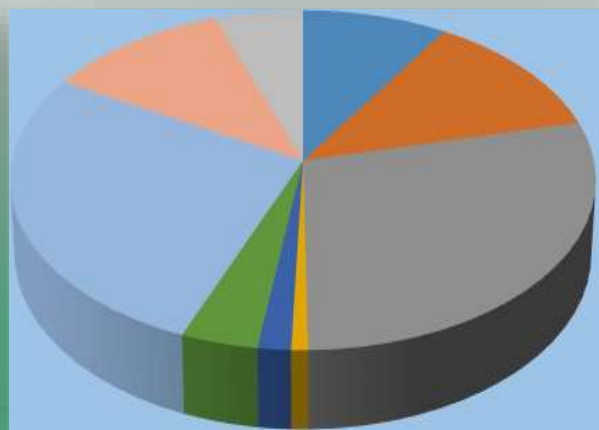
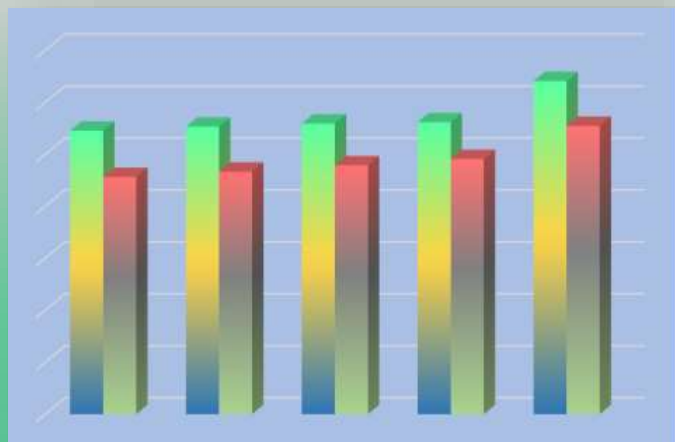


CHEMICAL AND PETROCHEMICAL STATISTICS AT A GLANCE-2020



Government of India
Ministry of Chemicals and Fertilizers
Department of Chemicals and Petrochemicals
Statistics and Monitoring Division
New Delhi

Website: www.chemicals.nic.in



मनसुख मांडविया
MANSUKH MANDAVIYA



स्वास्थ्य एवं परिवार कल्याण
व रसायन एवं उर्वरक मंत्री
भारत सरकार

Minister for Health & Family Welfare
and Chemicals & Fertilizers
Government of India



MESSAGE

Department of Chemicals and Petrochemicals is devoted to the service of the Chemical and Petrochemical sector in the country. The Indian Chemical and Petrochemical sector is playing a critical role in nation building and enhancing the quality of life. This sector has huge potential for realization of our dream 'Skill India' and 'Atmanirbhar Bharat' for better tomorrow.

2. I am very happy to message that the Department of Chemicals & Petrochemicals is bringing out the Annual Publication 'Chemical & Petrochemical Statistics at a Glance-2020' in this year. I hope this publication will be beneficial to all stakeholders and data users in the Chemicals and Petrochemicals Sector.

3. I convey my appreciation for the excellent work done by the Department in bringing out this publication.

With best wishes to all concerned.

(Mansukh Mandaviya)

भगवंत खुबा
ಭಗವಂತ ಖುಬಾ
BHAGWANTH KHUBA



रसायन एवं उर्वरक एवं
नवीन एवं नवीकरणीय ऊर्जा राज्य मंत्री
भारत सरकार
Minister of State
Chemicals & Fertilizers and
New & Renewable Energy
Government of India

MESSAGE

The Department of Chemicals and Petrochemicals is actively working for promotion of the Chemical and Petrochemical sector in the country. Chemical Sector is an integral component of the Indian economy. The share of this sector is quite significant in manufacturing. It has key linkages with several downstream industries such as automotive, agriculture, consumer durables, engineering, food processing, etc. Department of Chemicals & Petrochemicals under the Ministry of Chemicals & Fertilizers is striving hard to provide more conducive atmosphere to the industry for achieving higher and sustainable growth.

2. I am glad to note that a Publication '**Chemical & Petrochemical Statistics at a Glance-2020**' is being brought out by the Department which provides the statistics on key indicators of chemical sector along with detailed analysis. I hope this publication would be very useful for all the stakeholders, data users and organizations associated for the development of chemical sector in the country.

3. I appreciate the excellent work done by the officers of the Department of Chemicals & Petrochemicals in bringing out this publication.

My best wishes to all.

30th July, 2021

(Bhagwanth Khuba)

योगेन्द्र त्रिपाठी, भा.प्र.से.
Yogendra Tripathi, IAS



सचिव
भारत सरकार
रसायन और उर्वरक मंत्रालय
रसायन और पेट्रो रसायन विभाग
Secretary
Government of India
Ministry of Chemicals & Fertilizers
Department of Chemicals & Petrochemicals

2nd August, 2021

Message

The Indian Chemicals and Petrochemical industry is at the threshold of rapid growth and Government of India is keen to provide an atmosphere of support and encouragement under "Make in India" initiative to leverage the existing potential and opportunities. It has huge unrealized potential which needs to be facilitated. The Department of Chemicals and Petrochemicals is implementing various policies and programmes for achieving sustainable growth in the development of the chemical sector.

2. I am delighted to note that this year's Annual Publication 'Chemical & Petrochemical Statistics at a Glance-2020' is being brought out by the Statistics and Monitoring Division. It includes statistical analysis on various key indicators such as Installed Capacity, Consumption, Production, Import and Export of Chemicals and Petrochemicals in the country.

3. I compliment the Statistics and Monitoring Division led by Shri N K Santoshi, Deputy Director General, Department of Chemicals & Petrochemicals for the commendable efforts put in to bring out the publication.


(Yogendra-Tripathi)

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Ministry of Chemicals & Fertilizers

Department of Chemicals & Petrochemicals

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P R E F A C E

The Annual publication "**Chemical & Petrochemical Statistics at a Glance-2020**" is being brought out by the Statistics & Monitoring (S&M) Division, Department of Chemicals and Petrochemicals. S&M Division is mainly associated in collection, compilation and management of Statistical data on Major Chemicals & Petrochemicals from different manufacturing units of the country. This Division also provides the data of Chemical & Petrochemical Sector for construction of All India Index of Industrial Production (IIP) brought out on monthly basis by Central Statistics Office, Ministry of Statistics & Programme Implementation.

2. The Statistics presented in this publication includes inter alia Production, Installed Capacity, Consumption, Import and Export in respect of Selected Chemicals and Petrochemicals. I express my sincere thanks to Ministries / Departments / Organizations viz. M/o Statistics & PI, M/o Commerce & Industry, M/o PNG, DGFT, DGCI&S and DIPPI, etc. for providing valuable input for this publication. I also acknowledge my gratitude to various Divisions of this Department for providing valuable inputs and cooperation towards compilation of this publication.

3. I would like to place on record my appreciation for the outstanding work rendered by the officers of S&M Division of the Department namely; Shri Ram Sajeevan, Joint Director, Shri Patil Naresh Dnyaneshwar, Research Officer and Shri Rakesh Kumar, Jr. Statistical Officer. I hope this publication would be found useful for data users in government organization, research institutions and other stakeholders associated with chemical industry development.

4. Suggestions/ Comments from users of this publication are most welcome for future improvement of the compilation.

July, 2021

New Delhi

(N K Santoshi)

Deputy Director General

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Introduction

Chemical and Petrochemical Sector is one of the pioneering sectors having bearing on day to day needs of the society. Chemical Industry is playing a vital role in addressing our basic needs in the fields of food and water security, shelter, clothing and textiles, health care, social and physical infrastructure, information, communication and entertainment. In order to boost domestic production capacities as a part of Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIRs) policy, a perspective planning for the chemical industry has been initiated to study demand supply scenario keeping in view the existing and under execution capacities. This will help to realize India's vision of becoming US \$5 trillion economy, self-reliance and provide substantial employment to the youth in the Chemical Sector. The share of Gross Value Added (GVA) in the Manufacturing Sector during 2018-19 is about 8.75% at current prices. GVA of Chemical Sector has grown with CAGR of 13.49% during the period 2013-14 to 2018-19.

2. Statistics and Monitoring (S&M) Division under the Department of Chemicals & Petrochemicals (DCPC) compiles statistics on monthly production data and installed capacity of selected Chemicals and Petrochemicals products from Large and Medium Scale units. It also derives estimates of consumption of the chemicals products in the country. Data on Export and Import of Chemicals and Petrochemical items are being maintained by the Department based on the data received from the Directorate General of Commercial Intelligence and Statistics (DGCIS), Ministry of Commerce and Industry.

3. This publication consists seven chapters, namely, Chapter-1: An overview of Chemical and Petrochemical Sector; Chapter-2: Global Scenario; Chapter-3: Important Economic Indicators; Chapter-4: India Trade classification (Harmonized System) [ITC (HS)]-2017 - An Abstract; Chapter-5: National Industrial Classification (NIC) - A Digest. Chapter-6: Indices released by Government of India; Chapter-7: Glimpses of Important Trends during 2015- 16 to 2019-20. Chapter-1 besides defining Basic Chemicals, Specialty Chemicals & Agro-chemicals, also presents the latest status of Chemical Sector in India. Chapter-2 presents the status of Indian Chemical Sector vis-a-vis other countries of the world. Chapter-3 provides important statistics like GVA, Index of Industrial production, Export and Import of Chemical sector. Chapter-6 describes important indices like Index of Industrial Production (IIP), Consumer Price Index (CPI) & Whole Sale Price Index (WPI). Chapter-

7 provides graphical presentation of trends for the period 2015-16 to 2019-20 in Production, Installed Capacity, Import and Export for various groups under Major Chemical and Major Petrochemical along with brief analysis. At the end of the Appendices Section, Statistical tables presenting information inter-alia on Production, Installed Capacity, Capacity Utilization, Imports / Exports along with their growth rates during 2012-13 to 2019-20 have also been provided. Detailed table on Foreign Trade, FDI, IIP, WPI etc. related to Chemical and Petrochemical Sector have also been included in the Appendices Section.

4. The production of Selected Major Chemicals and selected Major Petrochemicals for each Group is generally found to be growing consistently over the years. The annual growth of production during 2019-20 over previous year was 3.06% with CAGR of 3.39% over a period of 8 years, in case of Major Chemicals. The annual growth of Basic Major Petrochemicals was 17.04% over preceding year with CAGR of 5.55% during the same period.

5. Installed Capacity utilization of basic Major Chemicals was 79% in 2019-20 as against 82% in 2018-19 while it was around 89.5% as against 87.3% in case of Basic Major Petrochemicals over last year. The utilization of installed capacity was hovered around 73% - 84% for the Alkali Chemicals and Dyes & Pigments, whereas it was in the range of 58-69 % in case of Organic, Inorganic Chemicals, Pesticides (Technical Grade) in 2019-20.

6. Among Selected Major Chemicals, there was a substantial import of Inorganic Chemicals and Organic Chemicals into the country. Amongst Inorganic Chemicals, two products, namely, Carbon Black (Rs.1,534/- crore) and Calcium Carbonate (Rs.907/- crore) had import of more than Rs.2,400/- crores. (Table 17). Amongst Organic Chemicals, five products, namely, Acetic Acid (Rs.2,737/- crore), Phenol (Rs.991/- crore), Methanol (Rs.4,256/- crore), Maleic Anhydride (Rs.469/- crore) and Aniline (Rs.533/- crore) had approximately Rs.9,000/- crore of imports into the country (Table 17).

7. Amongst Selected Basic Major Petrochemicals, substantial import was seen for Polymers, Synthetic Rubber and Synthetic Detergent Intermediate into the country during 2019-20. Amongst Polymers, three products, namely, Polypropylene (Inc. Co-Polymer) (Rs.8,540/-crore), High Density Polyethylene (Rs.6,344/-crore) and Poly Vinyl Chloride (Rs.5,875/-crore) had import of more than Rs.20,500/-crore (Table 25). Amongst Synthetic Rubber, four products, namely, Styrene Butadiene Rubber (SBR) (Rs.1,187/-crore), Poly Butadiene Rubber (Rs.1,073/-crore), Ethyl Vinyl Acetate (Rs.2,130/-crore) and Butyl Rubber (Rs.1,510/-crore), have import of approximately Rs.6,000/-crore into the country (Table 25). Amongst Synthetic Detergent Intermediates, one product, namely, Linear Alkyl Benzene has import of more than Rs.2,300/- crore in the country (Table 25). For Selected Basic Major Petrochemicals, in case of Performance Plastics, major portion of domestic production was exported (about 58% of domestic production) (Table 6). Amongst Performance Plastics, there is one product, namely, PET chips (Polyester Chips) has an export of more than Rs.6,000/- crore (Table 24).

8. The trade deficit during 2019-20 (i.e. net import) in Chemicals and Petrochemicals Sector (comprising chapters 28, 29, 32, 38, 39, 40, 25, 4 and 55 of HS code) was Rs.84,366/-crore as per information on DGCIS portal (as on 10.02.2021 (Table 12 A). The trade deficit of selected Major Chemicals and Petrochemical Products was around Rs.11,281/-crore as per figures received from DGCIS, Kolkata (Tables 15 & 23). The export / import monitored by DCPC are basically intermediate in nature.

9. In respect of Major Chemicals at group level, it is observed that Alkali Chemicals, Organic Chemicals and Inorganic Chemicals were in trade deficit, whereas Pesticides (Technical Grade and formulation both) and Dyes & Pigments were trade surplus, during 2019-20 (Table 18). However, in respect of Major Petrochemicals at group level Polymers, Fiber Intermediates, Synthetic rubber, Performance Plastics, Synthetic Detergent Intermediates and Other Petro-based Chemicals were in trade deficit, whereas Synthetic Fibre, Aromatics and Olefins were in trade surplus during the same period (Table 26). This aggregates to overall trade surplus in Major Chemicals and overall trade deficit in Major Petrochemicals which resulted into net trade deficit for Chemicals and Petrochemicals sector.

ACRONYMS

AF	Acrylic Fibre (including Dry Spun)
ASI	Annual Survey of Industries
ACN	Acrylonitrile
CAGR	Compound Annual Growth Rate
CEFIC	European Chemical Industry Council
CSO	Central Statistics Office
CPI	Consumer Price Index
DGCI&S	Directorate General of Commercial Intelligence & Statistics
DIPP	Department of Industrial Policy and Promotion
DMT	Dimethyl Terephthalate
EO	Ethylene Oxide
EPDM	Ethyl Propylene Dimers
EVA	Ethyl Vinyl Acetate
EX-PS	Expandable Polystyrene
FDI	Foreign Direct Investment
GVA	Gross Value Added
HBR	Halo Butyl Rubber
HDPE	High Density Polyethylene
IIP	Index of Industrial Production
IIR	Iso Butylene Isoprene Rubber
ISIC	International Standard Industrial Classification
ITC (HS)	Indian Trade Classification (Harmonized System)
KTPA	Thousand Tonnes Per Annum
LAB	Linear Alkyl Benzene
LDPE	Low Density Polyethylene
LLDPE	Linear Low Density Polyethylene
MEG	Mono Ethylene Glycol

MEK	Methyl Ethyl Ketone
MMA	Methyl Methacrylate
MMSCM	Million Standard Cubic Meters
MOSPI	Ministry of Statistics and Programme Implementation
MT	Metric Tonne
NBR	Nitrile Butadiene Rubber
NFY	Nylon Filament Yarn
NIC	National Industrial Classification
NIY	Nylon Industrial Yarn
ONCB	Ortho Nitro Chloro Benzene
PAN	Phthalic Anhydride
PBR	Poly Butadiene Rubber
PBT	Polybutylene Terephthalate
PET	Polyethylene terephthalate
PIB	Polyisobutylene
PFY	Polyester Filament Yarn
PG	Propylene Glycol
PMMA	Polymethyl Methacrylate
PNCB	Para Nitro Chloro Benzene
PO	Propylene Oxide
PP	Polypropylene
PPFY	Polypropylene Filament Yarn
PPSF	Polypropylene Staple Fibre
PS	Polystyrene
PSF	Polyester Staple Fibre
PSFF	Polyester Staple Fibrefil
PTA	Purified Terephthalic Acid
PVC	Poly Vinyl Chloride
SAN	Styrene Acrylonitrile
SBR	Styrene Butadiene Rubber
UNSC	United Nations Statistical Commission
VAM	Vinyl Acetate Monomer
WPI	Wholesale Price Index

COVERAGE

Major Chemicals			
Sl. No.	Group	Products	
I	Alkali Chemicals	Soda Ash	Caustic Soda
		Liquid Chlorine	
II	Inorganic Chemicals	Aluminium Fluoride	Calcium Carbide
		Carbon Black	Potassium Chlorate
		Sodium Chlorate	Titanium Dioxide
		Red Phosphorous	Hydrogen Peroxide
		Calcium Carbonate	
III	Organic Chemicals	Acetic Acid	Acetic Anhydride
		Acetone	Phenol
		Methanol	Formaldehyde
		Nitrobenzene	Citric Acid
		Maleic Anhydride	Pentaerythritol
		Aniline	Chloro Methanes
		ONCB	PNCB
		MEK	Acetaldehyde
		Ethanolamines	Ethyl Acetate
		Menthol	Ortho- Nitro Toluene
		Isobutyl Benzene	
IV	Pesticides (Technical Grade)	D.D.T.	Malathion
		Parathion(Methyl)	Dimethoate
		D.D.V.P.	Quinalphos
		Monocrotophos	Phosphamidon

		Phorate	Ethion
		Endosulphan	Fenvalerate
		Cypermethrin	Anilophos
		Acephate	Chlorpyrifos
		Phosalone	Metasystox
		Abate	Fenthion
		Triazophos	Lindane
		Temephos	Deltamethrin
		Alphamethrin	Profenofos Technical
		Pretilachlor Technical	Lambda Cyhalothrin
		Phenthoate	Permethrin Tech
		Imidacaloprid Tech	Captan & Captafol
		Ziram(Thio Barbamate)	Carbendzim (Bavistin)
		Calixin	Mancozab
		Copper-Oxychloride	Hexaconazole
		Metconazole	2, 4-D
		Butachlor	Ethofumesate Technical
		Thiamethoxam Technical	Pendimethalin
		Metribuzin	Triclopyr Acid Tech
		Isoproturon	Basalin
		Glyphosate	Paraquat
		Diuron	Atrazin
		Fluchloralin	Zinc Phosphide
		Aluminium Phosphide	Methyl Bromide
		Dicofol	

V	Dyes and Pigments	Azo Dyes	Acid Direct Dyes
			(other than AZO)
		Basic Dyes	Disperse Dyes
		Oil soluble (Solvent Dyes)	Fast Colour Bases
		Ingrain Dyes	Solubilised Vat Dyes
		Optical Whitening Agents	Organic Pigments
		Inorganic Pigments	Pigment Emulsion
		Reactive Dyes	Sulphur Dyes
		Vat Dyes	Food Colours
		Naphthols	Other Dyes

Major Petrochemicals			
A. Basic Major Petrochemicals			
Sl. No.	Group	Products	
I	Synthetic Fibres	Acrylic Fibre	Polyester Staple Fibrefill
		Nylon Filament Yarn	Nylon Industrial Yarn/Tyre Cord
		Polyester Filament Yarn	Polyester Staple Fibre
		Polypropylene Filament Yarn	Polypropylene Staple Fibre
		Polyster Industrial Yarn	Elastomeric/Spandex Filament Yarn
II	Polymers	Low Density Polyethylene	High Density Polyethylene
		Polyestyrene	Polypropylene (Inc. Co-Polymer)
		Expandable Polyestyrene	Poly Vinyl Chloride
		Linear Low Density Polyethylene	PVC Compound
III	Synthetic Rubber (Elastomers)	Styrene Butadiene Rubber (SBR)	Poly Butadiene Rubber (PBR)
		Nitrile Butadiene Rubber (NBR)	Ethyl Propylene Dimers (EPDM)
		Ethyl Vinyl Acetate (EVA)	Butyl Rubber
IV	Synthetic Detergent Intermediates	Linear Alkyl Benzene (LAB)	Ethylene Oxide (EO)

V	Performance Plastics	Acrylonitrile Butadiene Styrene (ABS) Resin	Nylon-6
		Nylon 6,6	Polymethyl Methacrylate (PMMA)
		Styrene Acrylonitrile (SAN)	Polytetrafluoroethylene(P TFE)
		Resin	
		Polyester Chips/PET Chips	
B. Intermediates			
I.	Fibre Intermediates	Acrylonitrile	Caprolactum
		Mono Ehylene Glycol (MEG)	Dimethyl Terephthalate (DMT)
		Purified Terephthalic Acid (PTA)	
II. Building Blocks			
i.	Olefins	Ethylene	Propylene
		Butadiene	
ii.	Aromatics	Benzene	Toluene
		Orthoxylene	Paraxylene
		Mixed Xylene	
C. Other Petro-based Chemicals			
Diethylene Glycol		Diacetone Alcohol	Ethylene Dichloride
Butanol		Oxo Alcohol	2-Ethyl Hexanol
Vinyl Chloride Monomer		Epichlohydrine	Iso Butylene
Metaxylene		Methyl Isobutyl Ketone	PBT

PET	PIB	Polycarbonate
Propylene Oxide	Propylene Glycol	Polyvinyl Acetate Resin
Unsaturated Polyester Resin	Methyl Methacrylate	Iso-Butanol
Ethyl Benzene	C4-Raffinate	Cellulose Acetate Butyrate
Cellulose Acetate Sheet	Cellulose Nitrate Sheet	Melamine Moulding Powder
Polyacetal Resin	Phthalic Anhydride	Styrene
Vinyl Acetate Monomer	Isopropanol	Polyol

Data Sources & Definitions

The major sources of data presented in this publication are:

(i) Production & Installed capacities	Production of Major Chemicals and Petrochemicals and their installed capacities have been aggregated based on monthly returns received directly by the Department of Chemicals & Petrochemicals from the manufacturers under large and medium scale.
(ii) Imports & Exports	Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, Kolkata.
(iii) FDI	Ministry of Commerce & Industry, Department of Industrial Policy & Promotion.
(iv) Index of Industrial Production	Ministry of Statistics & Programme Implementation, Central Statistics Office (CSO), New Delhi.
(v) Wholesale Price Index	Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry, New Delhi.
(vi) Chemical Industry (Broad definition)	The Chemical industry includes organic chemicals, inorganic chemicals, pharmaceuticals products, fertilizers, tanning or dyeing extracts, dyes pigments, paints and varnishes, putty and other mastics inks, essential oils, perfumery cosmetic, soap, organic surface, active agents, washing, lubricating, artificial waxes, dental waxes, polishing, albuminoidal substance, modified starches, glues, enzymes, explosive, pyrotechnic products, beverages, spirits and vinegar, matches, pyrophoric alloys, photographic or cinematographic goods, miscellaneous chemical products, petrochemicals, plastics synthetic, rubber, man-made filaments, manmade fibre.
(vii) Chemicals and Petrochemicals (Narrow definition)	The Chemicals and Petrochemical products that are monitored by the Department of Chemicals & Petrochemicals are selected major products and the list of these products is given in the tables 3 & 8 respectively. Unless contrary is mentioned, the terms 'Major Chemicals' and 'Major Petrochemicals' refer to the products or groups thereof as enumerated in the tables 3 & 8.

Chapter 1

An Overview of Chemical and Petrochemical Sector

The chemical industry is the backbone of industrial and agricultural development of the country and provides building blocks for several downstream industries, such as textiles, papers, paints, soaps, detergents, pharmaceuticals, varnish etc. It is one of the most diversified of all industrial sectors covering thousands of commercial products. Indian chemical industry comprises of both small scale as well as large scale units. With initiatives like "Make in India" program gaining steam, investments, innovation and infrastructure are going to be the major thrust areas for chemical industry players. The current per capita consumption of chemical products in India is about 1/10 of the world average, indicating that the demand potential is yet to be realized. The industry is important as it has several linkages with other sectors of an economy. Petrochemicals have backward linkages with other industries in petroleum refining, natural gas processing and forward linkages with industries that deal in a variety of downstream products. Also, the industry offers alternatives, which serve as substitutes for natural products and hence, has the capacity to meet the constantly growing demand that would otherwise strain the natural resources. The value additions in the petrochemicals chain offer immense possibilities and cater to the need of textiles and clothing, agriculture, packaging, infrastructure, healthcare, furniture, automobiles, information technology, power, electronics and telecommunication, irrigation, drinking water, construction needs and host of other articles of daily and specialized usage, amidst other emerging areas.

2. In Chemicals sector, 100% FDI in India is allowed under the automatic route (except in the case of certain hazardous chemicals). Manufacture of most chemical products, inter-alia, covering organic / inorganic, dyestuffs & pesticides is de-licensed. The entrepreneurs need to submit only Industries Entrepreneur Memorandum (IEM) with the Department of Industrial Policy & Promotion provided location of the project falls outside standard urban area limits of metropolitan cities and municipal cities. Only the following items are covered in the compulsory licensing list because of their hazardous nature as required by international conventions.

- Hydrocyanic acid & its derivatives
- Phosgene & its derivatives
- Isocyanates & di-isocyanates of hydrocarbons.

3. Chemicals can be broadly divided into the following sub-groups:-

i. Basic Chemicals

Chemicals, such as organic and inorganic chemicals, bulk petrochemicals, other chemical intermediates, plastic resins, synthetic rubber, man-made fibers, dyes and pigments, printing inks, are basic chemicals. These are also known as commodity chemicals.

ii. Specialty Chemicals

Specialty Chemicals, also known as performance chemicals, are low-volume but high-value compounds. These chemicals are derived from basic chemicals and are sold on the basis of their functions. For example, paints, adhesives, electronic chemicals, water management chemicals, oilfield chemicals, flavours and fragrances, rubber additives, paper additives, industrial cleaners and fine chemicals, sealants, coatings, catalysts etc. come under this category.

iii. Pesticides

Chemicals which essentially are meant for protecting agriculture crops against insects and pests are covered under this sub-group. Fertilizers and Pesticides played an important role in the "Green Revolution", during the 1960s and 1970s. Indian exports of agrochemicals have shown an impressive growth over the last five years. There are many pesticide formulators spread over the country and India is the fourth largest producer of agrochemicals globally, after United States, Japan and China. This industry is net export earning & contributes significantly to the foreign exchange basket of the country.

4. Based on composition, building blocks for petrochemicals are divided into two sub- groups:-

i. Olefins:

Olefin, also called as alkenes contains one or more pairs of carbon atoms linked by a double bond. Examples include ethylene, propylene and butadiene. Both ethylene and propylene are used in the industrial production of chemicals, plastics and plastics products while butadiene is used in the industrial production of synthetic rubber.

ii. Aromatics:

Aromatics are hydrocarbons derived from petroleum, characterized by a ring-like molecular structure. Examples include benzene, toluene, and xylene. Benzene is used in making dyes as well as in making synthetic detergents. A combination of benzene and toluene are used in making isocyanates which are required in making polyurethanes while xylenes are used in the industrial production of both plastics and synthetic fibers.

5. Growth Drivers for the Chemical Sector:

- A large population, huge domestic market, dependence on agriculture and strong export demand are the key growth drivers for this industry.
- A global shift towards Asia as the World's chemicals manufacturing hub.
- Per capita consumption of chemicals in India is lower, compared to western countries, so immense scope for new investments.
- Rise in GDP and purchasing power generates huge growth potential for the domestic market.
- A focus on new segments such as specialty and knowledge chemicals.
- Skilled science professionals.
- World-class engineering and strong R&D capabilities.

6. Research & Development (R&D)

The Chemical sector is highly heterogeneous encompassing many segments like organic, in-organics, dyestuffs, pesticides, paints, soaps and petrochemicals etc. Research and Development is critical and of paramount importance for the growth & development of this sector. Continued R&D efforts in the part of the industry helps to

improve the quality standards, obtain higher yields resulting in reduction in cost of production and to earn competitive edge in the International Market. Indian Chemical Industry spends on R&D to the extent of 2-3% of their total turnover, as against 9-10% by the multi-national companies in overseas countries. The industry would, therefore, have to make large investments in R&D to successfully counter competition from the international chemicals industry. India has a number of scientific institutions and the country's strength lies in its large pool of highly trained scientific manpower. With the introduction of the Patent Act 2005, product innovation has assumed high importance.

7. Foreign Technology Agreements

Foreign Technology Agreements in India cater to the growth of the technology in the Indian industries. The foreign technology is transferred from foreign sources such as research and development agencies, foreign parent companies and other manufacturers to the Indian counterparts. The transfer of foreign technology takes place by the means of foreign direct investments and foreign technology collaboration agreements. Foreign Technology Agreements in India permit transfer of technology by the means of Government approval or through the automatic route delegated by the RBI.

8. The Chemical and Petrochemical Industries occupies a pivotal position in meeting some basic human needs and in improving the quality of life. It is extremely important to the economy and is an integral part of everyday life. India has a high population base and thus, faces formidable problems in providing sufficient food, medicines and adequate shelter. From a very modest level of 52 million MT in 1951-52, food grain production increased to about

9.

10. 297.50 million MT during 2019-20 in the country. The chemical industry provides the vital inputs required, chemical fertilizers and pesticides, to augment food production and save crops from attack by a variety of pests in a safe and selective way. The marked improvements in the average life expectancy of our countrymen can be at-least partially attributed to the Chemical Industry which has provided lifesaving drugs and other chemicals required for managing public health care. The problem of housing can be tackled effectively with the assistance of the Chemicals Industry. It plays a crucial role in housing development.

11. The Chemical Industry converts raw materials like water, salt, crude oil, natural gas, air, metals minerals, etc. into other valuable products. It is involved in almost every industrial process and therefore plays a significant role in economic and social development. Without Chemical Industry, there would be no electronics or microelectronics, refrigerators, recording tapes, automobiles, laser discs, super magnets, processed foods and virtually all consumer products etc. Even the power industry depends on the Chemical Industry for its operations. The use of chemicals (ion exchange resins) becomes indispensable for removing dissolved salts needs in boilers and other applications. In gold mining, cyanide solution is used for extracting gold. The crude oil refining process uses chemicals, catalysts, heat and pressure to separate and combine the basic types of hydrocarbon molecules naturally found in crude oil into groups of similar molecules. Apart from providing a variety of drugs for alleviation of human sufferings, the chemical industry provides safe anesthetic agents and high quality artificial aids including a hip joint made from ultra-low molecular weight polyethylene. Other health products including dental fills, contact lenses and dialyses also depend on the Chemicals Industry.

12. Some of the most useful materials, synthetic polymers, also known as plastics, have transformed our lives in the last few decades. The driving force for this development was provided by the need for conservation of natural resources and energy efficiency and inherent advantages of the material which created possibilities of innovative designs and cost savings. Its usefulness, adaptability and flexibility of usage have led to a shift in manufacturing from the conventional material based products to synthetic products. The production of polymers has increased from 7.51 million tonne in 2012-13 to 12.40 million ton in 2019-20 (CAGR of 7.43%) while its consumption has increased from 9.58 million ton to 14.22 million ton (CAGR of 5.81%) during the same period.

13. Chemicals from petroleum may range from basic petrochemicals such as ethylene, propylene, benzene, xylenes to finished end-products like plastics, rubbers, fibers, detergents, pesticides, dyes etc. These may be classified as (a) first generation, (b) second generation and (c) third generation petrochemicals. First generation petrochemicals are chemicals directly available from basic inputs such as petroleum crude oil or natural gas, either by fractionation, isomerization, cracking etc. These can also be derived from coal gasification and bio mass. These generally represent the basic petrochemicals, which are the building blocks for various chemical syntheses. Examples

of this class of chemicals are methane, ethane, propane, ethylene, propylene, toluene, xylenes etc. Second generation petrochemicals are the derivatives of the first generation petrochemicals. Example of such products are styrene (derived from benzene and ethylene), dimethyl terephthalate or terephthalic acid (derived from p-xylene), acrylonitrile (derived from propylene), ethylene glycol (derived from ethylene), vinyl chloride monomer (derived from acetylene or ethylene) etc. Second generation petrochemicals constitute the intermediate chemicals which serve as the raw materials for consumer industries like plastics, rubbers, fibres, dyes, detergents etc. Third Generation Petrochemicals are the consumer commodities derived generally from second generation petrochemicals and represent the most important commercial products such as plastics, rubbers, fibres, detergents etc. Examples are polystyrene (from vinyl chloride monomer), DDT from (chlorobenzene), azo dyes (from styrene), Polyvinyl chloride (from aniline) etc. However, some of the products may be directly synthesized from first generation petrochemicals. Polybutadiene rubber, for instance, is obtained by polymerizing butadiene. Since most of the plastics or rubbers are derived from second generation petrochemicals, polybutadiene rubber is regarded as a third generation petrochemical. #

14. Chemical sector is predominantly based on feedstock derived from crude oil, natural gas, salt and minerals. Naphtha (used for production of Urea, Aromatics and Olefins), Heavy

15. Gas oil (propylene and ethylene) and Kerosene (Linear Alkyl Benzene) are derived from crude oil. Steam cracking/ Catalytic Reforming of low and high aromatic naphtha in oil refineries provide Olefins (Ethylene, Propylene and Butadiene) and Aromatics (benzene, toluene and xylenes). Natural gas contains Methane (CH_4), Ethane (C_2H_6), Propane (C_3H_8) and Butane (C_4H_{10}). Rich natural gas, which contains C_2 and C_3 in extractable quantity, is used in producing Ethylene and Propylene. Methane is converted into synthesis gas. Synthesis gas is a mixture of carbon monoxide & hydrogen which is used to make ammonia & methanol. Ammonia is used to make Urea and Methanol is used to make acetic acid and derivatives. Consumption of naphtha in petrochemical sector has increased from 9530 thousand ton in 2014-15 to 10875 (Provisional) thousand ton in 2019-20. Off take of natural gas for petrochemical sector has increased from 2890 million standard cubic meter to 3569 (Provisional) million standard cubic meters during the same period.

Dr. G.N.Sarkar, *Advanced Petrochemicals*, First Edition, Khanna Publishers, New Delhi

16. Olefins and Fibre Intermediates (Acrylonitrile, Caprolactum, Mono Ethylene Glycol, Purified Terephthalic Acid, Dimethyl Terephthalate) form the basis of the petrochemical industries. Olefins and Aromatics are used in producing Fibre Intermediates. Salt is the feed stock for the chlor-alkali chemical industry, just as crude oil and Natural Gas for the petrochemical industry. Salt, Aromatics, Minerals (Limestone, Bauxite ore (Aluminium), Rock Phosphate, Sulphur, Iron ore, Indium ore (Tin), Chromite ore, Mica, Silica, Manganese ore, etc) and Basic metals (Copper, Zinc, Titanium, Aluminium, Iron, Chromium, Tin, Nickel, etc) form the basis of chemical industries producing Chlor-Alkali, Organic Chemicals, Inorganic Chemicals, Pesticides and Dyes & pigments. Dyes are organic compounds and are mainly based on Benzene, Toluene, Naphthalene (from petroleum fractions and coke oven batteries of steel plants), Anthracene and Cyanuric Chloride. Pesticides are mainly based on Benzene, Naphthalene, Phosphorous (produced from phosphate rock) and Sulphur. Pharmaceuticals are mainly based on Benzene, Toluene and Xylene.

17. Innovations in additives, alloys, blends, compounds, composites and high grade reinforcement materials such as glass, nano-clays, carbon nano-tubes and carbon fibres require attention for technology development. New developments in the field of bio and photodegradable plastics, are also taking place all over the world. The chemical and petrochemical industries face the challenge to operate in an environmentally acceptable manner. Chemicals are globally tradable and unless chemicals produced in India are cost effective, these cannot contribute usefully to the Nation's economy. With an eye on emerging usages, research and development efforts may focus on the need to modernize and upgrade the existing manufacturing processes, improve the quality of existing products and make them safe for environment and human health.

18. According to the National Sample Survey Office (NSSO)'s latest survey (July 2015-June 2016 NSS 73rd round), 3.72 lakh persons were engaged in Unincorporated Chemicals and Chemical Products Sector (Industry Division 20) while 3.6 crore persons engaged in Unincorporated Manufacturing sector. There is around 1.73 lakh Unincorporated Enterprises in Chemicals and Chemical Products Sector (Industry Division 20) industries while 1.97 Crore Unincorporated Enterprises in manufacturing sector.

Chapter 2

Global Scenario

As per the European Chemical Industry Council Report-2021 (Cefic- 2021) world chemicals (excluding pharmaceuticals) sales in 2019 are valued at 3669 Euro billion. India ranks 4th in Asia and 6th in world with chemicals sales valued at 92 Euro billion in 2019. India's Capital spending in World Chemicals (excluding pharmaceuticals) is valued at 5.5 Euro billion in 2019, as compared to 2.0 Euro billion in 2009. India's chemical R&I spending is valued at 2.3 Euro billion in 2019, as compared to 1.7 Euro billion in 2009. Top ten countries in World Chemical sales during 2019 are as under:

Rank	Country	Sales in 2018 (in Euro Billion)
1	China	1488
2	European Union (EU)	543
3	USA	504
4	Japan	168
5	South Korea	119
6	India	92
7	Taiwan	76
8	Russia	77
9	Brazil	66
10.	Saudi Arabia	49

Source: cefic report 2021

2. As per UN Comtrade Database for 2019, India ranks 11th in the world exports of chemicals (excluding pharmaceutical products) and ranks 6th in the world imports of chemicals (excluding pharmaceutical products). India's exports of chemicals (excluding pharmaceutical products) was 40.38 US\$ billion in 2019. India's share in World exports of chemicals (excluding pharmaceutical products) was 2.51% in 2019. India's imports of chemicals (excluding pharmaceutical products) was 59.99 US\$ billion in 2019. India's share in World imports of chemicals (excluding pharmaceutical products) was 3.67% in 2019.

3. The top five Chemical Products (in terms of value) exported to different countries during 2019-20 were Other Insecticides (Rs.8,406/-Cr.), Other Herbicides-Anti Sprouting Products (Rs.7,174 /-Cr.), Pigment Emulsion (Rs.5,340/-Cr.), Reactive Dyes (Rs.5,023/- Cr.), Other Fungicide Nes (Rs.4,256/-Cr.). Other Insecticides were exported mainly to the countries of Brazil, U S A, Bangladesh Pr, Iran & Nigeria; Other Herbicides-Anti Sprouting Products exported to USA, Brazil, Australia, Argentina & France; Pigment Emulsion exported to China P RP, U S A, Netherland, Japan & Belgium; Reactive Dyes exported to Turkey, Bangladesh Pr, Honduras, Singapore & Indonesia and exported to Brazil, Bangladesh Pr, Costa Rica, France & Indonesia.

During 2019-20, top five Chemical products (in terms of value) imported from different countries were Methanol (Rs.4,256/-Cr.), Acetic Acid (Rs.2,737/-Cr.), Other Insecticides (Rs.2,680/- Cr.), Carbon Black (Rs.1,534/- Cr.) and Soda Ash (Rs.1,525/- Cr.). Methanol mainly imported from Oman, Saudi Arab, Iran, Qatar & U Arab Emts. Acetic Acid imported from China P RP, Malaysia, Singapore, Taiwan & Saudi Arab. Other Insecticides imported from China P RP, Taiwan, U S A, Korea Rp & Israel. Carbon Black imported from China P RP, Korea Rp, Russia, U Arab Emts & U S A and Soda Ash imported from U S A, Turkey, Bulgaria, Kenya & Romania.

Export of top five Petrochemical Products (in terms of value) to different countries during 2019-20 were Paraxylene (Rs.15,953/- Cr), Polyester Filament Yarn (Rs.7,505/- Cr.), Benzene (Rs.6,353/- Cr.), Polyester Chips/Pet Chips (Rs.6,182/- Cr) and Polypropylene (Inc. Co-Polymer) (Rs.3,867/- Cr.). Paraxylene was mainly exported to China P RP, Malaysia, Indonesia, Pakistan IR & Thailand. Polyester Filament Yarn was exported to Turkey, Brazil, Bangladesh PR, Egypt A RP & Korea RP; Benzene was exported to Saudi Arab, Spain, Belgium, China RP & U S A. Polyester Chips/Pet Chips was exported to U Arab Emts, Italy, Bangladesh PR, Japan & Israel and Poly Propylene(Inc. Co-Polymer) is exported to China P RP, Turkey, Vietnam SOC REP, Nepal & Portugal.

Top five Petrochemical products (in terms of value) imported from different countries during 2019-20 were Poly Propylene (Inc. Co-Polymer) (Rs.8,540/- Cr.), High Density Polyethylene (Rs.6,344/- Cr.), Styrene (Rs.6,109/-Cr.), Poly Vinyl Chloride (Rs. 5,875/- Cr.) and Paraxylene (Rs.5,193/-Cr.). Poly Propylene (Inc. Co-Polymer) mainly imported from U

Arab Emts, Singapore, Saudi Arab, Korea RP & Thailand. High Density Polythylene imported from U Arab Emts, Qatar, U S A, Singapore & Saudi Arab. Styrene mainly imported from U S A, Korea RP, Singapore, Saudi Arab & Kuwait. Poly Vinyl Chloride imported from Japan, Taiwan, Korea RP, Thailand & Russia and Paraxylene imported from Singapore, Japan, Kuwait, Saudi Arab & U S A.

Chapter 3

Important Economic Indicators

According to the National Accounts Statistics 2020, brought out by the Central Statistics Office (CSO), Chemical and Chemical products sector, excluding pharmaceuticals (Industry Division 20 of NIC 2008), accounted for 1.41% of the GVA for All Economic Activity in 2018-19. The share of Gross Value Added (GVA) in the Manufacturing Sector during 2018-19 is about 8.75%. GVA of Chemical Sector has grown with CAGR of 13.49% during the period 2013-14 to 2018-19. The average Indices of Industrial Production (IIP) for the Chemical and Chemical products (Industry Division 20 of NIC 2008) for the year 2019- 20 stood at 118.5, which is 0.42% less as compared to the previous year. The size of the Indian Chemical industry, excluding Pharmaceuticals (Industry Division 20 of NIC 2008), in terms of Value of Output in the year 2018-19 was Rs.8,28,356/- crores and it is 7.3% of Value of Output of Manufacturing Sector. The size of Chemical industry, including Pharmaceuticals (i.e. Industry Division 20 and 21 of NIC 2008), in terms of Value of Output in the year 2018-19 was Rs.11,95,290/- crores and it is 10.58% of the Total Value of Output of Manufacturing sector. As per the data of six years, i.e. between 2013-14 to 2018-19, real growth rate in Output of Chemical Industry excluding Pharmaceuticals Industry (i.e. Industry Division 20) is 8.20% while it is 8.52% for Chemical Industry including Pharmaceutical Industry {i.e. Industry Division 20 & 21}. Growth in Value of Output for Manufacturing Sector during the same period is 7.24%.

2. The exports and imports data of 2019-20 shows that in the Chemical Sector, comprising of chapters 28, 29, 30, 31, 32, 38, 39, 4002, 54 and 55 of HS code, India was net importer in all categories except of four categories, namely, Pharmaceuticals Products (Chapter 30 HS code), Man-made staple fibers (Chapter 55 HS code), Man-Made Filaments (Chapter 54 HS code) and Tanning or Dyeing (Chapter 32 HS code). Pharmaceuticals products accounted Rs.98,943/- crore, Man-made staple fibres accounted Rs.5,039/- crore, Man-Made Filaments accounted Rs.9,611/- crore and Tanning or Dyeing accounted Rs.9,891/- crore in **net exports** while Fertilizers (chapter 31 HS code) accounted Rs.46,560/- crore, Plastic and Articles thereof (Chapter 39 HS code) accounted Rs.51,638/- crore, Organic Chemicals (Chapter 29 HS code) accounted Rs.16,009/- crore, Inorganic Chemicals (Chapter 28 HS code) accounted

Rs.32,533/- crore, Miscellaneous Chemical Products (Chapter 38 HS code) accounted Rs.3,407/- crore and Synthetic Rubber and Factice (4002 HS code) accounted Rs.5,320/- crores in the **net imports** during 2019-20. {**Table No. 12A**}

3. As per Annual Survey of Industries (Factory Sector), 2017-18, top seven States, namely, Gujarat (31.21%), Maharashtra (16.38%), Tamil Nadu (6.59%), Himachal Pradesh (5.08%), Uttar Pradesh (5.05%), Uttarakhand (4.10%) and West Bengal(3.48), contributed around 71.89% in the Gross Value Added (GVA) for the Chemical & Chemical products Sector (Industry Division 20 of NIC 2008) and seven States, namely, Gujarat (33.4%), Maharashtra (16.3%), Uttar Pradesh (5.8%), Tamil Nadu (5.5%), West Bengal (5.0%), Rajasthan (3.7%) and Andhra Pradesh (3.4%), contributed around 73% in the Value of Output. {**Table 50**}

4. The exports of chemicals & petrochemicals (excluding pharmaceutical products and fertilizers) has increased from Rs.1,50,829/- crores in 2012-13 to Rs.2,75,294/-crore in 2019-20. The percentage share of the exports of chemicals & petrochemicals (excluding pharmaceutical products and fertilizers) in the total national exports increased from 9.2% to 12.4% during the same period {**Table 11, 16 & 24**}.

At the product level, the following products accounted more than Rupees One Thousand crore in the exports during 2019-20:

Product	Export (Rs. crore)	Product	Export (Rs. crore)
PARAXYLENE	15953	HIGH DENSITY POLYTHYLENE	3159
OTHER INSECTICIDES	8406	MENTHOL	2653
POLYESTER FILAMENT YARN	7505	LINEAR LOW DENSITY POLYTHYLENE	2472
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	7174	AZO DYES	2103
BENZENE	6353	POLYESTER STAPLE FIBRE	2049
POLYESTER CHIPS/PET CHIPS	6182	DISPERSE DYES	1332
PIGMENT EMULSION	5340	FOOD COLOURS	1078
REACTIVE DYES	5023	BUTADIENE	1039
OTHER FUNGICIDE NES	4256	CARBON BLACK	1035
POLYPROPYLENE (INC. CO- POLYMER)	3867	ORTHO-XYLENE	1010

5. The imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) has increased from Rs.2,09,909/- crores in 2012-13 to Rs.3,59,660/- crores in 2019-20. The percentage share of the imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) in the total national imports increased from 7.9% to 10.7% during the same period {**Table 11, 17 & 25**}.

At the product level, the following products accounted for more than Rupees One Thousand crores in the imports in 2019-20:

Product	Import (Rs. Crore)	Product	Import (Rs. Crore)
POLYPROPYLENE (INC. CO-POLYMER)	8540	POLYESTER CHIPS/PET CHIPS	2339
HIGH DENSITY POLYTHYLENE	6344	LINEAR LOW DENSITY POLYTHYLENE	2171
STYRENE	6109	ETHYL VINYL ACETATE	2130
POLY VINYL CHLORIDE	5875	ACRYLONITRILE	2007
PARAXYLENE	5193	ETHYLENE DICHLORIDE	1826
PURIFIED TEREPHTHALIC ACID	4702	CARBON BLACK	1534
METHANOL	4256	SODA ASH	1525
NYLON-6	3452	BUTYL RUBBER	1510
POLYOL	3304	OTHER PESTICIDES	1313
MONO EHYLENE GLYCOL	3121	POLYESTER FILAMENT YARN	1292
LOW DENSITY POLYETHYLENE	2825	ABS RESIN	1268
VINYL CHLORIDE MONOMER	2808	STYRENE BUTADIENE RUBBER	1187
ACETIC ACID	2737	PHTHALIC ANHYDRIDE	1100
OTHER INSECTICIDES	2680	POLY BUTADIENE RUBBER	1073
POLYCARBONATE	2633	OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	1048
TOLUENE	2381	OTHER FUNGICIDE NES	1016
LINEAR ALKYL BENZENE	2368		

6. The net imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) has increased from Rs.59,080/-crore in 2012-13 to Rs.84,366/-crore in 2019-20. The percentage share of the net imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) in the total national net imports increased from 5.7% to 7.4% during the same period. At the product level, the following products accounted more than Rs. thousand crore in the net imports in 2019-20. { *Table 12(a), 18 & 26* }

Produce	Net Import (Rs. crore)	Produce	Net Import (Rs. crore)
STYRENE	6076	LINEAR ALKYL BENZENE	2365
POLY VINYL CHLORIDE	5861	TOLUENE	2326
POLYPROPYLENE (INC. CO-POLYMER)	4673	MONO ETHYLENE GLYCOL	2308
PURIFIED TEREPHTHALIC ACID	4315	ETHYL VINYL ACETATE	2114
METHANOL	4221	ACRYLONITRILE	1975
HIGH DENSITY POLYETHYLENE	3184	LOW DENSITY POLYETHYLENE	1844
NYLON-6	3043	ETHYLENE DICHLORIDE	1625
VINYL CHLORIDE MONOMER	2808	BUTYL RUBBER	1453
ACETIC ACID	2674	ABS RESIN	1262
POLYCARBONATE	2597	SODA ASH	1254
POLYOL	2534	OTHER PESTICIDES	1028

The following products accounted more than Rupees One Thousand crore in the total net exports in 2019-20: -

Product	Net Export (Rs. crore)	Product	Net Export (Rs. crore)
PARAXYLENE	10760	OTHER FUNGICIDE NES	3240
BENZENE	6300	MENTHOL	2352
POLYESTER FILAMENT YARN	6213	AZO DYES	2062
OTHER HERBICIDES- ANTI SPROUTING PRODUCTS	6126	POLYESTER STAPLE FIBRE	1101
OTHER INSECTICIDES	5725	DISPERSE DYES	1100
PIGMENT EMULSION	4797	BUTADIENE	1038
REACTIVE DYES	4744	FOOD COLOURS	1011
POLYESTER CHIPS/PET CHIPS	3843		

7. Chemical Sector (including Pharmaceutical) in India is mainly in the Organized Sector {i.e. 99.5% GVA of Chemical Sector (including Pharmaceutical) comes from the organized Sector. The estimates of the Total Output (Factory Sector) of at 4-digit Industry class in the Chemicals and Chemical Products (Division 20-NIC 2008) during the year 2016- 17 and 2017- 18 are given in the table below:

Class	Description	Total Output (Rs. Crore)	
		2016-17	2017-18
2011	Manufacture of basic chemicals	126624	175960
2012	Manufacture of fertilizers and nitrogen compounds	107653	120736
2013	Manufacture of plastics and synthetic rubber in primary forms	100540	103265
2021	Manufacture of pesticides and other agrochemical products	47503	43907
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	41880	44633
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	75071	81478
2029	Manufacture of other chemical products n.e.c.	64239	66814
2030	Manufacture of man-made fibres	19498	24706
Total		583008	661499

Source: - Annual Survey of Industries, 2016-17 and 2017-18 (Factory sector), Ministry of Statistics & Programme Implementation

Chapter 4

INDIAN TRADE CLASSIFICATION (HARMONISED SYSTEM)

[ITC (HS)] 2017- An abstract

Indian Trade Classification (Harmonized System), 2017 has been compiled and notified by the Directorate General of Foreign Trade, Ministry of Commerce and Industry, Government of India in January 2017. ITC-HS codes are divided into two schedules. ITC (HS) Import Schedule I describe the rules and guidelines related to import policies whereas Schedule II describes the rules and regulation related to export policies. Schedule I of the ITC-HS code is divided into 21 sections and each section is further divided into chapters. The total number of chapters in the schedule I is 98. The chapters are further divided into sub- heading under which different HS codes are mentioned. Export Policy Schedule II of the ITC-HS code contains 97 chapters giving all the details about the guidelines related to the export policies.

The Chapters dealing with Chemicals and Petrochemical products are falling under Section VI, VII & XI as depicted below:

Chapter	Description	Section
Chapter 28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare- earth metals, of radioactive elements or of; isotopes	SECTION VI
Chapter 29	Organic chemicals	
Chapter 38	Miscellaneous chemical products	
Chapter 39	Plastics and articles thereof	SECTION VII.
Chapter 40	Rubber and articles thereof	
EXIM Code 4002	Synthetic rubber and factice derived from oils, in primary Forms or in plates, sheets or strip; mixtures of any product of heading 4001 with any product of this heading, in primary forms or in plates, sheets or strip	
Chapter 54	Man-made filaments	
Chapter 55	Man-made staple fibres	SECTION XI

Illustration of 8 digit Product Code:

Chapter	Exim Code	Item Description
28		Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of; isotopes
	2801	FLUORINE, CHLORINE, BROMINE AND IODINE
	28011000	Chlorine
39		Plastics and articles thereof
	3902	POLYMERS OF PROPYLENE OR OF OTHER OLEFINS, IN PRIMARY FORMS
	39021000	Polypropylene

**Source: website of Directorate General Foreign trade (DGFT), Ministry of Commerce and Industry, Government of India. <http://dgft.gov.in/exim/2000/itchs2017/ITCHS2017.html> may be followed for further details.*

Chapter 5

National Industrial Classification (NIC) - A Digest

The Central Statistics Office under the Ministry of Statistics & Programme Implementation being nodal Statistical Authority in the Country is vested with the responsibility of setting up Standards for collection, compilation and dissemination of Statistical data. The Official statistics is required to be collected and presented according to classification designed to facilitate its use for National Economic Policies and conform to International comparison. The need for comparability of Statistics available from various sources, on different aspects of the economy and usability of such data for economic analysis necessitated the need of standardization of a system of classification.

CSO being responsible for coordination of statistical activities in the country and with a view to evolve and maintain statistical standards initiated task of bringing out Standard Industrial Classification as early as in 1960 and evolved a Standard Industrial Classification (SIC) in 1962. To take care of emerging changes in Organizations and Structure of Industries, the need for revision of this document was felt from time to time. With this objective, the CSO revised SIC 1962 in 1970 (NIC-70), NIC-1970 in 1987 (NIC-87) and NIC-87 in 1998 (NIC-98). It is during 1998 that 4-digit system of International Standard Industrial Classification (ISIC- 3) was followed and these 4 digits were extended up to 5 digits based on national needs. Consequent upon release of United Nations International Standard Industrial Classification (ISIC) – 2002 Rev. 3.1, NIC- 1998 was updated to bring out NIC – 2004. After adoption of ISIC Revision-4 by the United Nations Statistical Commission (UNSC) in the year 2008, an expert committee under the chairmanship of DG, CSO deliberated on the issues and approved the draft NIC -2008 incorporating revision in NIC- 2004 consistent with ISIC revision 4.

Basic features of NIC 2008

All the activities are grouped into several “activity groups” or “tabulation categories” in a hierarchical manner. Activities are first grouped into ‘section’ alphabetically coded from A through U, every section is divided into ‘division’ with 2-digit numeric code, every division into ‘group’ with 3-digit numeric code, every group into ‘class’ with 4-digit numeric code and every 4-digit class into 5-digit ‘sub-class’. The structure is illustrated below.

Level		Description
Section		Manufacturing
Division 20		Manufacture of Chemicals and Chemical Products
Group	201	Manufacture of Basic Chemicals, Fertilizer and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms
	203	Manufacture of man-made fibres
	2011	Manufacture of Basic Chemicals
	2030	Manufacture of man-made fibres
	20111	Manufacture of liquefied or compressed inorganic industrial or medical gases (elemental gases, liquid or compressed air, refrigerant gases, mixed industrial gases etc.)
	20301	Manufacture of synthetic or artificial filament tow

The structure of NIC-2008 is identical to the structure of ISIC Revision up to 4-digit level ‘class’. Classes were then divided into 5-digit ‘sub classes” according to national requirements.

Salient features of NIC-2008

- The sections A to Q of NIC-2004 have been replaced by sections A to U in respect of NIC-2008. NIC-2008 has 21 sections, 88 divisions, 238 groups, 403 classes and 1304 sub-classes.
- NIC-2008 is comparable with ISIC Rev.4 till 4-digit classes in totality.
- The concept of shadow classes introduced in NIC-2004 has been done away with in NIC- 2008 as the emphasis has been given on activity rather than type of operation and scale of operation.
- In NIC-2008 some of the 5-digit sub-classes of NIC-2004 have been made separate 4-digit classes e.g. ‘Growing of Sugarcane (01115)”, ‘Growing of tobacco (01114)’, ‘Growing of fibre crops (01113)” ‘Growing of flowers (01122)”.
- Repair and installation of machinery and equipment has been classified as separate division (Division-33) in NIC-2008.
- Repair of Personal Household goods (5260 of NIC-2004) has been removed from Section-G (wholesale and retail trade; repair of motor vehicles and motor cycles) and now included in Section-S (other service activities).
- Publishing activity which was included in division-22 of manufacturing section in NIC-

2004 is now included in division-58 (publishing activities) of NIC-2008 under Section-J (information and communication).

- Activity ‘water supply’ under division-41 (Electricity, Gas and Water Supply) of NIC-2004 is now included in Section-E (water supply; sewerage, waste management and remediation activities).
- Explanatory notes of ISIC Rev.4 at 1/2/3-digit level have been incorporated in NIC-2008 as Annexure for better understanding of the revised classification.
- Under 4-digit classes of NIC-2008, inclusion and exclusion statements have been included in the detailed structure itself to remove ambiguity in the scope of classification and to facilitate the classification of economic activity distinctly.

Division 20 and 21 of NIC -2008 relates to “Chemical and Chemical Products” and “Pharmaceutical, Medicinal and botanical products” respectively.

**Source: website of Ministry of Statistics and Programme Implementation, Government of India*

http://mospi.nic.in/sites/default/files/main_menu/national_industrial_classification/nic_2008_17apr09.pdf may be followed for further details.

Chapter 6

Indices released by Government of India

Indices are important economic indicators to demonstrate the relative change in the parameters over a specified period of time. Some of the important indices compiled and released by different Departments under the Government of India along with their inception and uses in different sectors of economy are summarized below:

A. Index of Industrial Production (IIP)

B. Consumer Price Index (CPI)- Industrial Worker, Agricultural Labourer / Rural Labourer, Rural / Urban / Combined

C. Wholesale Price Index (WPI)

A. **Index of Industrial Production-(IIP)**

1. The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation Compiles and brings out an index of Industrial Production. CSO revises the base year of the macroeconomic indicators, as a regular exercise, to capture structural changes in the economy and improve the quality and representativeness of the indices. In this direction, the base year of the all-India Index of Industrial Production (IIP) has also been revised from 2004-05 to 2011-12 to not only reflect the changes in the industrial sector but to also align it with the base year of other macroeconomic indicators like the Gross Domestic Product (GDP), Wholesale Price Index (WPI).
2. IIP in the revised series will continue to represent the Mining, Manufacturing and Electricity sectors. The revised series uses the National Industrial Classification (NIC) 2008 for the purpose of classification of industrial production. 15 source agencies are providing production data for Index of Industrial Production (IIP) base year 2011-12.

Summary of Source Agencies of IIP in the new series with base 2011-12

SI No	Source	Weights (%)
1	Department of Industrial Policy and Promotion (DIPP)	47.54
2	Indian Bureau of Mines	14.37
3	Ministry of Petroleum & Natural Gas	11.29
4	Joint Plant Committee	10.52
5	Central Electricity Authority	7.99
6	Department of Chemicals and Petrochemicals	2.54
7	Office of Textile Commissioner	1.94
8	Department of Fertilisers	1.06
9	Directorate Of Sugar and Vegetable Oils (for Edible Oils only)	0.97
10	Directorate Of Sugar and Vegetable Oils (for Sugar only)	0.76
11	Office of Coal Controller	0.49
12	Tea Board	0.29
13	Railway Board	0.13
14	Office of Jute Commissioner	0.07
15	Coffee Board	0.04
	GENERAL	100.00

3. Highlights of the changes in New Series of Index of Industrial Production are summarized below:
 - a. The selection of items in the new series has been done at the 3 digit level of NIC for better representation as compared to selection at 2 digit level done in 2004-05 series.
 - b. At the broad level, the new series has a total of 809 items occurring in the manufacturing sector in the item basket (405 item groups), where 149 new items like Steroids and hormonal preparations, Cement clinkers, Medical/ surgical accessories, Pre-fabricated concrete blocks, refined Palm Oil have been added and 124 items such as Biaxially Oriented Polypropylene (BOPP) Films, Calculators, Colour TV picture tubes, Gutka have been deleted from the 2004-05 series which had 620 items(397 item groups)in the manufacturing sector. The sectoral composition of the IIP is as follows:

Sector	Base year 2011-12		Base year 2004-05	
	Weights (%)	Item groups	Weights (%)	Item groups
Mining	14.373	1	14.157	1
Manufacturing	77.633	405	75.527	397
Electricity	7.994	1	10.316	1
Total	100	407	100	399

- c. To reflect the increasing significance of electricity generation from renewable sources, it has been decided to include data on electricity generation figures from these sources in the new series. This inclusion is being done from April, 2014 onwards as monthly data for electricity generation from renewable sources for earlier months were not available.
- d. For capital goods, data in the new series will now be captured in terms of ‘work in progress’ to better represent the growth of capital goods and to avoid reporting of production figures in bulk after the completion of production. Details on this methodology are available in the Report of the Working Group set up for the revision of base year, which may be accessed in the official website of this Ministry.
- e. The number of source agencies reporting data for compilation of IIP in the new series will be 14 as compared to 15 in the current series. This is on account of the fact that data on ‘Iodised Salt’ in the new series will be provided by the Department of Industrial Policy and Promotion (DIPP) as O/o Salt Commissioner is not in a position to supply Salt production data after abolition of Salt Cess Act, 1953 in Finance Bill 2016.
- f. In the Mining Sector the coverage has undergone a change on account of the MCDR Amendment Rules, 2016 resulting in 27 non-metallic minerals being designated as minor minerals and which are no longer monitored by Indian Bureau of Mines.

B. Consumer Price Index (CPI)

1. A Consumer Price Index (CPI) is designed to measure the changes over time in general level of retail prices of selected goods and services that households purchase for the purpose of consumption. Such changes affect the real purchasing power of consumer's income and their welfare. CPI numbers are widely used as macroeconomic indicator of inflation, and also as a tool by government and central banks for targeting inflation and monitoring price stability. CPI is also used as deflators in the National Accounts. Therefore, CPI is considered as one of the most important economic indicators.

2. Different types of CPIs, namely, CPI (IW), CPI (AL/RL), CPI (UNME) and CPI (R/U/C) compiled by different agencies of Govt. of India, are available for users in our country. First three indices, including CPI (UNME), are specific to population segments. The price collection for CPI (UNME) was discontinued with effect from April 2008 and linked all India CPI (UNME) numbers were brought out from April 2008 to December 2010. The fourth one

i.e. CPI (R/U/C) is for general population, sector-wise, to be explained in subsequent paragraphs.

3. Salient features of different types of CPIs:

Consumer Price Index for Industrial Workers - CPI (IW)

This index is compiled by the Labour Bureau, Ministry of Labour and Employment. The target population is working class family, defined as a family: (i) located within the center for industrial worker, (ii) has at least one member working as manual worker in an establishment in any of the seven sectors of employment covered viz., factories, plantations, mining, ports and docks, public motor transport undertakings, electricity generating and distributing establishments, and railways; and (iii) derived 50 per cent or more of its income during the calendar month preceding the day of enquiry through any manual work.

The present series of CPI (IW) is on base 2001=100. The weighting diagrams for the purpose of compilation of index numbers had been derived on the basis of average monthly family expenditure of the working class obtained from the Working Class Family Income Expenditure Survey conducted during 1999-2000.

The CPI (IW) is released every month (on the last working day of the following month) for each of the selected 78 centres as well at all India level. It is mainly used for the determination of Dearness Allowance (DA) being paid to Central/State Government employees and also to the workers in the industrial sectors, besides fixation and revision of minimum wages in scheduled employments. It is also used in moving the base year poverty lines for urban areas to the subsequent years.

**The base of the index is being revised to 2015=100 to replace the existing base of the index.*

Consumer Price Index for Agricultural/Rural Labourers - CPI (AL/RL)

These indices are compiled by the Labour Bureau, Ministry of Labour and Employment. The target populations are agricultural and rural labourers. A rural labour household is defined as one, which derives major income from manual employment (rural labour) during the last 365 days. From amongst the rural labour households, those households, which earn 50% or more of their total income from gainful employment as manual labour in agriculture during the last 365 days, are categorized as agricultural labour households. Agricultural labour households form a major subset of rural labour households. A person is considered engaged in agricultural labour if he/she follows one or more of the agricultural occupations in the capacity of wage paid manual labourer, whether paid in cash or kind (excluding exchange labour) or both. A person who does manual work in return for wages in cash or kind or partly in cash and partly in kind (excluding exchange labour) is a wage paid manual labourer. Persons who are self-employed doing manual work are not treated as wage paid manual labourers. People living in rural areas and engaged in manual labour by working in agricultural and/or non-agricultural occupations in return for wages paid either in cash or kind (excluding exchange labour) or both, are considered as rural labourers. Thus, rural labourers include both agricultural and other labourers.

The present series of CPI (AL/RL) is on base 1986-87=100. Estimates of average consumer expenditure per household generated from the results of the NSS 38th round (1983), CES formed the source of weights for different items of goods and services, used in compilation of CPI (AL) and CPI (RL).

For both the current series of CPI (AL) and CPI (RL), the retail prices in respect of goods and services are collected on monthly basis, from fixed markets in 600 sample villages in 20 states by the field workers of the Field Operations Division (FOD) of the National Sample Survey Office (NSSO). The various items (12) of goods and services are

categorized into four main groups namely, (i) Food, (ii) Fuel and Light, (iii) Clothing, Bedding and Footwear; and (iv) Miscellaneous. The items of goods and services are common for the state as a whole but the varieties of most of the items differ from village to village. The collection of retail prices is staggered over four weeks of a month with one-fourth of the sample covered every week.

The CPI (AL/RL) is released every month (20th or preceding working day of the following month) for each of the selected states as well at all India level. It is mainly used for the determination/ fixation and revision of minimum wages in agricultural sector. CPI (AL) is also used in moving the base year poverty lines for rural areas to the subsequent years.

Consumer Price Index for Rural, Urban and Combined - CPI (R/U/C)

The indices are compiled by the CSO on base 2010 = 100. The consumption patterns (weighting diagrams) for this series of CPI have been derived on the basis of average monthly consumer expenditure of an urban/rural household obtained from the results of the 61st Round of CES conducted by the National Sample Survey Office during 2004-05.

C. Wholesale Price Index (WPI)

WPI is an important measure to monitor the dynamic movement of prices at the wholesale level. In a dynamic world, prices keep on changing. WPI is used as a deflator of various nominal macroeconomic variables including Gross Domestic Product (GDP). The WPI based inflation estimates also serve as an important determinant, in formulation of trade, fiscal and other economic policies by the Government. WPI is also used for the purpose of escalation clauses in the supply of raw materials, machinery and construction work. Business firms in search of effective methods for coping with changes in prices often employ price adjustment (escalation) clauses in long-term sales and purchase contracts. WPI is widely recognized among business people, economists, statisticians, and accountants as a useful objective indexing tool in price adjustment clauses.

The base year of All-India WPI has been revised from 2004-05 to 2011-12 by the Office of Economic Advisor (OEA), Department of Industrial Policy and Promotion, Ministry of Commerce and Industry to align it with the base year of other macroeconomic indicators like the Gross Domestic Product (GDP) and Index of Industrial Production (IIP). The Wholesale Price Index (WPI) series in India has undergone six revisions in 1952-53,

1961-62, 1970-71, 1981-82, 1993- 94 and 2004-05 so far. The current series is the seventh revision.

New Features of WPI

- In the new series of WPI, prices used for compilation do not include indirect taxes in order to remove impact of fiscal policy. This is in consonance with international practices and will make the new WPI conceptually closer to ‘Producer Price Index’.
- A new “WPI Food Index” will be compiled to capture the rate of inflation in food items.
- Seasonality of fruits and vegetables has been updated to account for more months as these are now available for longer duration.
- Item level aggregates for new WPI are compiled using Geometric Mean (GM) following international best practice and as is currently used for compilation of All India CPI.
- A high level Technical Review Committee has been set up for the first time to carry out dynamic review process in order to keep pace with the changing structure of the economy.

Chapter 7

Glimpses of Important Trends during 2015-16 to 2019-20

This Chapter has been included in this publication to highlight important trends of chemicals and petrochemicals sector during the last five years i.e. 2015-16 to 2019-20, through graphical presentation with concise analysis. The graphical presentation contains tables alongside displays trend during the considered period in respect of Production, Installed Capacity, Export, Import and Net Export / Net Import relating to various groups under Major Chemicals and Major Petrochemicals with compound annual growth rate (CAGR) during the period 2015-16 to 2019-20. The Chapter also contains Pie Charts which has depicted share of Major groups under Major Chemicals and Major Petrochemicals in respect of Production, Installed Capacity, Export and Import along with Net Import / Net Export during 2019-20.

2. This Publication has also contained detailed tables in Appendices Section showing group- wise, product-wise, year-wise information pertaining to Selected Major Chemicals and Petrochemicals along with top five import and export destinations. The information relating to exchange rates of Indian Rupees' vis-a-vis US\$, World export of Chemicals by top ten countries -2019, Sector –wise FDI Inflows etc. are also included in the Appendices Section.

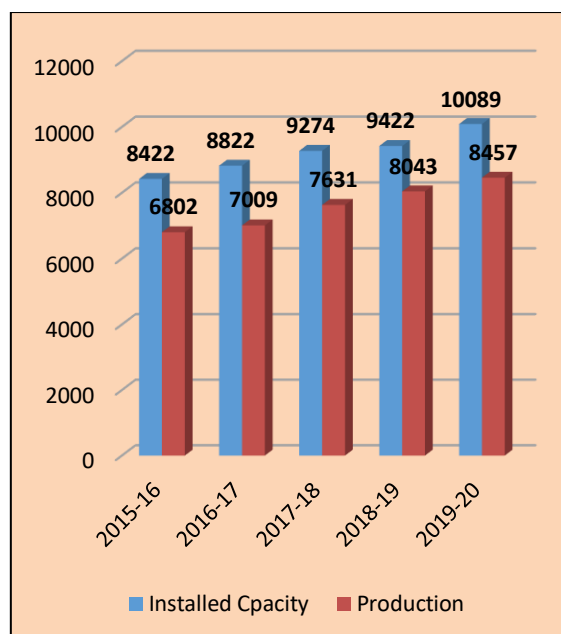
3. Many of statistical tables appended in the Publication present temporal data for the period 2012-13 to 2019-20. CAGR in these tables has also been reflected over the period of 8 years.

4. Hope trends indicated in this chapter and data contained in the publication would help users in understanding the scenario emerging in the sector with clarity and ease.

Alkali Chemicals

Installed Capacity-Production

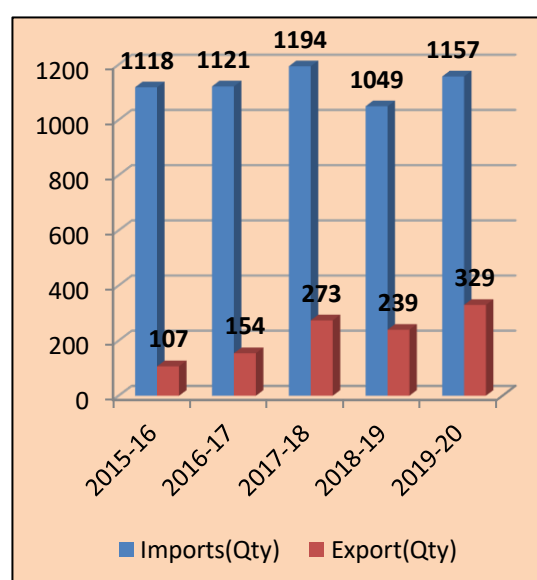
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	8422	6802
2016-17	8822	7009
2017-18	9274	7631
2018-19	9422	8043
2019-20	10089	8457
CAGR (%)	4.6	5.6



It is observed that installed capacity and production of Alkali Chemicals has shown increasing trend during 2015-16 to 2019-20. The actual production was always lower than the installed capacity during the same period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	1118	107
2016-17	1121	154
2017-18	1194	273
2018-19	1049	239
2019-20	1157	329
CAGR (%)	0.9	32.5

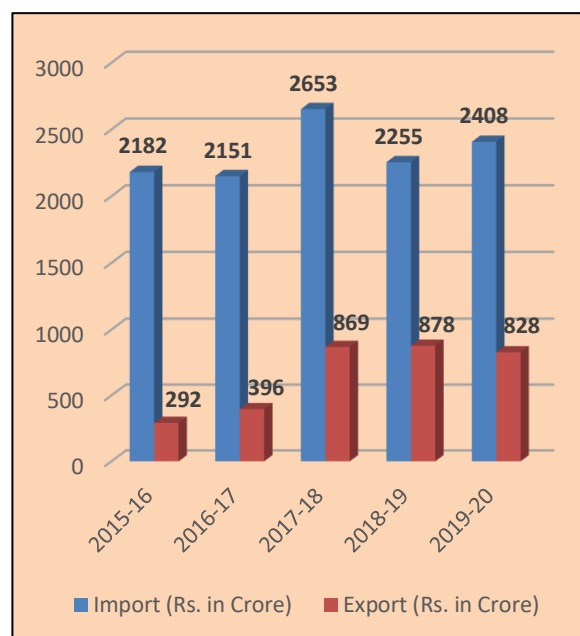


It is observed that the Export of Alkali Chemicals was very less as compared to its import during the period 2015-16 to 2019-20.

Alkali Chemicals

Value of Import- Value of Export

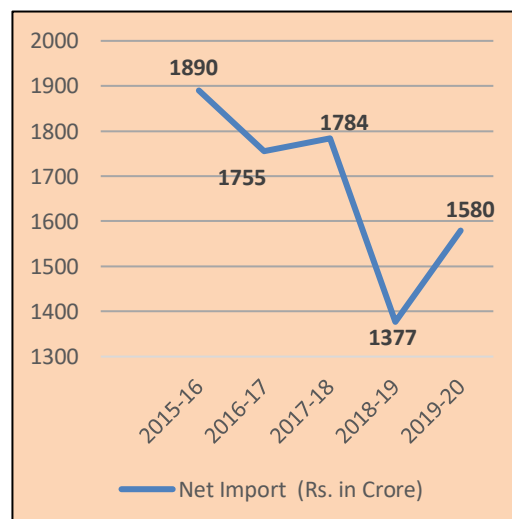
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	2182	292
2016-17	2151	396
2017-18	2653	869
2018-19	2255	878
2019-20	2408	828
CAGR (%)	2.5	29.8



It is evident that the values of Export of Alkali Chemicals were significantly lower than the values of import during 2015-16 to 2019-20. During the same, the maximum Export has been seen during the year 2018-19.

Net Import

Year	Net Import (Rs. in Crore)
2015-16	1890
2016-17	1755
2017-18	1784
2018-19	1377
2019-20	1580
CAGR (%)	-4.4

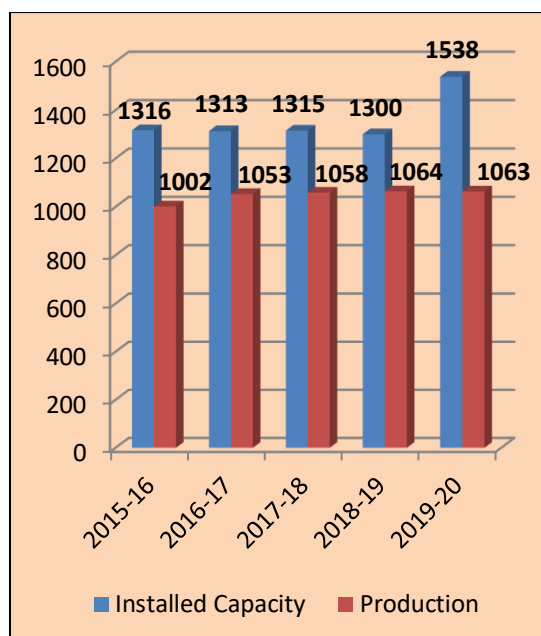


The net Import of Alkali Chemicals has been declining during the years 2015-16 to 2019-20.

Inorganic Chemicals

Installed Capacity-Production

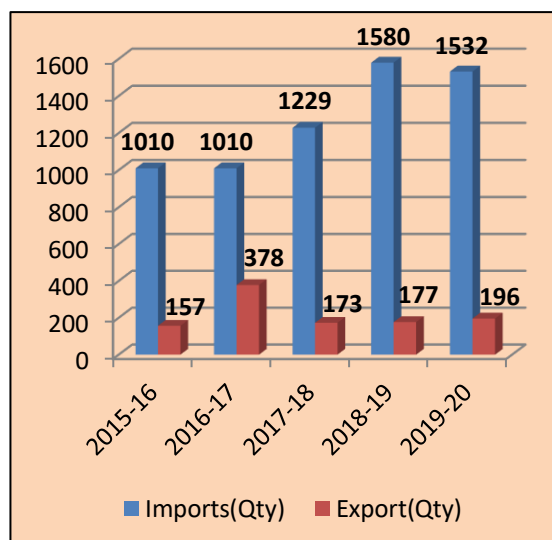
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	1316	1002
2016-17	1313	1053
2017-18	1315	1058
2018-19	1300	1064
2019-20	1538	1063
CAGR (%)	4.0	1.5



It is observed that the installed capacity and production showed no specific trend during 2015-16 to 2019-20. Also the actual production was always lower than the installed capacity during the same period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	1010	157
2016-17	1010	378
2017-18	1229	173
2018-19	1580	177
2019-20	1532	196
CAGR (%)	11.0	5.8

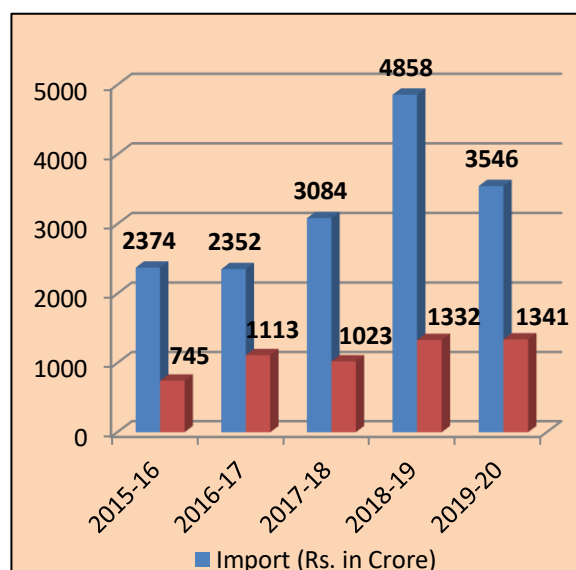


It is observed that during the period Export of Inorganic Chemicals was very low as compared to its import.

Inorganic Chemicals

Value of Import- Value of Export

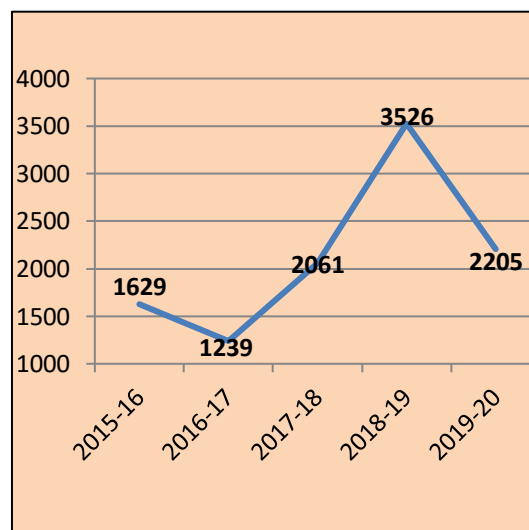
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	2374	745
2016-17	2352	1113
2017-18	3084	1023
2018-19	4858	1332
2019-20	3546	1341
CAGR (%)	10.6	15.8



It is also observed that the values of Export of Inorganic Chemicals were significantly lower than the values of import during 2015-16 to 2019-20. There has been an increasing trend in both import and Export during the period.

Net Import

Year	Net Import (Rs. in Crore)
2015-16	1629
2016-17	1239
2017-18	2061
2018-19	3526
2019-20	2205
CAGR (%)	7.9

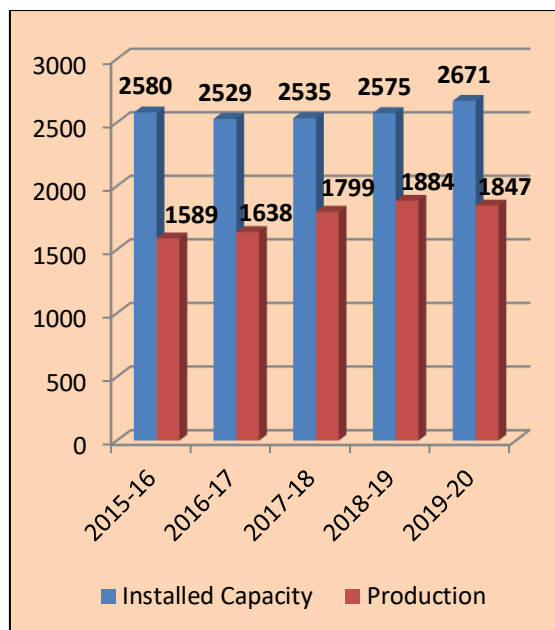


It is evident that the net Import of Inorganic Chemicals has generally increased during 2015-16 to 2019-20.

Organic Chemicals

Installed Capacity-Production

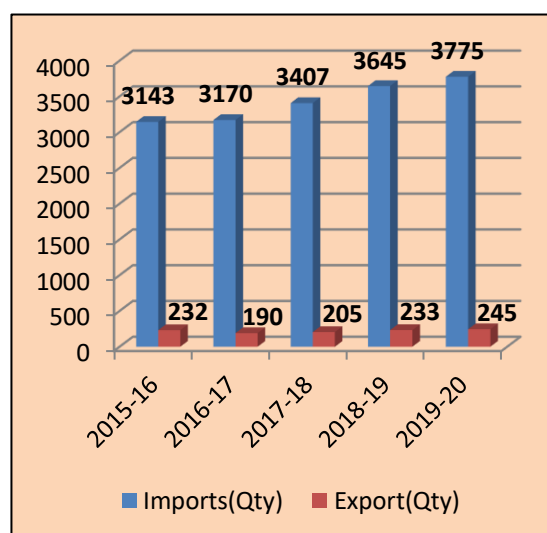
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	2580	1589
2016-17	2529	1638
2017-18	2535	1799
2018-19	2575	1884
2019-20	2671	1847
CAGR (%)	0.9	3.8



It is observed that installed capacity was almost stagnant but the production has increased during 2015-16 to 2019-20. This resulted the reduction in the gap between installed capacity and production during the period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	3143	232
2016-17	3170	190
2017-18	3407	205
2018-19	3645	233
2019-20	3775	245
CAGR (%)	4.7	1.4

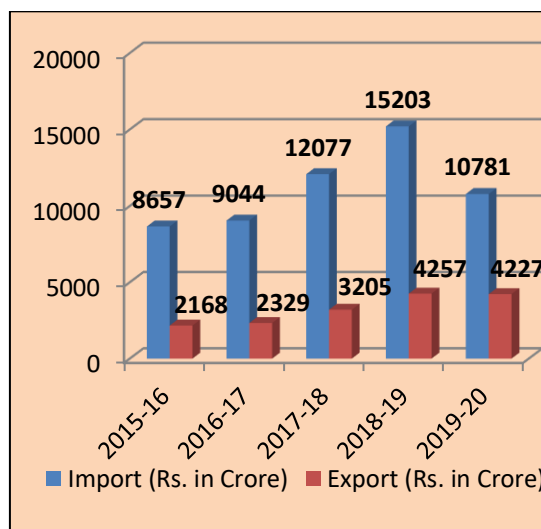


The Exports of Organic Chemicals were significantly lower than the imports during the period 2015-16 to 2019-20. It is also observed that the import of Organic Chemicals has gradually increased but the Export has shown mixed trend during the period.

Organic Chemicals

Value of Import- Value of Export

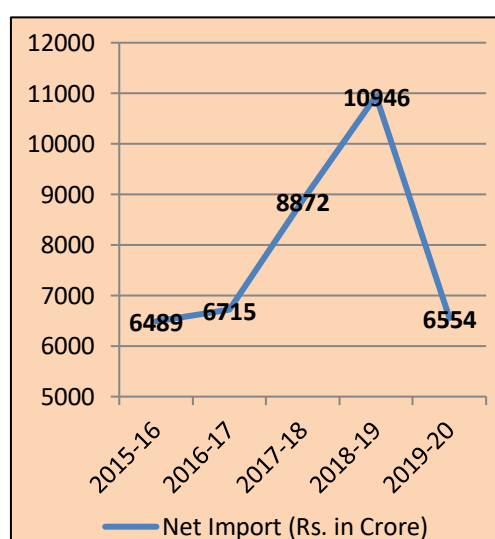
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	8657	2168
2016-17	9044	2329
2017-18	12077	3205
2018-19	15203	4257
2019-20	10781	4227
CAGR (%)	5.6	18.2



Values of Export of Inorganic Chemicals were very low as compared to values of import during the period 2015-16 to 2019-20. During the period, it is observed that the maximum Export was seen in the year 2018-19 and there was an increasing trend in both import and Export except in 2019-20.

Net Import

Year	Net Import in Crore)	(Rs.
2015-16	6489	
2016-17	6715	
2017-18	8872	
2018-19	10946	
2019-20	6554	
CAGR (%)	0.2	

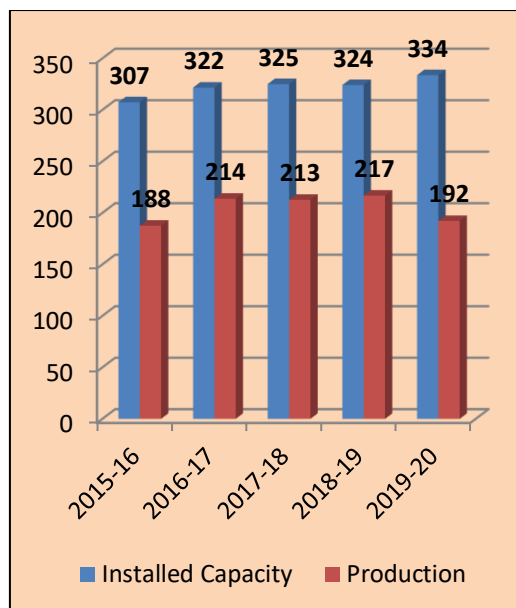


It is stated that the net import of Organic Chemicals has been showing increasing from 2015-16 to 2018-19 but in the year 2019-20, it was again come down from the highest to the near normal net import value of Organic Chemicals.

Pesticides (Technical Grade)

Installed Capacity-Production

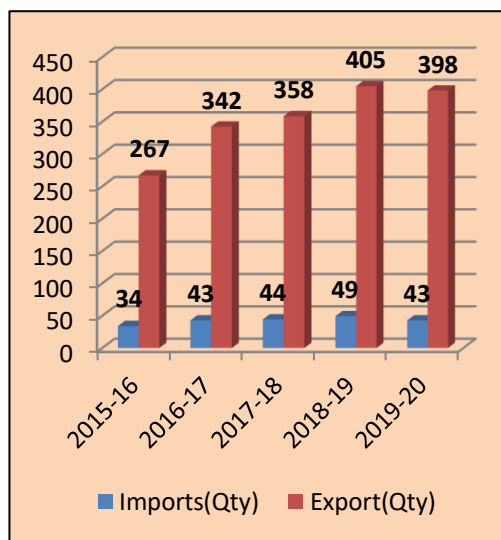
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	307	188
2016-17	322	214
2017-18	325	213
2018-19	324	217
2019-20	334	192
CAGR (%)	2.1	0.6



It is observed that installed capacity and production of Pesticides (Technical Grade) have shown mixed trend during the 2015-16 to 2019-20. The actual production was always lower than the installed capacity during the same period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	34	267
2016-17	43	342
2017-18	44	358
2018-19	49	405
2019-20	43	398
CAGR (%)	5.9	10.5

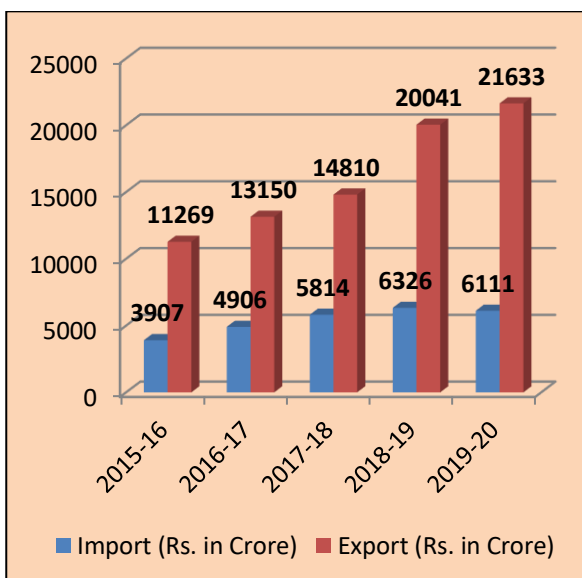


During 2015-16 to 2019-20, the period Export of Pesticides (Technical and formulations both) were significantly higher as compared to its Import and were consistently increased over the years.

Pesticides and Insecticides

Value of Import- Value of Export (Technical Grades & Formulations)

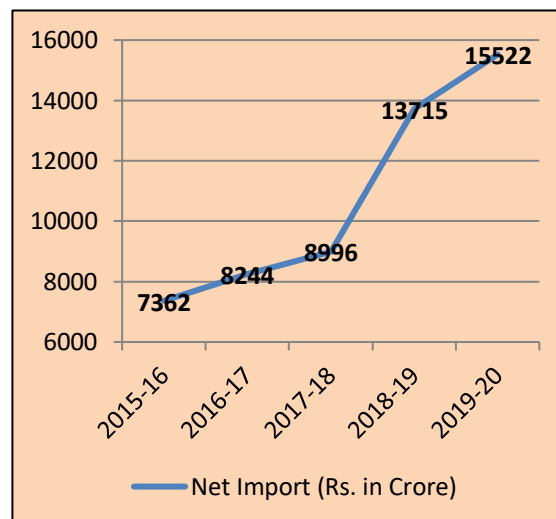
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	3907	11269
2016-17	4906	13150
2017-18	5814	14810
2018-19	6326	20041
2019-20	6111	21633
CAGR (%)	11.8	17.7



It is noted that the values of Export of Pesticides and Insecticides (Technical and Formulations both) were very high as compared to Import during the years 2015-16 to 2019-20. It was consistently increased over the years.

Net Export

Year	Net Export in Crore) (Rs.
2015-16	7362
2016-17	8244
2017-18	8996
2018-19	13715
2019-20	15522
CAGR (%)	20.5

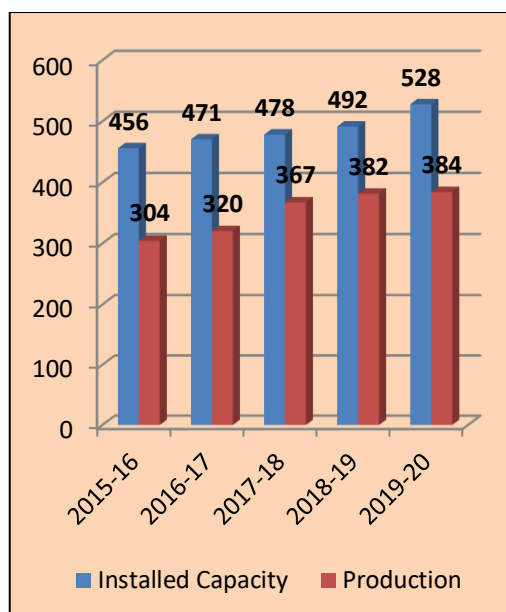


The Net Export of Pesticides and Insecticides (Technical and Formulations both) were increased during 2015-16 to 2019-20. The increasing trend of Net Export of Pesticides is playing an important role to counter situation of trade deficit in Chemical Sector

Dyes and Pigments

Installed Capacity-Production

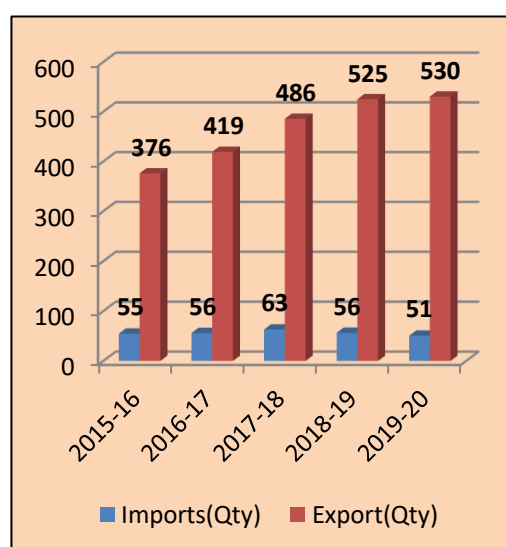
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	456	304
2016-17	471	320
2017-18	478	367
2018-19	492	382
2019-20	528	384
CAGR (%)	3.7	6.0



It is observed that installed capacity and production of Dyes and Pigments have been increasing during 2015-16 to 2019-20. Also, the actual production was less than the installed capacity during the same period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	55	376
2016-17	56	419
2017-18	63	486
2018-19	56	525
2019-20	51	530
CAGR (%)	-1.9	9.0

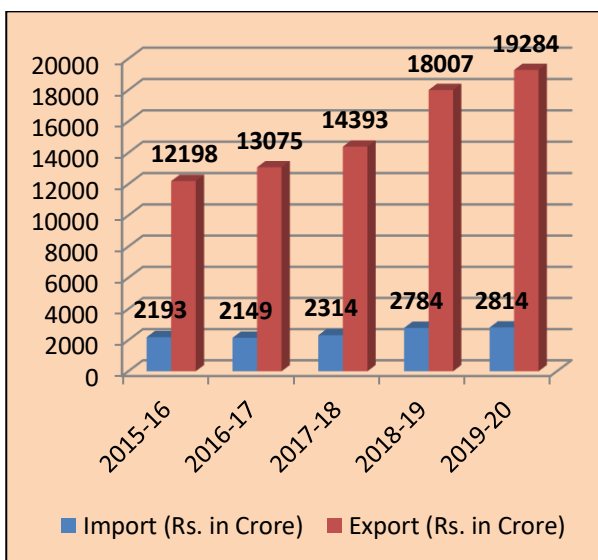


During the period 2015-16 to 2019-20, the Export of Dyes and Pigments was significantly higher compared to its Import which was consistently increased over the years.

Dyes and Pigments

Value of Import- Value of

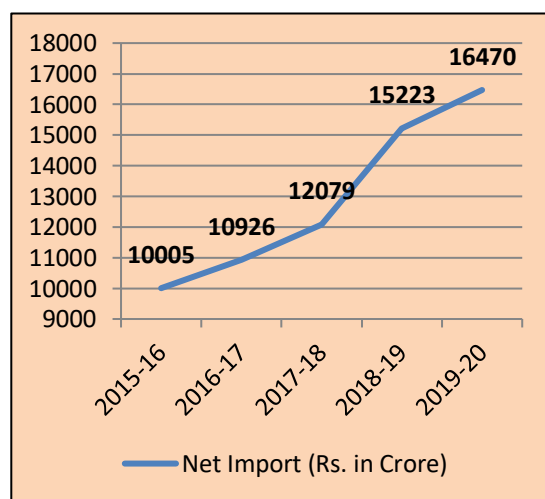
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	2193	12198
2016-17	2149	13075
2017-18	2314	14393
2018-19	2784	18007
2019-20	2814	19284
CAGR (%)	6.4	12.1



During 2015-16 to 2019-20, the values of Export of Dyes and Pigments were higher as compared to its import. It was consistently increased over the years.

Net Export

Year	Net Export in Crore) (Rs.
2015-16	10005
2016-17	10926
2017-18	12079
2018-19	15223
2019-20	16470
CAGR (%)	13.3

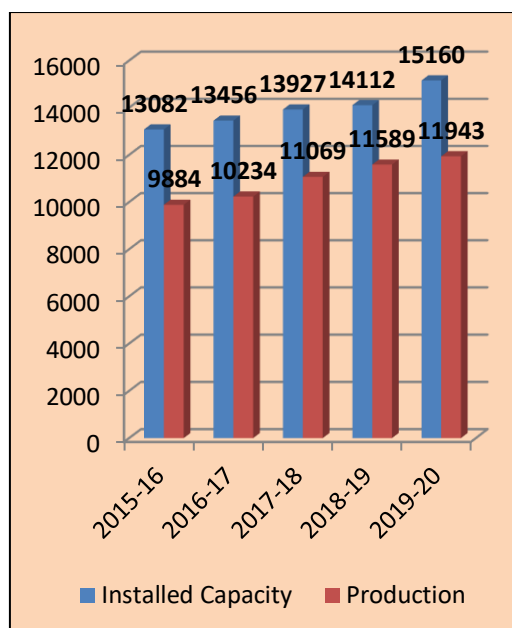


It is noted that the Net Export of Dyes and Pigments has increased during 2015-16 to 2019-20. The increasing trend of Net Export of Dyes and Pigments is playing a vital role to counter situation of trade deficit by the other groups of the Chemical Sector.

Total Major Chemicals

Installed Capacity-Production

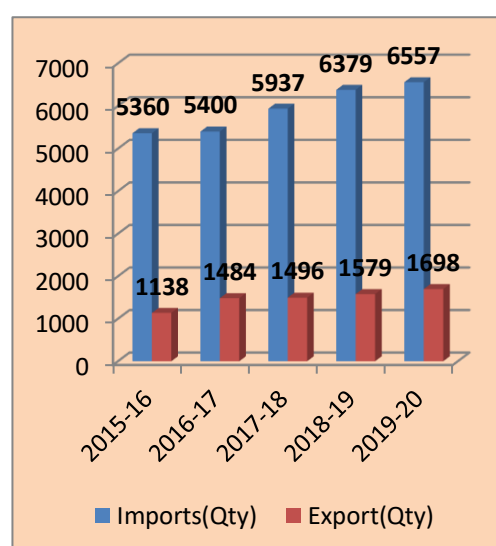
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	13082	9884
2016-17	13456	10234
2017-18	13927	11069
2018-19	14112	11589
2019-20	15160	11943
CAGR (%)	3.8	4.8



It is observed that installed capacity and production of Total Major Chemicals have shown an increasing trend during 2015-16 to 2019-20. Also it is observed that the actual production was lower than the installed capacity during the same period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	5360	1138
2016-17	5400	1484
2017-18	5937	1496
2018-19	6379	1579
2019-20	6557	1698
CAGR (%)	5.2	10.5

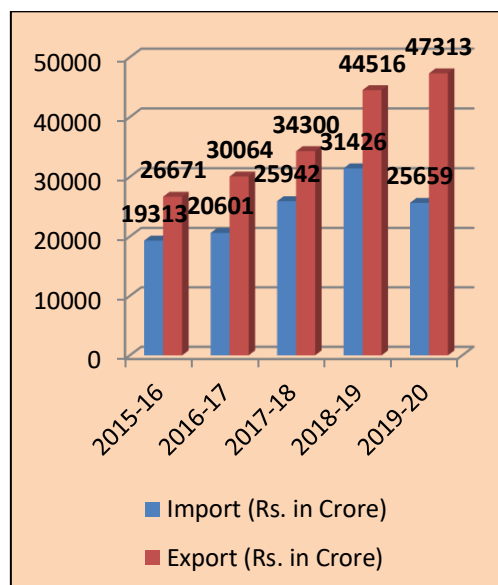


It is clear that during the period Export of Total major Chemicals was significantly low as compared to its import.

Total Major Chemicals

Value of Import- Value of

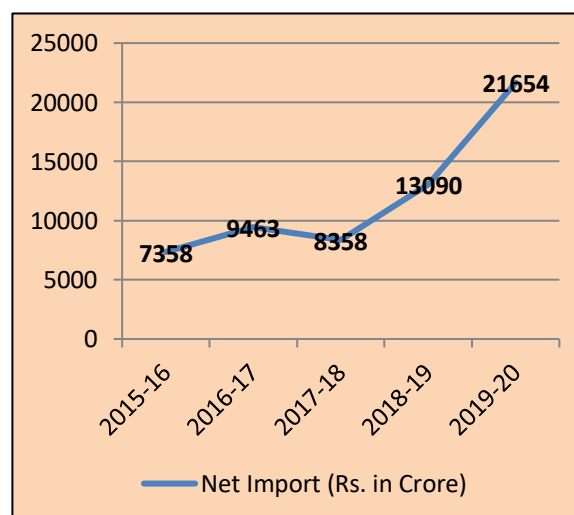
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	19313	26671
2016-17	20601	30064
2017-18	25942	34300
2018-19	31426	44516
2019-20	25659	47313
CAGR (%)	7.4	15.4



During 2015-16 to 2019-20, the values of Export of Total Major Chemicals were consistently increased as compared to its import which resulted into situation of trade surplus.

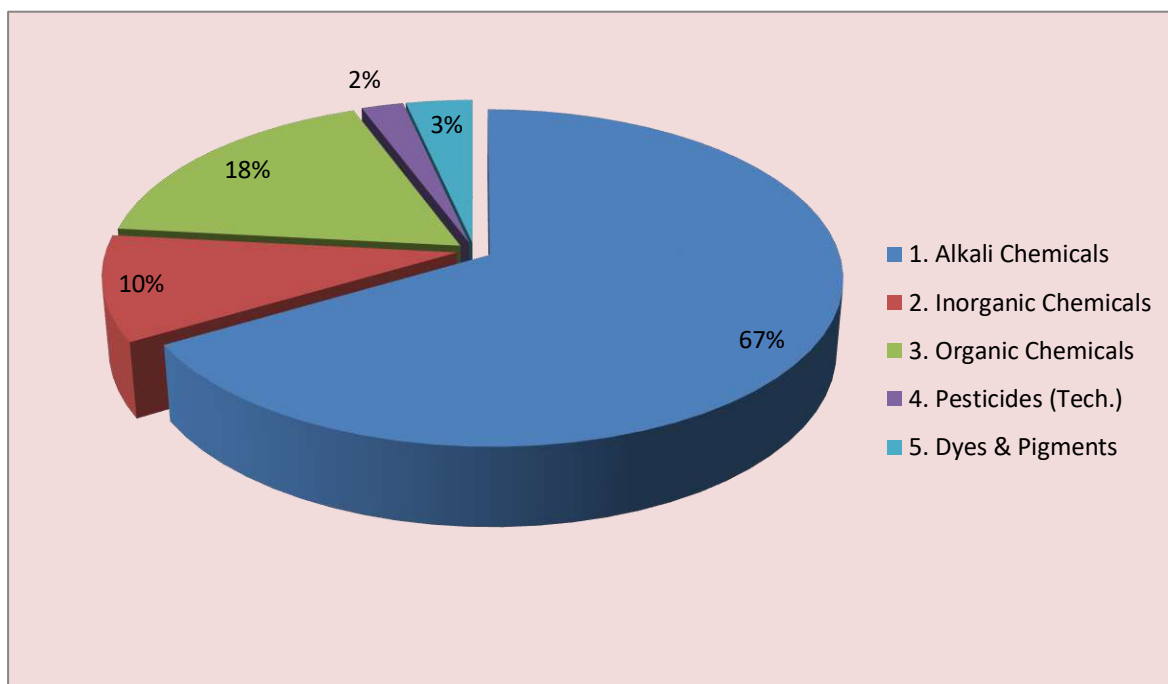
Net Export

Year	Net Export (Rs. in Crore)
2015-16	7358
2016-17	9463
2017-18	8358
2018-19	13090
2019-20	21654
CAGR (%)	31.0

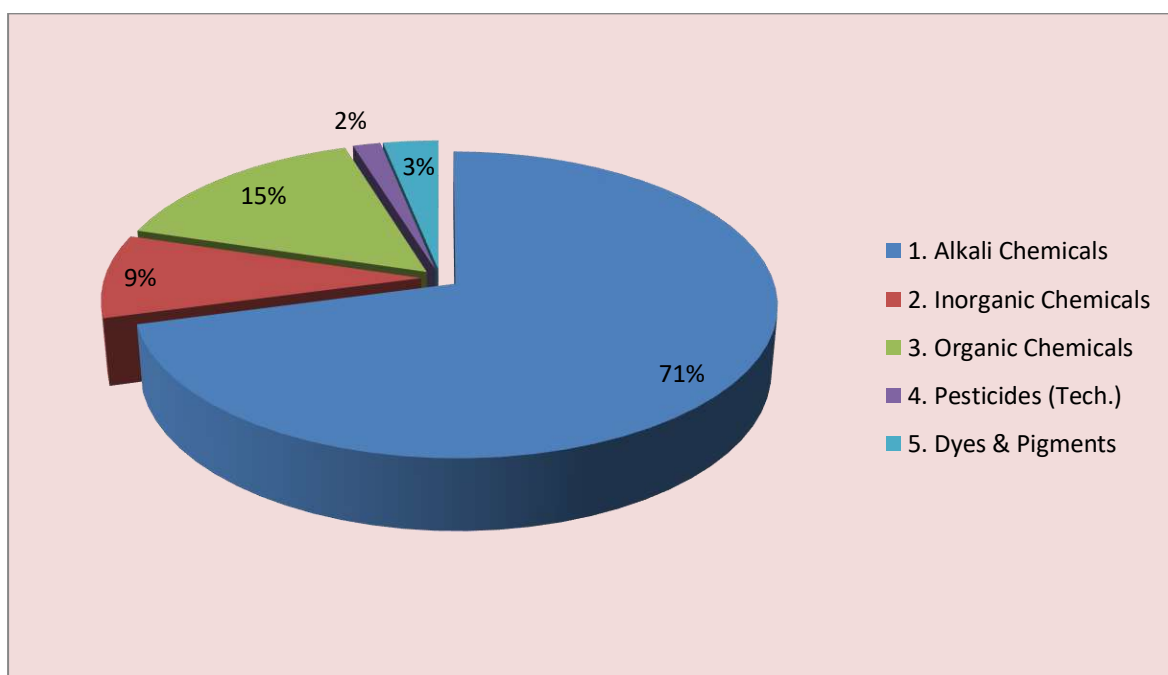


It is apparent that during the years 2015-26 to 2019-20, the Net Export of Total Major Chemicals was showing an increasing trend except the marginal decrease in 2017-18.

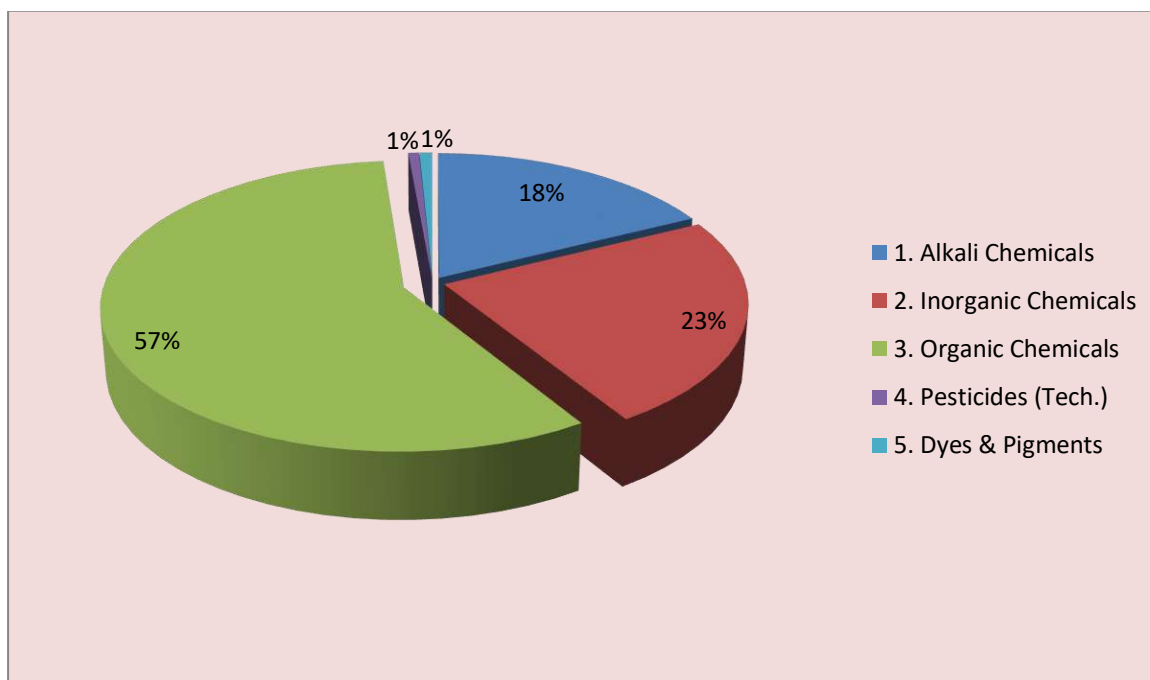
Share of different groups of Major Chemical in Installed Capacity during 2019-20



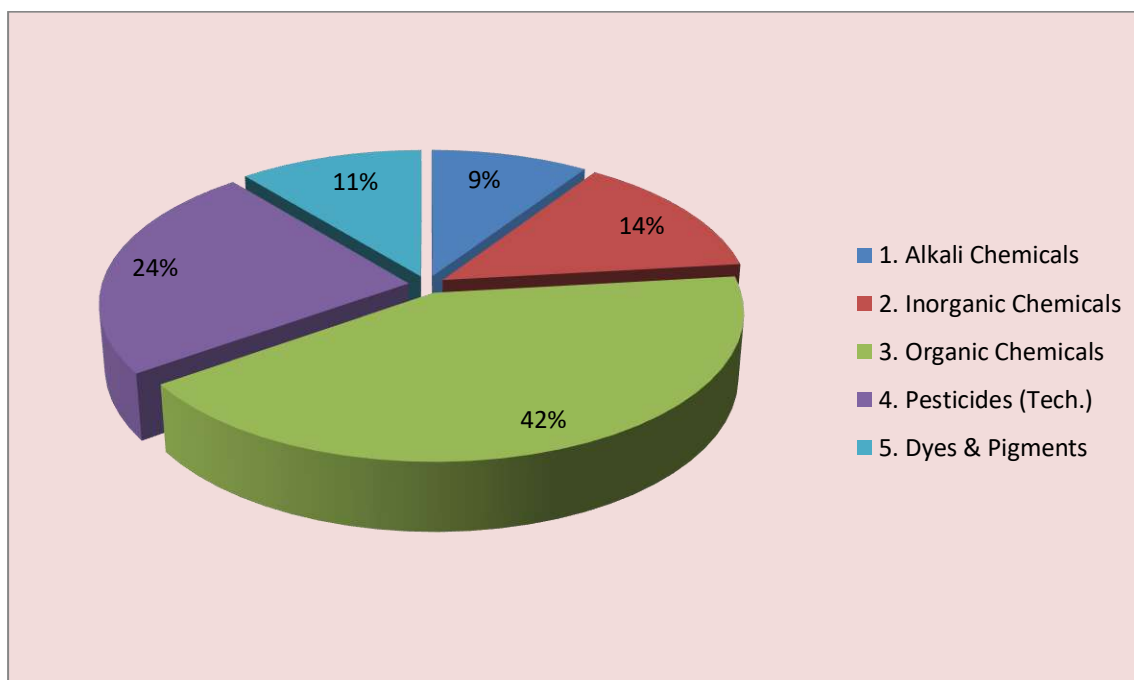
Share of different groups of Major Chemical in Production during 2019-20



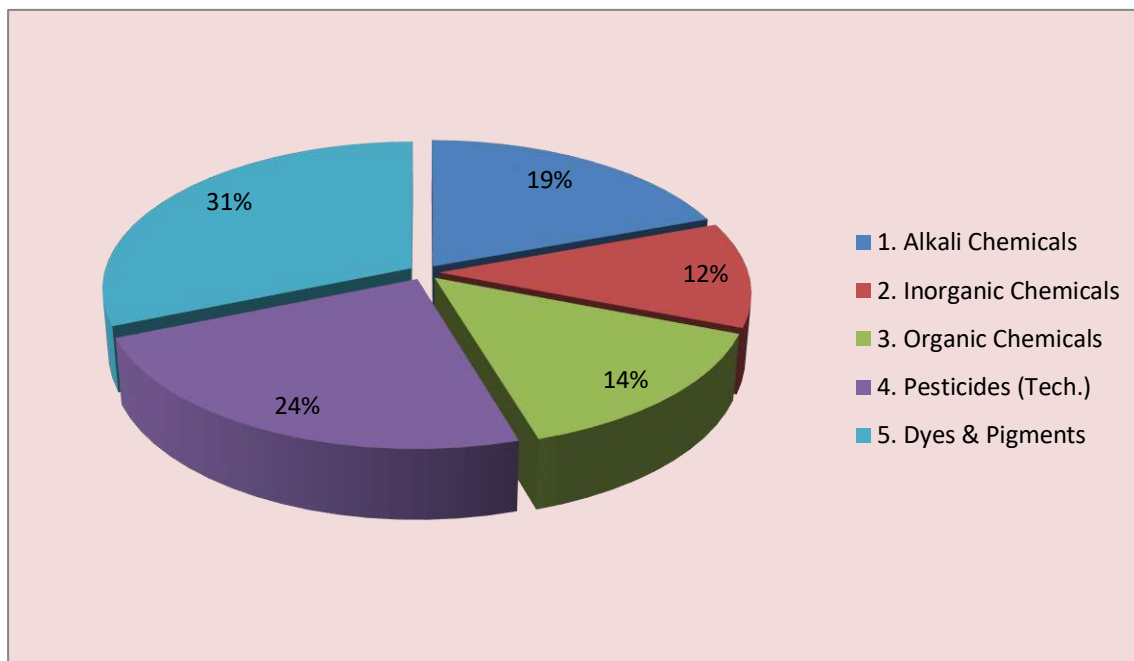
Share of different groups of Major Chemical in total Import (Qty.) during 2019-20



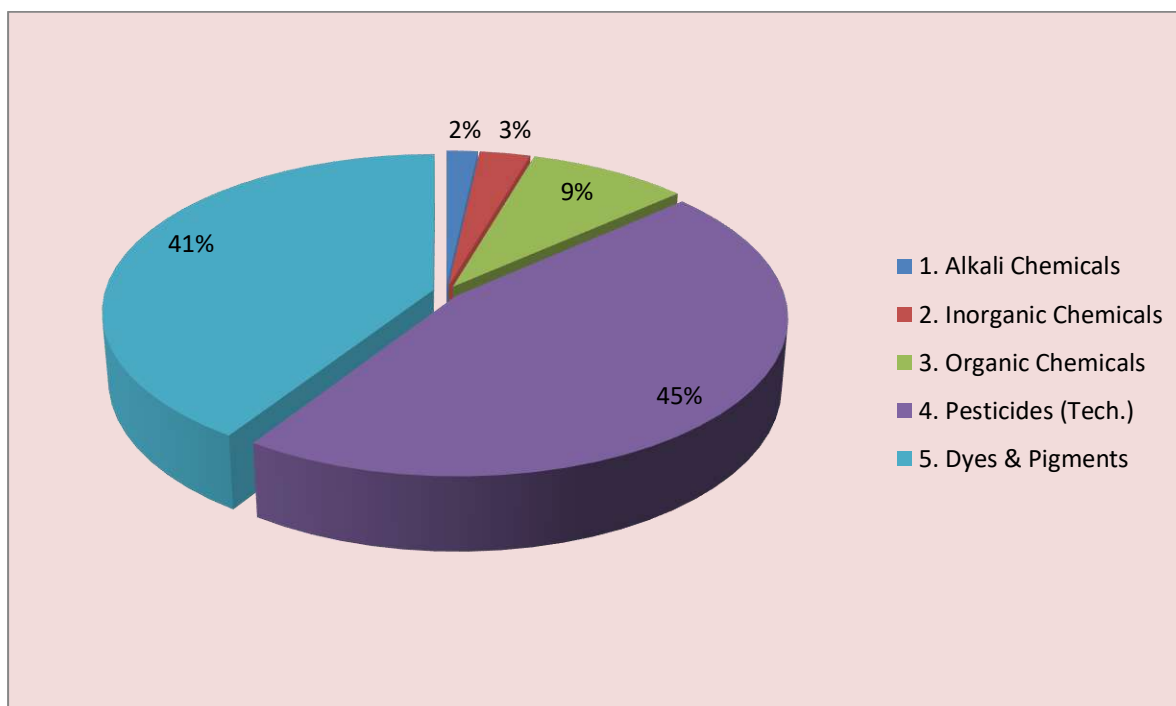
Share of different groups of Major Chemical in total Import (Value) during 2019-20



Share of different groups of Major Chemical in total Export (Qty.) during 2019-20



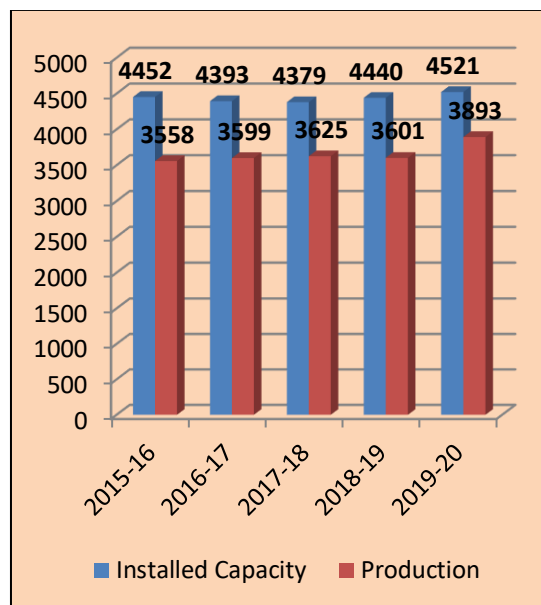
Share of different groups of Major Chemical in total Export (Value) during 2019-20



Synthetic Fibres/Yarn

Installed Capacity-Production

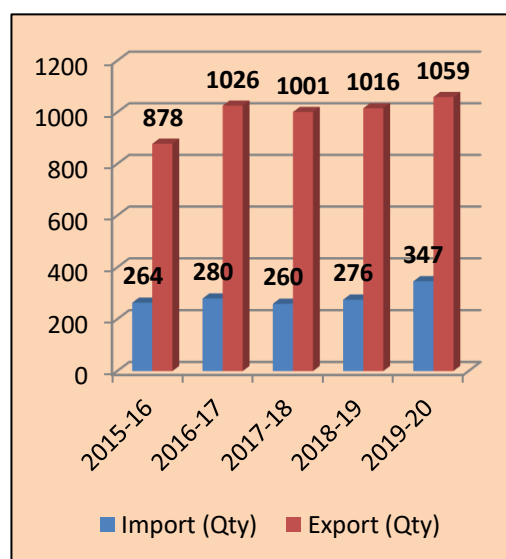
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	4452	3558
2016-17	4393	3599
2017-18	4379	3625
2018-19	4440	3601
2019-20	4521	3893
CAGR (%)	0.4	2.3



It is observed that installed capacity was almost stagnant while the production of Synthetic Fibre/Yarn has shown an increasing trend during 2015-16 to 2019-20. The actual production was always lower than the installed capacity during the period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	264	878
2016-17	280	1026
2017-18	260	1001
2018-19	276	1016
2019-20	347	1059
CAGR (%)	7.1	4.8

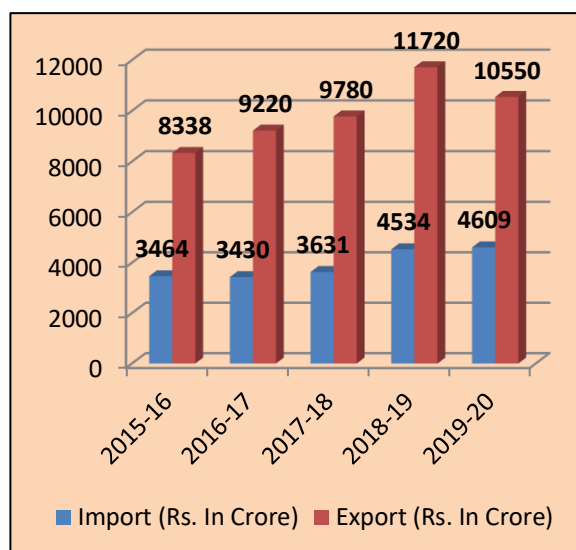


The Export of Synthetic Fibre / Yarn were significantly higher than the Import during 2015-16 to 2019-20.

Synthetic Fibres/Yarn

Value of Import- Value of Export

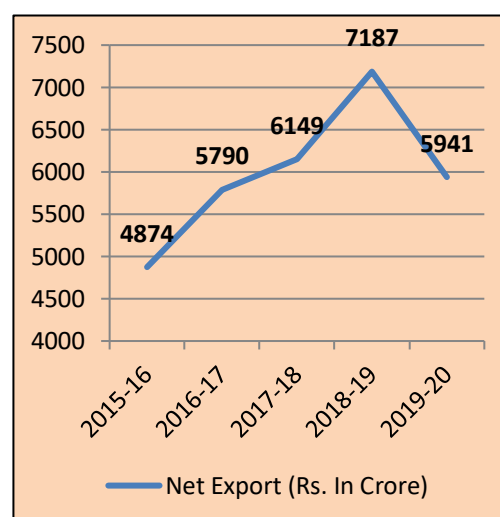
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	3464	8338
2016-17	3430	9220
2017-18	3631	9780
2018-19	4534	11720
2019-20	4609	10550
CAGR (%)	7.4	6.1



It is observed that during the years 2015-16 to 2019-20, the Export of Synthetic Fibre / Yarn were significantly higher as compared to its import which resulted into trade surplus. Both Import-Export has shown an increasing trend during the period. Also, the rate of increase was higher in the Export than the import.

Net Export

Year	Net Import (Rs. in Crore)
2015-16	4874
2016-17	5790
2017-18	6149
2018-19	7187
2019-20	5941
CAGR (%)	5.1

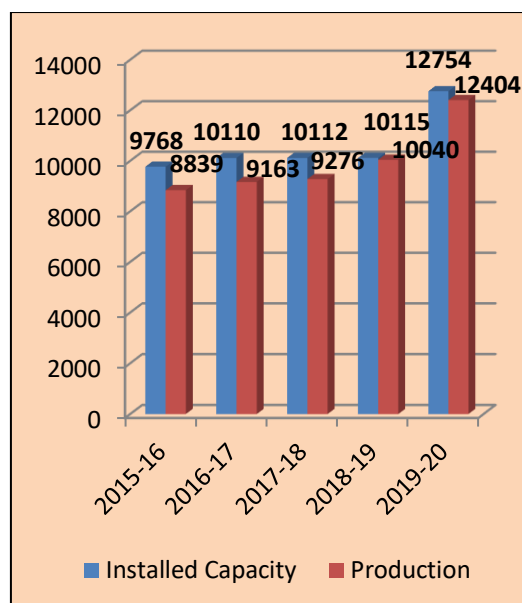


It is depicted that the net Export of Synthetic Fibre / Yarn has shown an increasing trend except the year 2019-20.

Polymers

Installed Capacity-Production

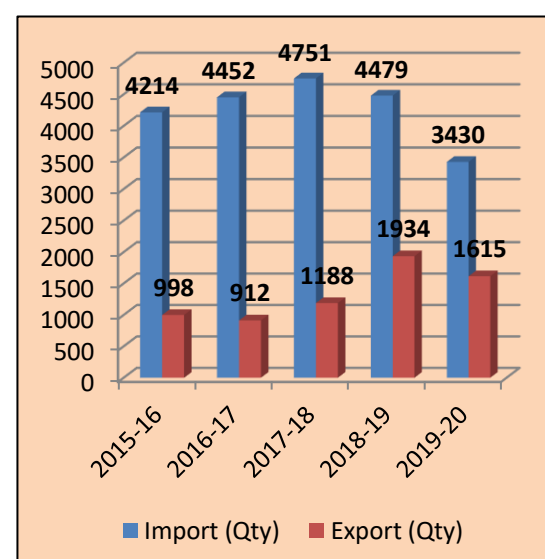
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	9768	8839
2016-17	10110	9163
2017-18	10112	9276
2018-19	10115	10040
2019-20	12754	12404
CAGR (%)	6.9	8.8



It is observed that installed capacity and production of Polymers has shown, in general, an increasing trend during 2015-16 to 2019-20. Both installed capacity and production of Polymers were increased significantly in the year 2019-20.

Quantity Imported-Quantity Exported

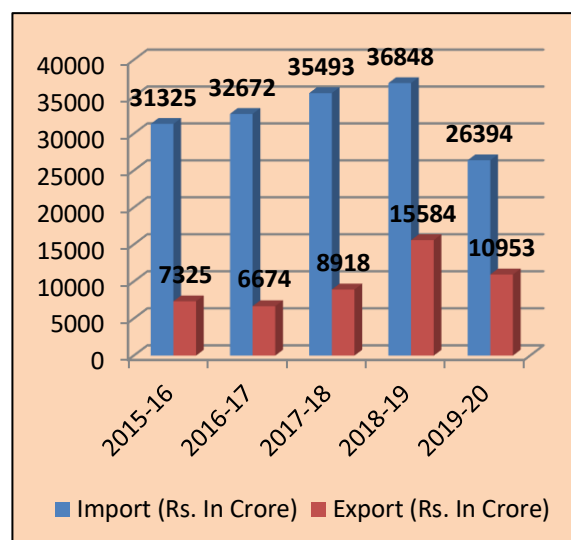
Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	4214	998
2016-17	4452	912
2017-18	4751	1188
2018-19	4479	1934
2019-20	3430	1615
CAGR (%)	-5.0	12.8



Polymers

Value of Import- Value of Export

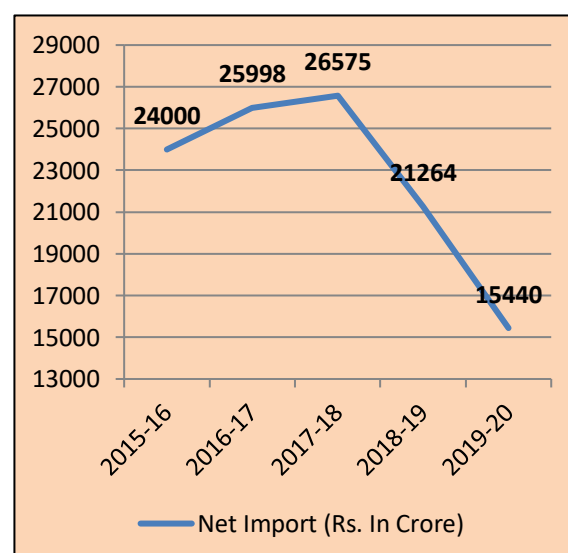
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	31325	7325
2016-17	32672	6674
2017-18	35493	8918
2018-19	36848	15584
2019-20	26394	10953
CAGR (%)	-4.2	10.6



It is observed that during the years 2015-16 to 2019-20 the import of Polymers was significantly higher as compared to its Export which resulted into trade deficit during the period.

Net Import

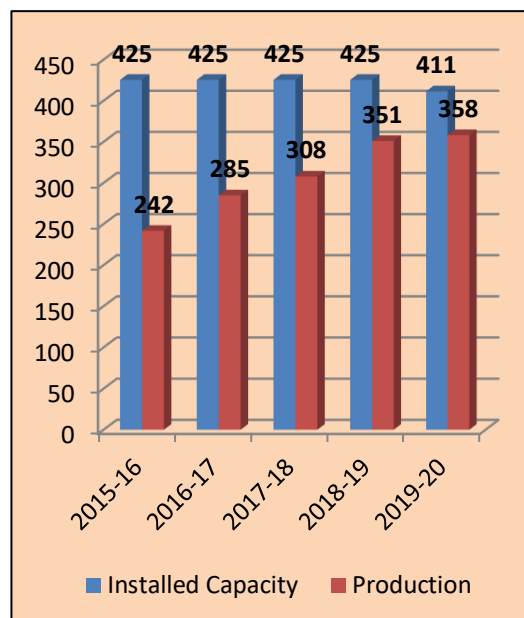
Year	Net Import (Rs. in Crore)
2015-16	24000
2016-17	25998
2017-18	26575
2018-19	21264
2019-20	15440
CAGR (%)	-10.4



Synthetic Rubber

Installed Capacity-Production

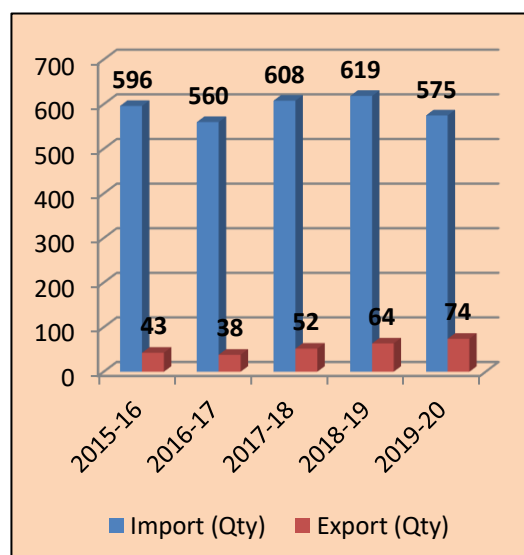
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	425	242
2016-17	425	285
2017-18	425	308
2018-19	425	351
2019-20	411	358
CAGR (%)	-0.8	10.3



It is observed that installed capacity of Synthetic Rubber was almost stable but the production has shown an increasing trend during the period 2015-16 to 2019-20.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	596	43
2016-17	560	38
2017-18	608	52
2018-19	619	64
2019-20	575	74
CAGR (%)	-0.9	14.8

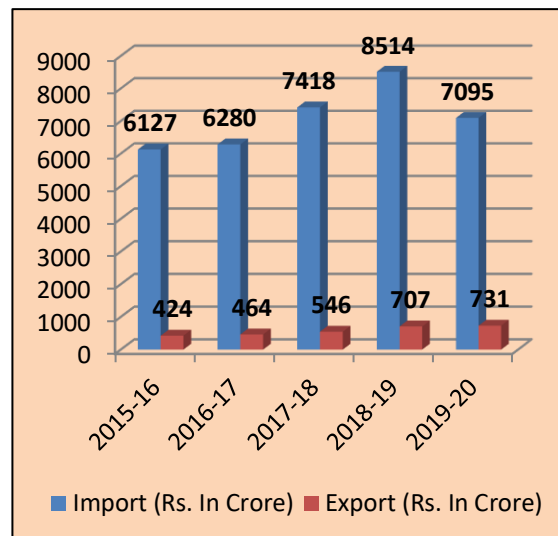


It is observed that in the years 2015-16 to 2019-20 the gap between Import-Export of Synthetic Rubber were significantly high in each year.

Synthetic Rubber

Value of Import- Value of Export

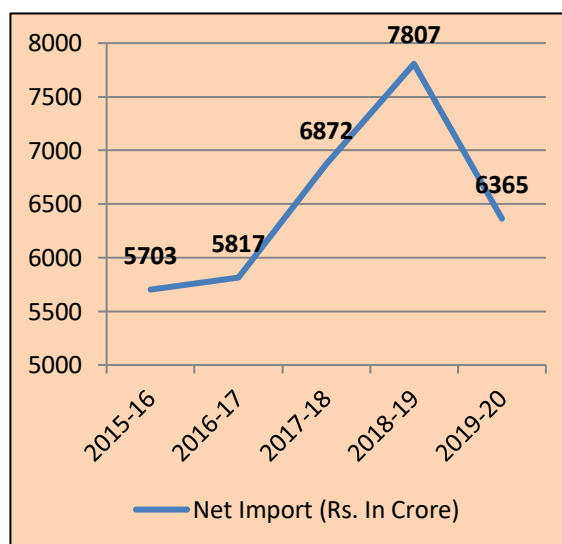
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	6127	424
2016-17	6280	464
2017-18	7418	546
2018-19	8514	707
2019-20	7095	731
CAGR (%)	3.7	14.6



It is observed that during 2015-16 to 2019-20, the import of Synthetic Rubber was very high compared to the Export which resulted into trade deficit during the period.

Net Import

Year	Net Import (Rs. in Crore)
2015-16	5703
2016-17	5817
2017-18	6872
2018-19	7807
2019-20	6365
CAGR (%)	2.8

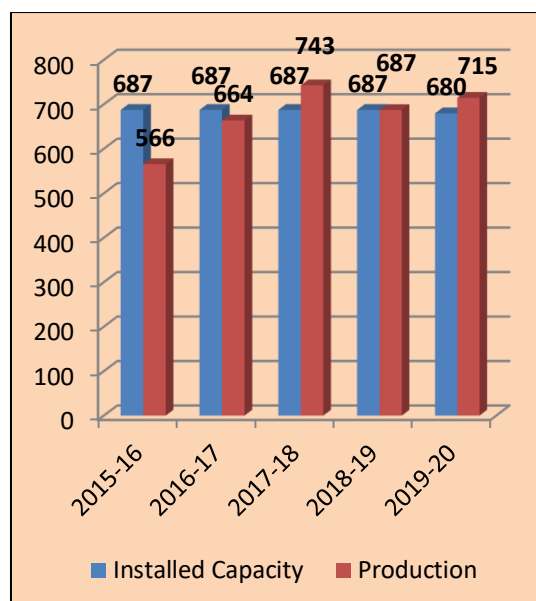


It is observed that the Net Import of Synthetic Rubber was showing an increase trend except 2019-2020.

Synthetic Detergent Intermediates

Installed Capacity-Production

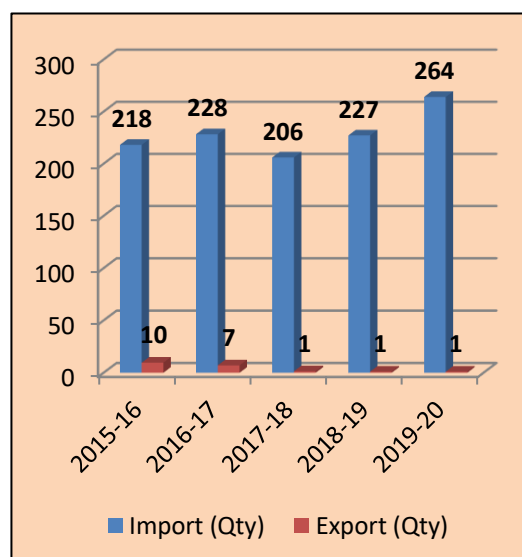
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	687	566
2016-17	687	664
2017-18	687	743
2018-19	687	687
2019-20	680	715
CAGR (%)	-0.3	6.0



It is observed that installed capacity of Synthetic Detergent Intermediates was almost stable but the production has generally increased during 2015-16 to 2019-20. It would be mentioned that the production during 2017-18 and 2019-20 were higher as against their installed capacity.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	218	10
2016-17	228	7
2017-18	206	1
2018-19	227	1
2019-20	264	1
CAGR (%)	4.9	-42.6

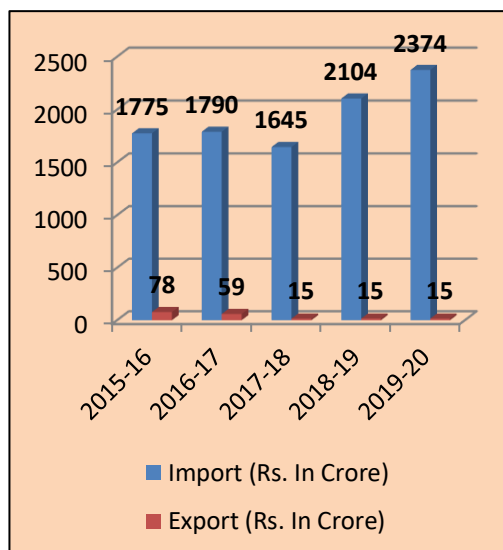


It is observed that during 2015-16 to 2019-20, the Export of Synthetic Detergent Intermediates were significantly lower as compared to its Import.

Synthetic Detergent Intermediates

Value of Import- Value of Export

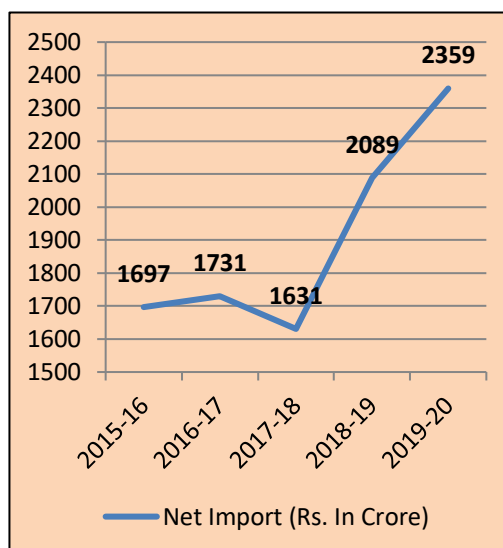
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	1775	78
2016-17	1790	59
2017-18	1645	15
2018-19	2104	15
2019-20	2374	15
CAGR (%)	7.5	-33.9



It is noted that during 2015-16 to 2019-20 the Import of Synthetic Detergent Intermediates were significantly higher as compared to its Export which resulted into trade deficit. It is also observed that import of Synthetic Detergent Intermediates was showing an increasing trend but Export was declining which resulted in to widening of trade deficit during the period.

Net Import

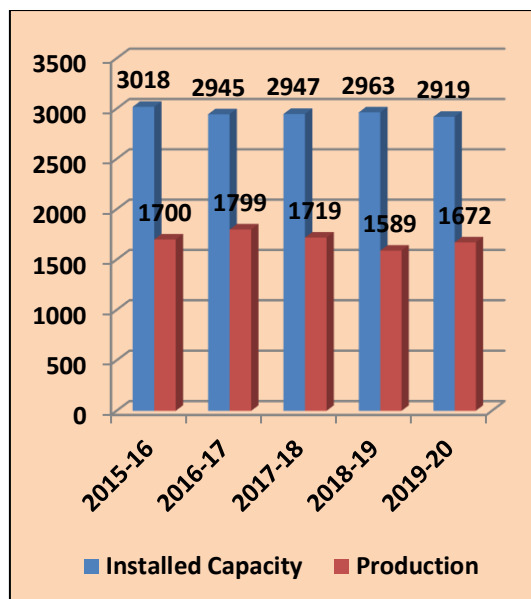
Year	Net Import (Rs. in Crore)
2015-16	1697
2016-17	1731
2017-18	1631
2018-19	2089
2019-20	2359
CAGR (%)	8.6



Performance Plastic

Installed Capacity-Production

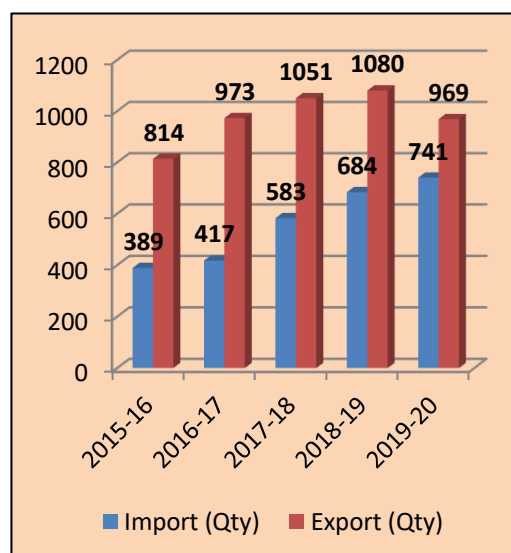
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	3018	1700
2016-17	2945	1799
2017-18	2947	1719
2018-19	2963	1589
2019-20	2919	1672
CAGR (%)	-0.8	-0.4



It is observed that the both installed capacity and production of Performance Plastic were almost stagnant during 2015-16 to 2019-20. Also the production of Performance Plastic during the period was significantly lower as compared to the installed capacity.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	389	814
2016-17	417	973
2017-18	583	1051
2018-19	684	1080
2019-20	741	969
CAGR (%)	17.5	4.4

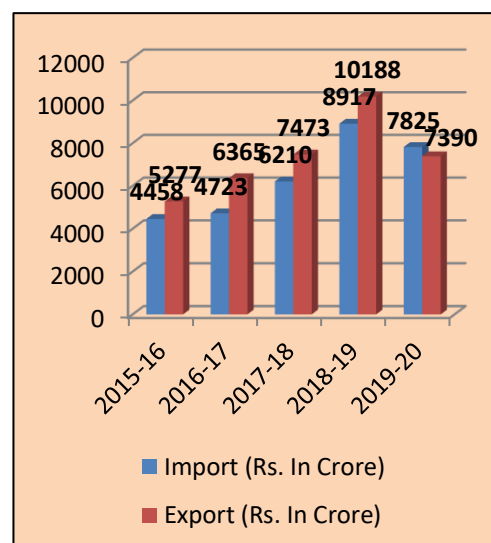


It is observed that during 2015-26 to 2019-20 the Export of Performance Plastic were significantly higher as compared to its import.

Performance Plastic

Value of Import- Value of Export

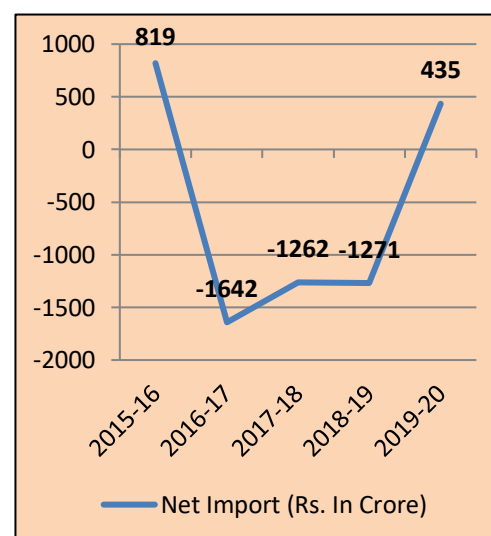
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	4458	5277
2016-17	4723	6365
2017-18	6210	7473
2018-19	8917	10188
2019-20	7825	7390
CAGR (%)	15.1	8.8



It is noted that during 2015-16 to 2019-20 the Import and Export of Performance Plastic has been showing an increasing trends except in the year 2019-20. Also, it is observed that the Export was higher than Import except in the year 2019-20.

Net Import

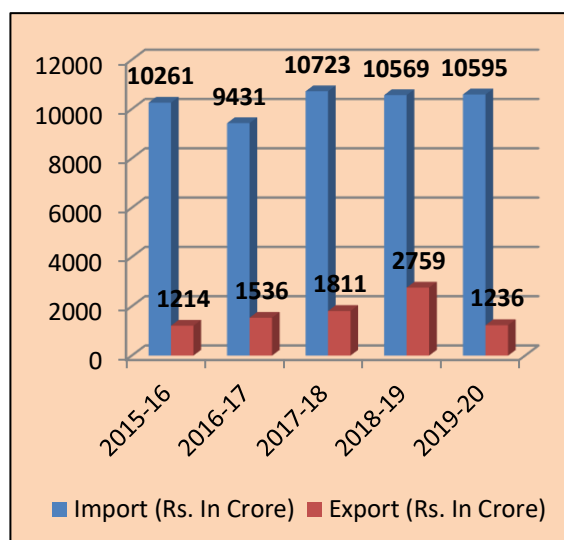
Year	Net Import (Rs. in Crore)
2015-16	819
2016-17	-1642
2017-18	-1262
2018-19	-1271
2019-20	435
CAGR (%)	-14.7



Fibre Intermediates

Value of Import- Value of Export

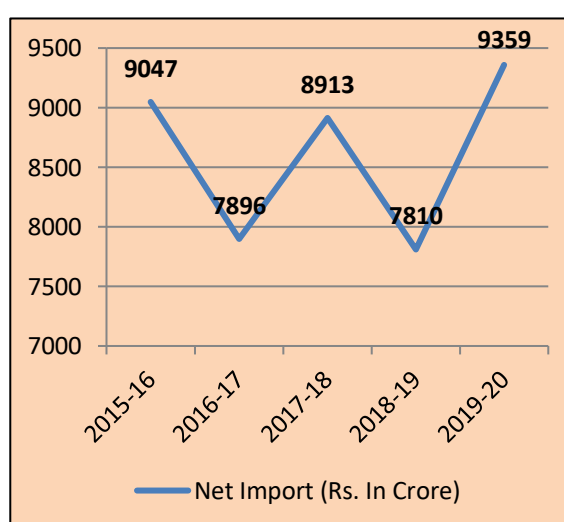
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	10261	1214
2016-17	9431	1536
2017-18	10723	1811
2018-19	10569	2759
2019-20	10595	1236
CAGR (%)	0.8	0.5



It is evident that during the years 2015-16 to 2019-20 the Import of Fibre Intermediates was higher as compared to its Export which resulted into trade deficit during the period.

Net Import

Year	Net Import (Rs. in Crore)
2015-16	9047
2016-17	7896
2017-18	8913
2018-19	7810
2019-20	9359
CAGR (%)	0.8

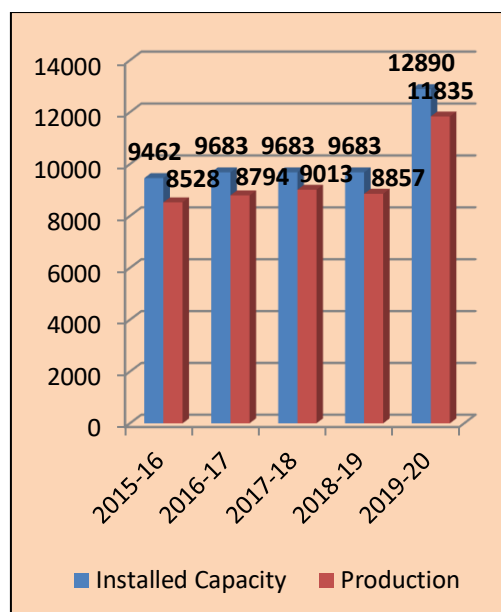


During 2015-16 to 2019-20 the net Import of Fibre Intermediates were showing a mix trend.

Olefins

Installed Capacity-Production

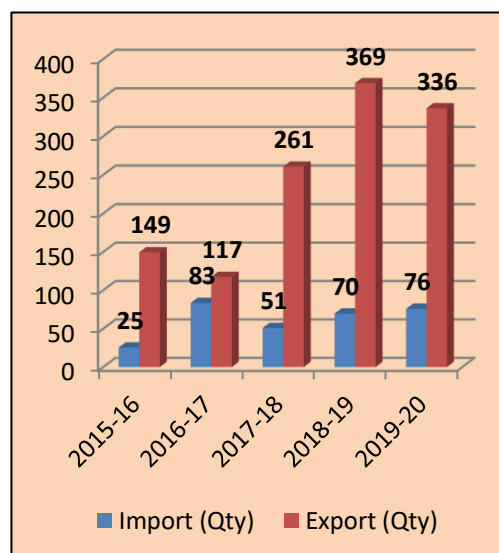
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	9462	8528
2016-17	9683	8794
2017-18	9683	9013
2018-19	9683	8857
2019-20	12890	11835
CAGR (%)	8.0	8.5



The Production of Olefins during the year 2019-20 was 11835 Thousand MT as against installed capacity of 12890 Thousand MT. It is observed that both installed capacity and production of Olefins were increased significantly during 2019-20 as compared to its previous five years.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	25	149
2016-17	83	117
2017-18	51	261
2018-19	70	369
2019-20	76	336
CAGR (%)	31.5	22.5

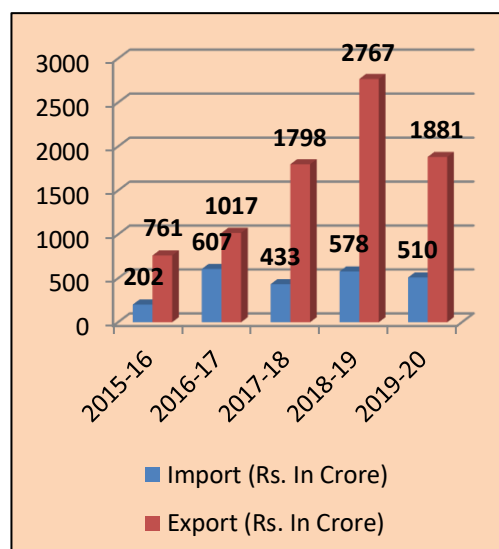


It is pleasant to note that in the last five years the Export of Olefins was very high as compared to its Import.

Olefins

Value of Import- Value of Export

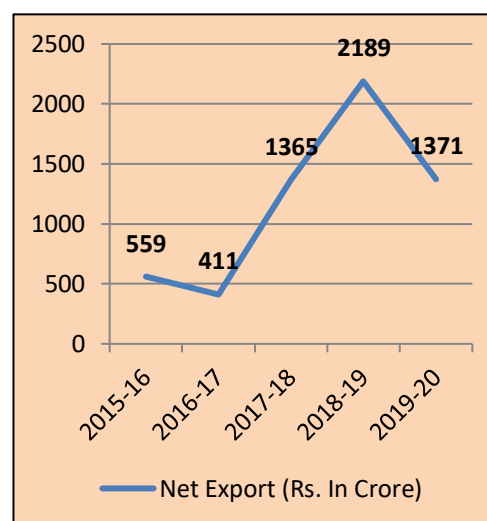
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	202	761
2016-17	607	1017
2017-18	433	1798
2018-19	578	2767
2019-20	510	1881
CAGR (%)	26.1	25.4



It is noted that during 2015-16 to 2019-20 the Export of Olefins has shown increasing trends except the decline in the year 2019-20 but there was no specific trend of the Import. Also it is observed that Export was higher than Import in each during the period.

Net Export

Year	Net Export (Rs. in Crore)
2015-16	559
2016-17	411
2017-18	1365
2018-19	2189
2019-20	1371
CAGR (%)	25.2

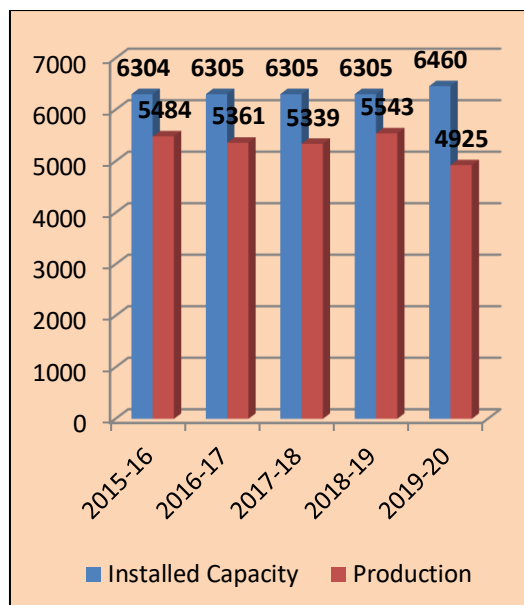


It is evident that the Net Export of Olefins was positive and it has shown an increasing trend except in the year 2019-20.

Aromatics

Installed Capacity-Production

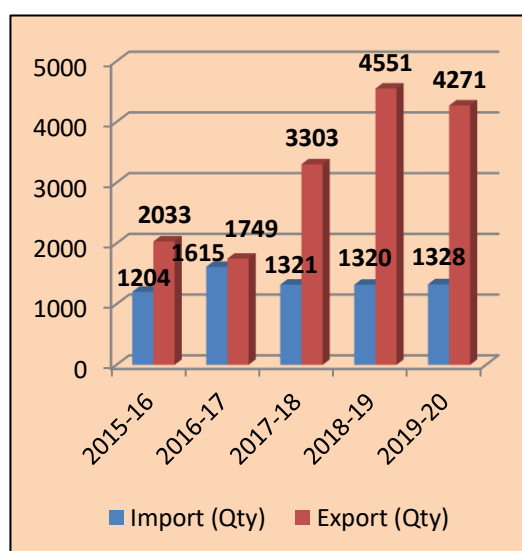
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	6304	5484
2016-17	6305	5361
2017-18	6305	5339
2018-19	6305	5543
2019-20	6460	4925
CAGR (%)	0.6	-2.7



Production of Aromatics during the year 2019-20 was 4925 Thousand MT as against installed capacity of 6460 Thousand MT. It is observed that installed capacity and production of Aromatics was almost stagnant during the years 2015-16 to 2019-20.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	1204	2033
2016-17	1615	1749
2017-18	1321	3303
2018-19	1320	4551
2019-20	1328	4271
CAGR (%)	2.5	20.4

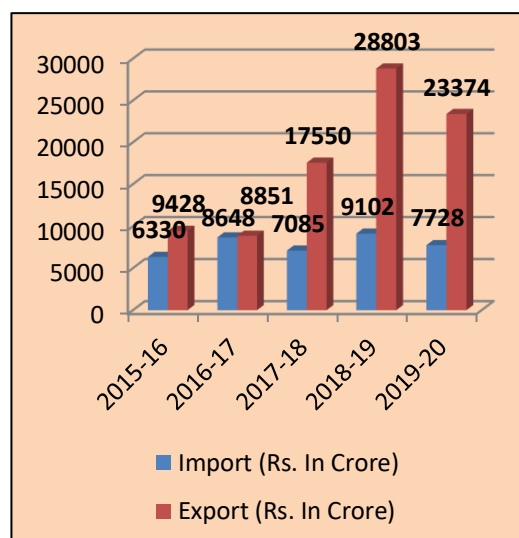


It is pleasant to note that during 2015-16 to 2019-20 the Export of Aromatics was significantly higher as compared to its Import. It is also shown that the Export-Import gaps were increased during this period.

Aromatics

Value of Import- Value of Export

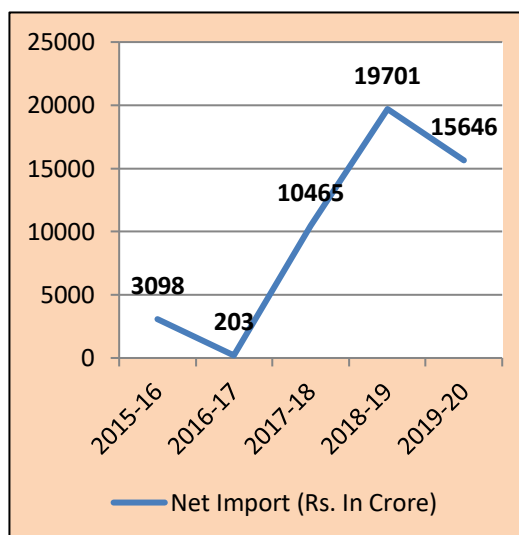
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	6330	9428
2016-17	8648	8851
2017-18	7085	17550
2018-19	9102	28803
2019-20	7728	23374
CAGR (%)	5.1	25.5



It is noted that during 2015-16 to 2019-20, the Export of Aromatics was higher than its Import.

Net Export

Year	Net Export (Rs. in Crore)
2015-16	3098
2016-17	203
2017-18	10465
2018-19	19701
2019-20	15646
CAGR (%)	20

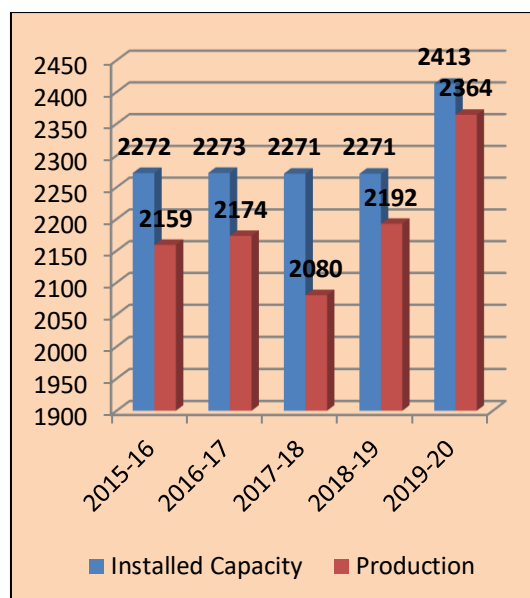


It is depicted that the Net Export of Aromatics has shown as an increasing trend during 2015-16 to 2018-19. However, it was decreased during 2019-20.

Other Petro-based Chemical

Installed Capacity-Production

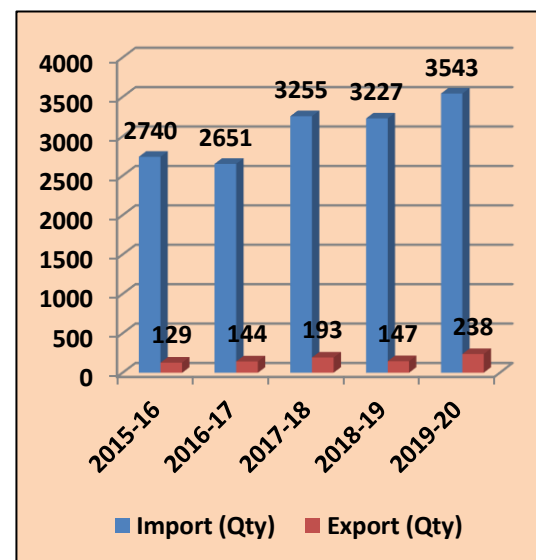
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	2272	2159
2016-17	2273	2174
2017-18	2271	2080
2018-19	2271	2192
2019-20	2413	2364
CAGR (%)	1.5	2.3



Production of Other Petro-based Chemicals during the year 2019-20 was 2364 Thousand MT as against the installed capacity of 2413 Thousand MT. It is observed production of Other Petro-based Chemicals have shown an increasing trend except the year 2017-18.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	2740	129
2016-17	2651	144
2017-18	3255	193
2018-19	3227	147
2019-20	3543	238
CAGR (%)	6.6	16.6

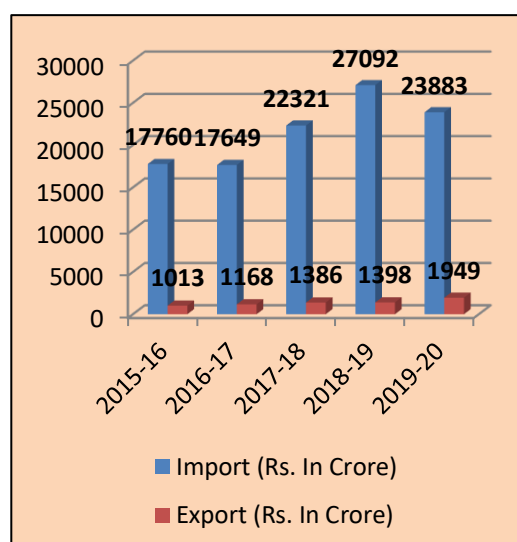


It is depicted that during 2015-16 to 2019-20, the Export of Other Petro-based Chemicals were significantly lower as compared to its Import. It is also seen that the Export-Import gaps were increased during this period.

Other Petro-based Chemical

Value of Import- Value of Export

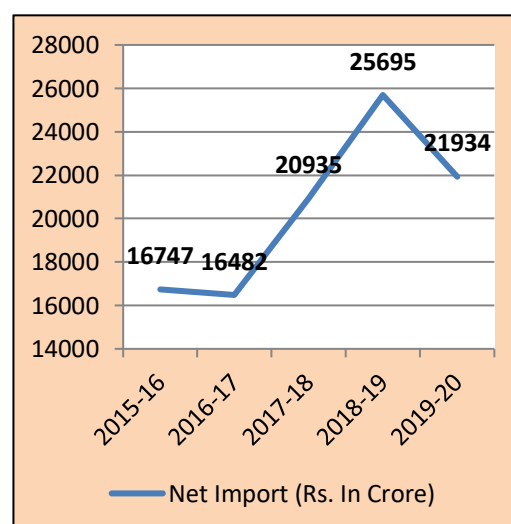
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	17760	1013
2016-17	17649	1168
2017-18	22321	1386
2018-19	27092	1398
2019-20	23883	1949
CAGR (%)	7.7	17.8



It is evident that during 2015-16 to 2019-20, the Export of Petro-based Chemicals were significantly lower than its Import.

Net Import

Year	Net Import (Rs. in Crore)
2015-16	16747
2016-17	16482
2017-18	20935
2018-19	25695
2019-20	21934
CAGR (%)	7.0

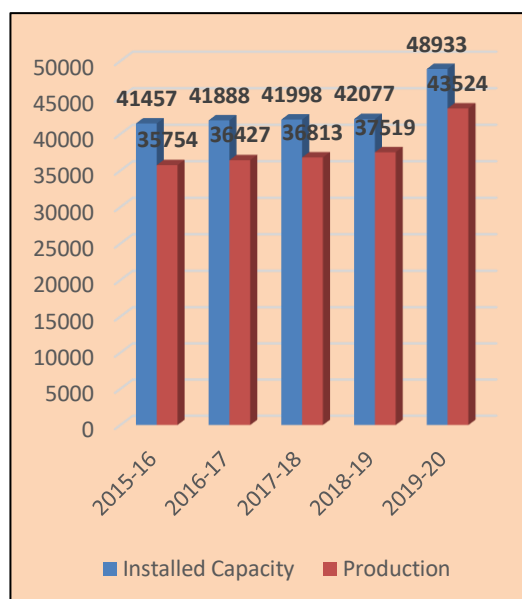


It is depicted that, the Net Import of Other Petro-based Chemicals have shown an increasing trend during 2015-16 to 2019-20.

Total Major Petrochemical

Installed Capacity-Production

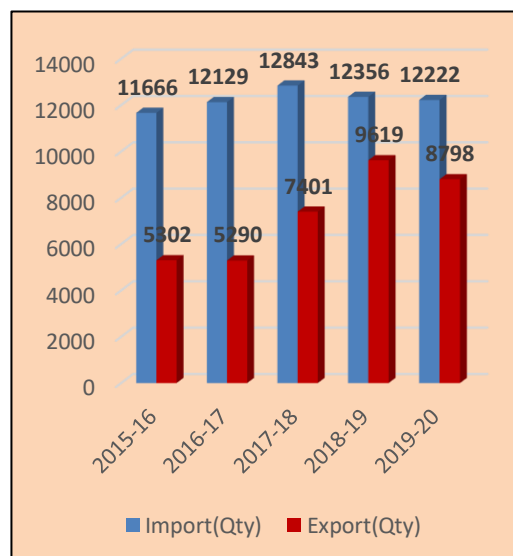
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	41457	35754
2016-17	41888	36427
2017-18	41998	36813
2018-19	42077	37519
2019-20	48933	43524
CAGR (%)	4.2	5.0



Production of Total Major Petrochemicals during the year 2019-20 is 19041 in (Thousand) MT as against installed capacity of 21286 in (Thousand) MT. It is evident that over the last 5 years, installed capacity and production is increases.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	11666	5302
2016-17	12129	5290
2017-18	12843	7401
2018-19	12356	9619
2019-20	12222	8798
CAGR (%)	1.2	13.5

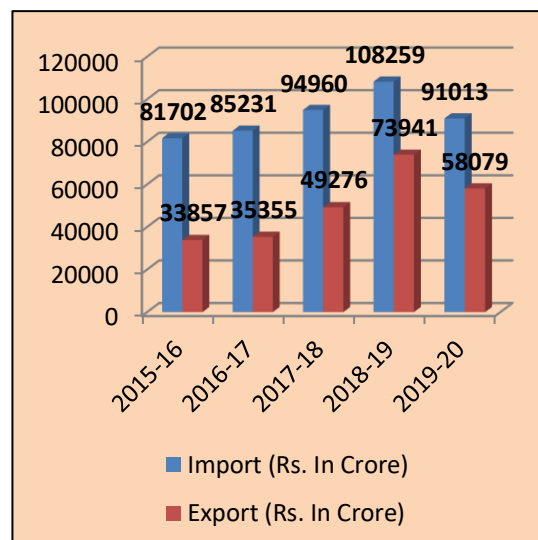


It is clear that during the last five years the Export of Total Major Petrochemicals is low compared to its Import. It is also seen that the Export-Import gap decreases from the last two years.

Total Major Petrochemicals

Value of Import- Value of Export

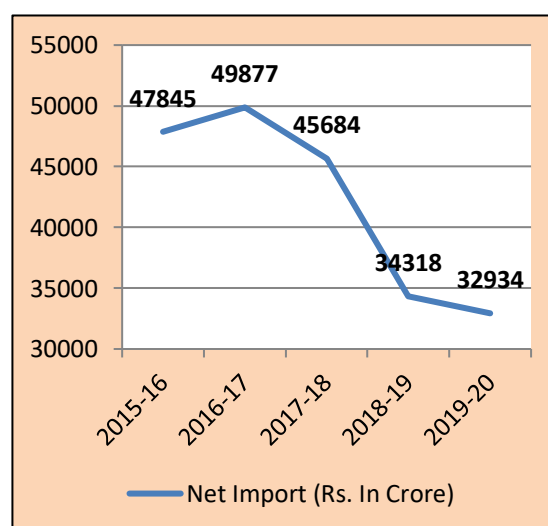
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2015-16	81702	33857
2016-17	85231	35355
2017-18	94960	49276
2018-19	108259	73941
2019-20	91013	58079
CAGR (%)	2.7	14.4



It is noted that during the last five years the Import and Export of Total Major Petrochemicals shows an increasing trend except the year 2019-2020. It is also observed that the Import of Total Major Petrochemicals is very high than its Export.

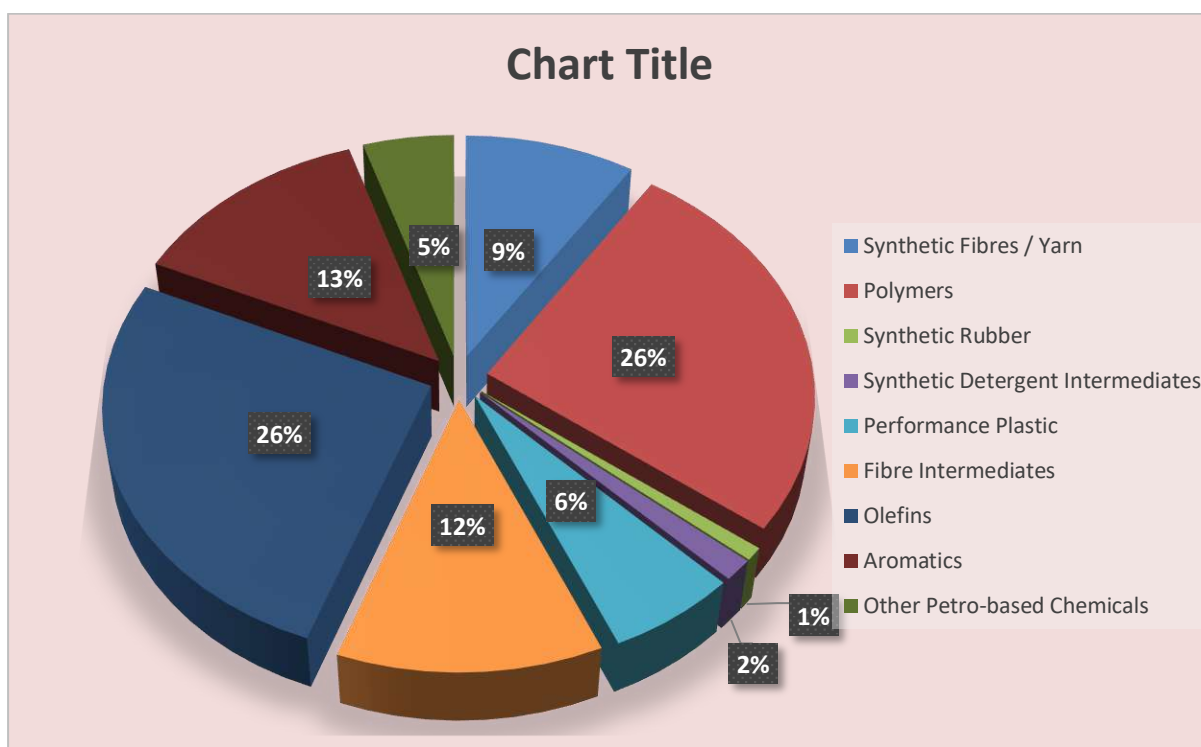
Net Import

Year	Net Import (Rs. in Crore)
2015-16	47845
2016-17	49877
2017-18	45684
2018-19	34318
2019-20	32934
CAGR (%)	-8.9

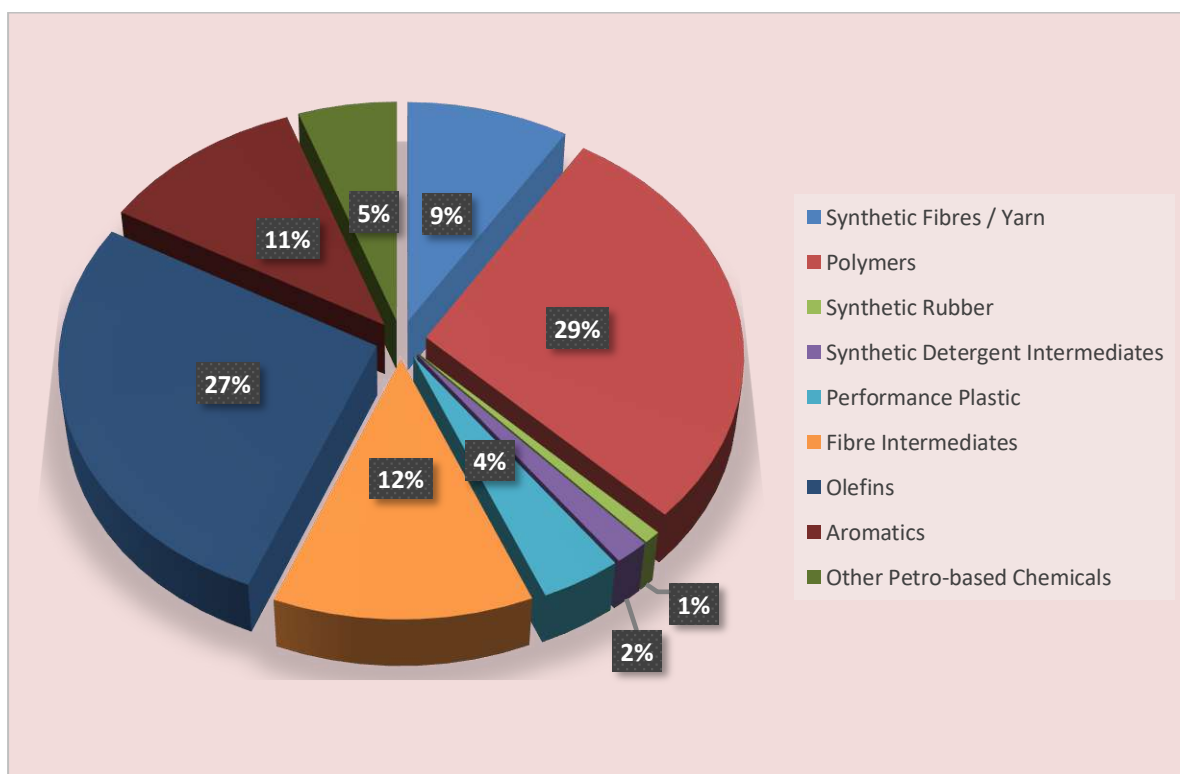


It is clear that the Net Import of Total Major Petrochemicals shows the decreasing trend still there is huge gap between them in terms of Rs.

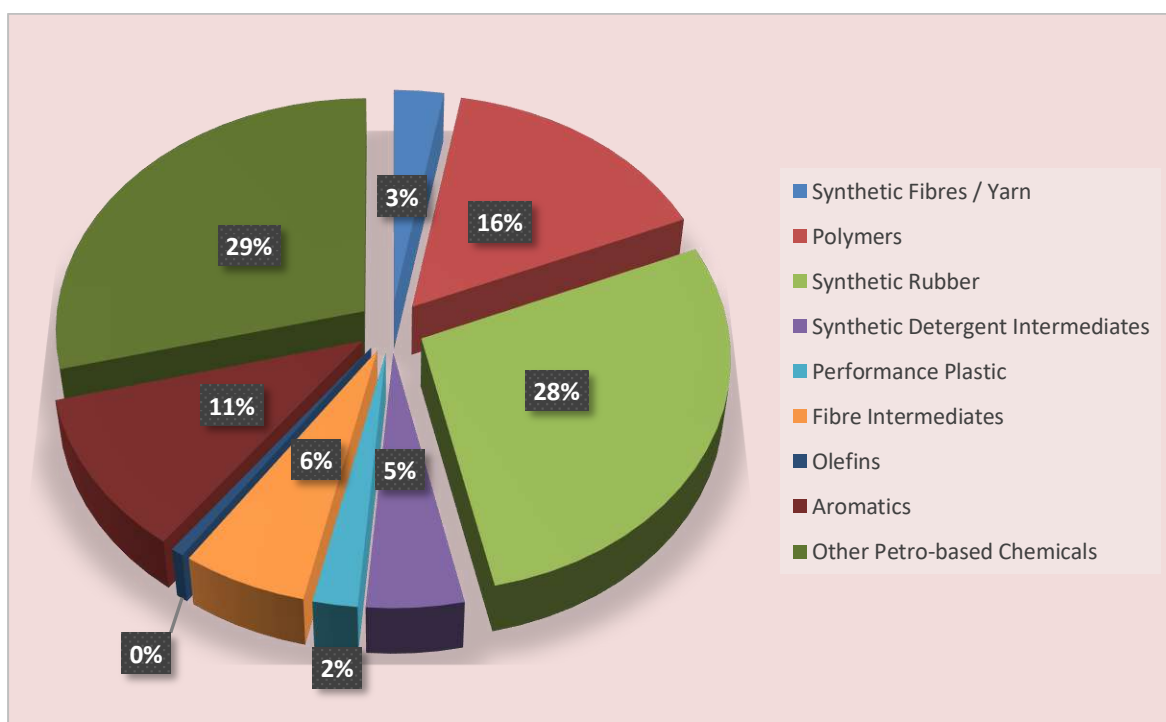
Share of different groups of Major Petrochemical in Installed Capacity during 2019-20



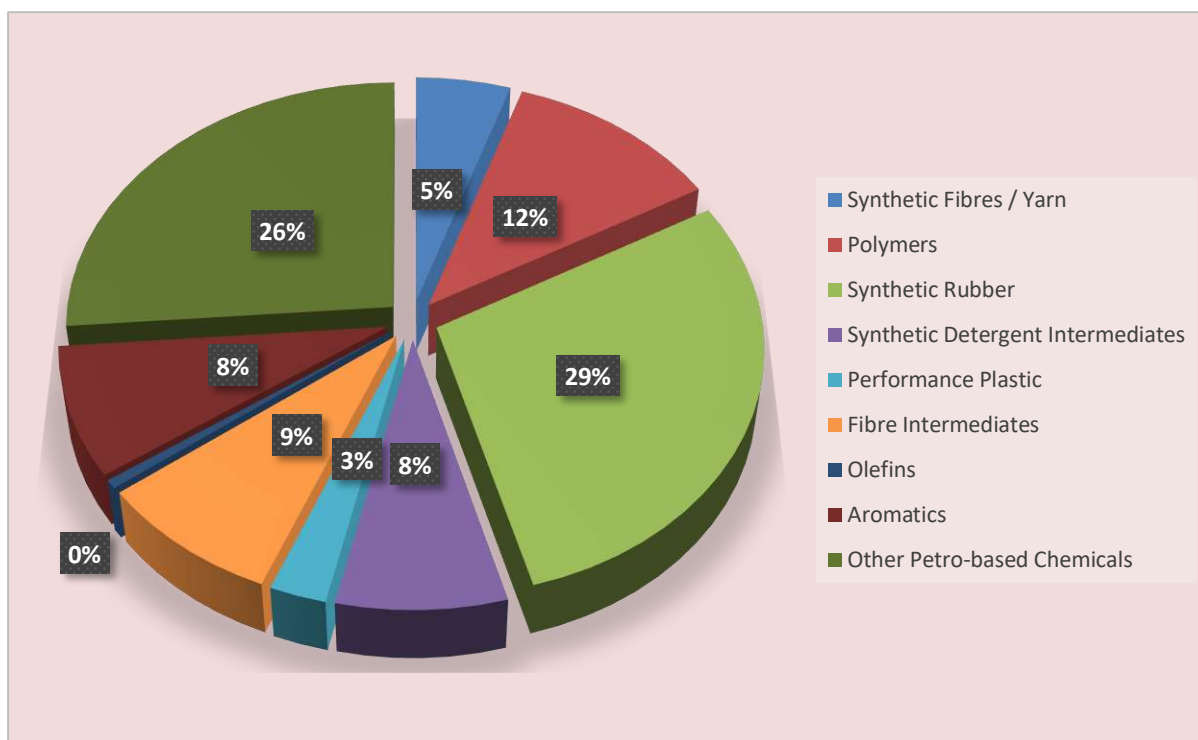
Share of different groups of Major Petrochemical in Production during 2019-20



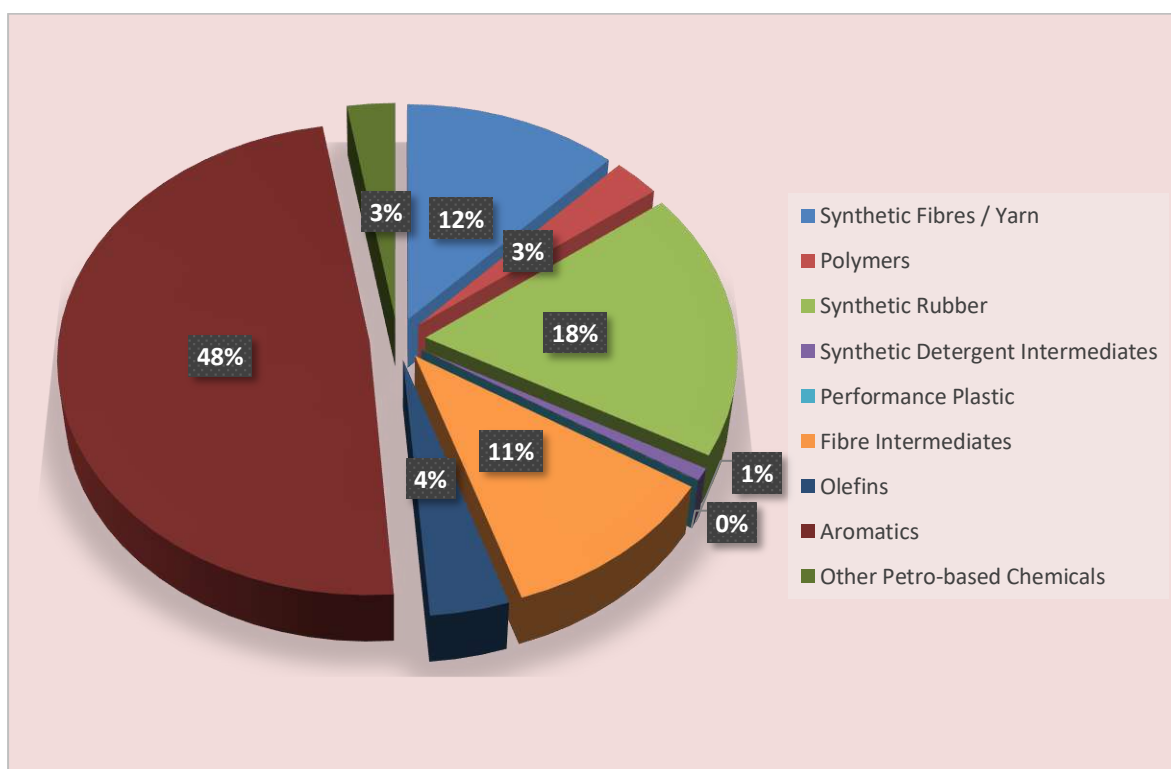
Share of different groups of Major Petrochemicals under total Import (Qty.) during 2019-20



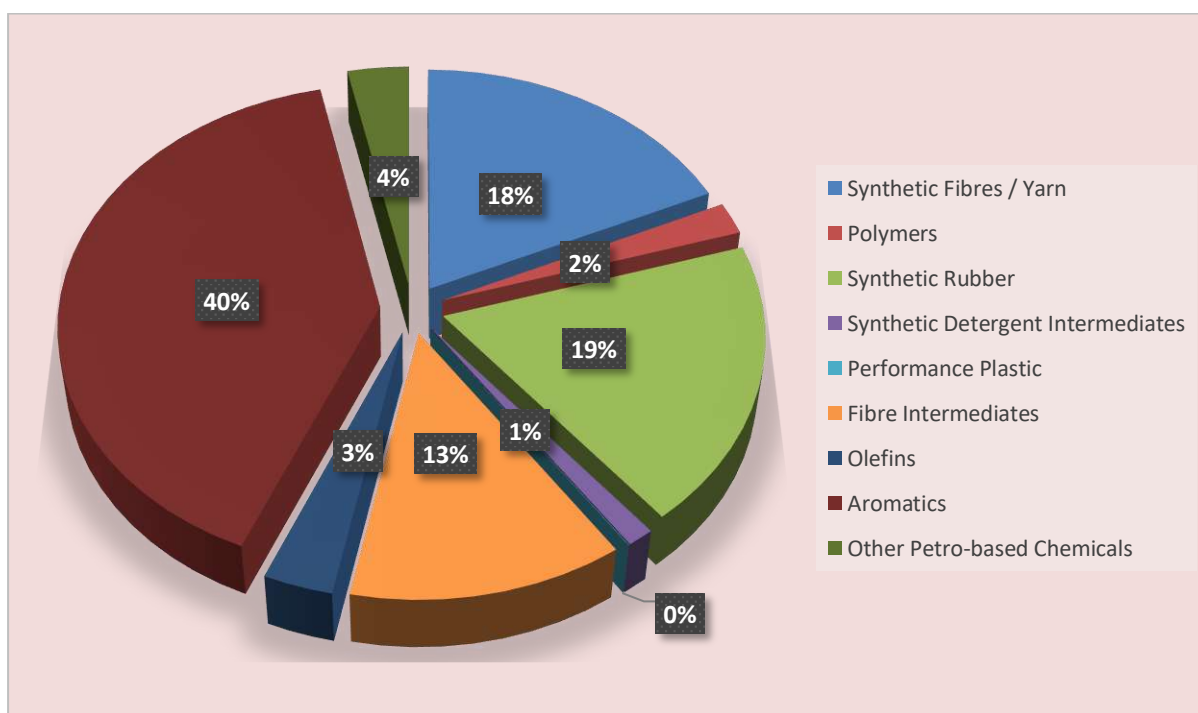
Share of different groups of Major Petrochemicals under total Import (Value) during 2019-20



Share of Groups under total Export (Qty.) of Major Petrochemicals during year 2019-20



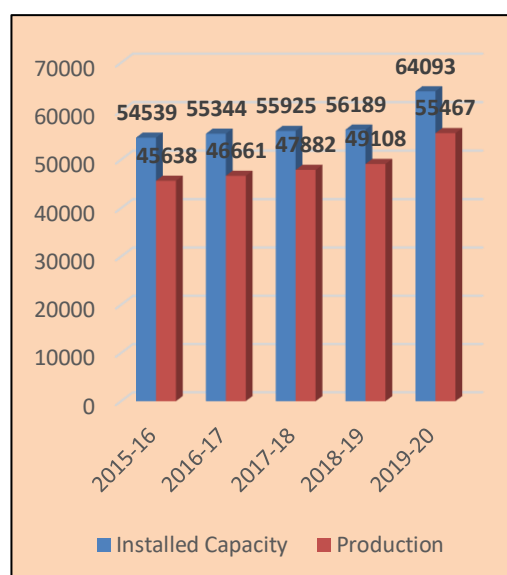
Share of Groups under total Export (Value) of Major Petrochemicals during year 2019-20



Total Major Chemicals & Major Petrochemicals

Installed Capacity-Production

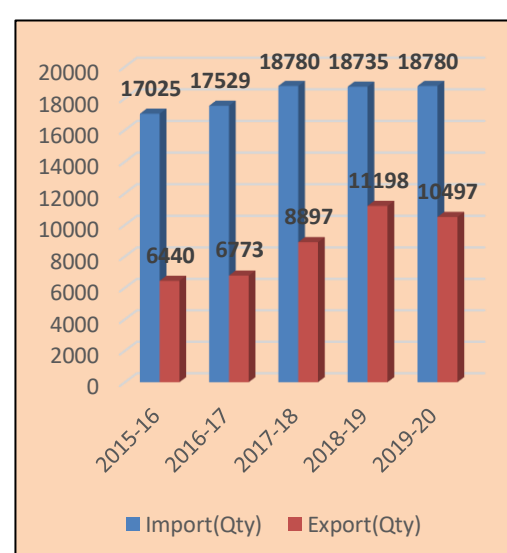
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2015-16	54539	45638
2016-17	55344	46661
2017-18	55925	47882
2018-19	56189	49108
2019-20	64093	55467
CAGR (%)	4.1	5.0



It is observed that installed capacity and production of Total Major Chemicals & Major Petrochemicals shows increasing trend with smaller rate during the last five year period. Also it is observed that the actual production is less than the installed capacity during the same time period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2015-16	17025	6440
2016-17	17529	6773
2017-18	18780	8897
2018-19	18735	11198
2019-20	18780	10497
CAGR (%)	2.5	13.0

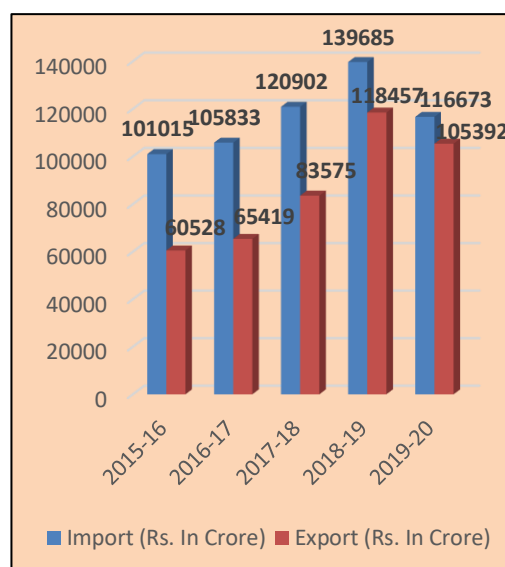


During the last five years, the volume of Export of Total Major Chemicals & Major Petrochemicals is low compared to its Import. Also it is noted that the CAGR of Export is 13.0% as compared to 2.5% of its Imports.

Total Major Chemicals & Major Petrochemicals

Value of Import- Value of Export

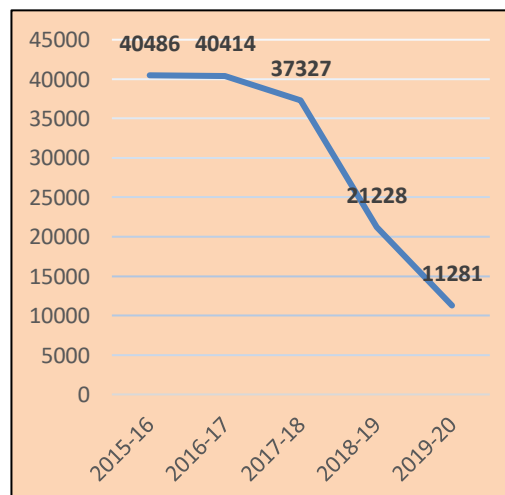
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2015-16	101015	60528
2016-17	105833	65419
2017-18	120902	83575
2018-19	139685	118457
2019-20	116673	105392
CAGR (%)	3.7	14.9



Although the Imported quantity Total Major Chemicals & Major Petrochemicals are very larger than its Exports, the gap is reduces when we considering them in terms of money. In the last five years, except the year 2019-20 both the Import and Export shows the general increasing trend.

Net Import

Year	Net Export (Rs. in Crore)
2015-16	40486
2016-17	40414
2017-18	37327
2018-19	21228
2019-20	11281
CAGR (%)	-27.3



India is a net importer of total Chemical and Petrochemicals. But in the year 2019-20 the Net Import reduces up to 11,281 crore from 40,486 crore in 2015-16. Also it is clear that the rate of decrease in Net Import is very high in the last five years.

Section – I

Chemical Sector

Table 1:- Performance of Selected Major Chemicals (Group-Wise) during 2012-13 to 2019-20 at a Glance

(Figures in 000'MT)

GROUP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR (%)
1	2	3	4	5	6	7	8	9	10
1. Alkali Chemicals									
Capacity	8075	8075	8214	8422	8822	9274	9422	10089	3.23
Production	6487	6481	6625	6802	7009	7631	8043	8457	3.86
Capacity Utilisation (%)	80	80	81	81	79	82	85	84	
Imports	995	874	1134	1118	1121	1194	1049	1157	2.18
Exports	145	164	74	107	154	273	239	329	12.44
2. Inorganic Chemicals									
Capacity	1238	1228	1259	1316	1313	1315	1300	1538	3.15
Production	891	906	944	1002	1053	1058	1064	1063	2.56
Capacity Utilisation (%)	72	74	75	76	80	81	82	69	
Imports	689	874	912	1010	1010	1229	1580	1532	12.08
Exports	163	167	164	157	378	173	177	196	2.70
3. Organic Chemicals									
Capacity	2409	2463	2537	2580	2529	2535	2575	2671	1.49
Production	1686	1792	1619	1589	1638	1799	1884	1847	1.30
Capacity Utilisation (%)	70	73	64	62	65	71	73	69	
Imports	2487	2496	2886	3143	3170	3407	3645	3775	6.15
Exports	407	335	241	232	190	205	233	245	-7.02
4. Pesticides (Tech.)									
Capacity	283	297	302	307	322	325	324	334	2.38
Production	155	179	186	188	214	213	217	192	3.08
Capacity Utilisation (%)	55	60	62	61	66	65	67	58	
Imports	30	37	41	34	43	44	49	43	5.24
Exports	180	207	230	267	342	358	405	398	12.05
5. Dyes & Pigments									
Capacity	422	434	460	456	471	478	492	528	3.25
Production	240	284	285	304	320	367	382	384	6.98
Capacity Utilisation (%)	57	65	62	67	68	77	78	73	
Imports	52	52	52	55	56	63	56	51	-0.46
Exports	326	347	353	376	419	486	525	530	7.20
Total Major Chemicals (1 to 5)									
Capacity	12427	12496	12772	13082	13456	13927	14112	15160	2.88
Production	9459	9643	9660	9884	10234	11069	11589	11943	3.39
Capacity Utilisation (%)	76	77	76	76	76	79	82	79	
Imports	4253	4333	5025	5360	5400	5937	6379	6557	6.38
Exports	1220	1221	1061	1138	1484	1496	1579	1698	4.84

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry.

3. Import and Export includes both technical and formulations.

Table 1A: Projection of Production, Installed Capacity, Export and Import of Selected Major Chemical (Group-wise) from the year 2020-21 to 2025-26

(Figures in 000'MT)

GROUP	Actual Values								forecast values					
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Alkali Chemicals														
Capacity	8075	8075	8214	8422	8822	9274	9422	10089	10343	10666	11153	11528	11759	12236
Production	6487	6481	6625	6802	7009	7631	8043	8457	8868	9221	9621	10093	10511	10893
Capacity Utilisation (%)	80	80	81	81	79	82	85	84	86	86	86	88	89	89
Imports	995	874	1134	1118	1121	1194	1049	1157	1255	1196	1225	1252	1274	1298
Exports	145	164	74	107	154	273	239	329	344	437	453	544	536	642
2. Inorganic Chemicals														
Capacity	1238	1228	1259	1316	1313	1315	1300	1538	1468	1516	1564	1615	1687	1725
Production	891	906	944	1002	1053	1058	1064	1063	1064	1086	1103	1113	1121	1131
Capacity Utilisation (%)	72	74	75	76	80	81	82	69	72	72	71	69	66	66
Imports	689	874	912	1010	1010	1229	1580	1532	1677	1810	1983	2161	2291	2413
Exports	163	167	164	157	378	173	177	196	214	201	194	179	165	164
3. Organic Chemicals														
Capacity	2409	2463	2537	2580	2529	2535	2575	2671	2692	2680	2716	2743	2790	2821
Production	1686	1792	1619	1589	1638	1799	1884	1847	1867	1901	2006	2054	2101	2129
Capacity Utilisation (%)	70	73	64	62	65	71	73	69	69	71	74	75	75	75
Imports	2487	2496	2886	3143	3170	3407	3645	3775	4019	4212	4315	4552	4742	4866
Exports	407	335	241	232	190	205	233	245	223	215	216	225	227	227
4. Pesticides (Tech.)														
Capacity	283	297	302	307	322	325	324	334	341	347	352	358	363	370
Production	155	179	186	188	214	213	217	192	207	214	215	216	214	217
Capacity Utilisation (%)	55	60	62	61	66	65	67	58	61	62	61	60	59	59
Imports\$	30	37	41	34	43	44	49	43	49	47	53	50	55	51
Exports\$	180	207	230	267	342	358	405	398	468	502	546	554	616	630
5. Dyes & Pigments														
Capacity	422	434	460	456	471	478	492	528	527	539	553	570	586	599
Production	240	284	285	304	320	367	382	384	413	433	455	475	495	514
Capacity Utilisation (%)	57	65	62	67	68	77	78	73	78	80	82	83	84	86
Imports	52	52	52	55	56	63	56	51	56	56	56	54	53	52
Exports	326	347	353	376	419	486	525	530	566	601	644	680	712	742
Total Major Chemicals (1 to 5)														
Capacity	12427	12496	12772	13082	13456	13927	14112	15160	15371	15747	16339	16814	17185	17751
Production	9459	9643	9660	9884	10234	11069	11589	11943	12418	12856	13400	13950	14442	14884
Capacity Utilisation (%)	76	77	76	76	76	79	82	79	81	82	82	83	84	84
Imports	4253	4333	5025	5360	5400	5937	6379	6557	7056	7321	7631	8068	8415	8681
Exports	1220	1221	1061	1138	1484	1496	1579	1698	1815	1957	2053	2182	2255	2405

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry.

3. \$ Import and Export includes both technical and formulations.

4. Projected figures have been calculated by using Forecast formula in MS Excel.

Table 2:- Production, Installed Capacity & Growth of Selected Major Chemicals (Group-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

Group	Installed Capacity			Production / Growth Rate	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	2017-18	2018-19	2019-20										
1	2	3	4	5	6	6	7	8	9	10	11	12	13
Alkali Chemicals	9274	9422	10089	Production	6478	6487	6481	6625	6802	7009	7631	8043	8457
				Growth Rate (%)	0	0.14	-0.09	2.22	2.67	3.04	8.89	5.39	5.15
Inorganic Chemicals	1315	1300	1538	Production	895	891	906	944	1002	1053	1058	1064	1063
				Growth Rate (%)	0	-0.40	1.70	4.18	6.08	5.13	0.53	0.51	-0.04
Organic Chemicals	2535	2575	2671	Production	1640	1686	1792	1619	1589	1638	1799	1884	1847
				Growth Rate (%)	0	2.83	6.28	-9.67	-1.87	3.12	9.79	4.76	-2.01
Pesticides	325	324	334	Production	156	155	179	186	188	214	213	217	192
				Growth Rate (%)	0	-0.48	15.41	3.95	0.57	13.97	-0.48	1.88	-11.33
Dyes & Pigments	478	492	528	Production	241	240	284	285	304	320	367	382	384
				Growth Rate (%)		-0.56	18.40	0.58	6.68	5.26	14.67	3.88	0.71

Note: Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 3:- Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2019-20
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Alkali Chemicals													
SODA ASH	3464.00	3489.00	3614.00	2437.79	2392.17	2462.00	2583.01	2613.42	2989.57	3048.19	3069.43	3.35	84.93
CAUSTIC SODA	3335.94	3397.34	3700.34	2375.83	2391.66	2442.89	2503.96	2594.50	2742.31	2925.35	3136.94	4.05	84.77
LIQUID CHLORINE	2474.20	2535.25	2774.73	1673.25	1697.33	1720.10	1714.82	1800.67	1899.41	2069.11	2250.43	4.32	81.10
Total	9274.14	9421.59	10089.07	6486.88	6481.15	6624.99	6801.78	7008.58	7631.30	8042.65	8456.80	3.86	83.82
Inorganic Chemicals													
ALUMINIUM FLUORIDE	25.60	25.60	25.60	6.70	5.40	6.73	9.51	8.14	7.51	5.70	5.05	-3.96	19.73
CALCIUM CARBIDE	112.00	112.00	112.00	70.98	78.78	87.18	83.47	85.02	87.30	83.17	81.34	1.97	72.62
CARBON BLACK	640.00	696.00	696.00	404.02	406.41	444.35	469.56	535.27	530.36	546.39	500.15	3.10	71.86
POTASSIUM CHLORATE	4.60	4.60	28.60	0.59	0.68	0.45	0.41	0.01	0.35	0.70	16.18	60.56	56.57
TITANIUM DIOXIDE	82.50	82.50	82.50	50.14	52.78	47.88	58.53	58.46	57.82	57.06	49.49	-0.19	59.98
RED PHOSPHORUS	1.68	1.68	1.68	0.69	0.75	0.89	0.84	0.77	0.88	1.03	1.03	5.87	61.31
HYDROGEN PEROXIDE	165.85	145.85	218.63	125.79	128.37	119.75	153.08	148.87	157.02	156.45	122.84	-0.34	56.19
POTASSIUM IODATE	0.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51		42.58
CALCIUM CARBONATE	282.35	231.55	371.55	232.18	233.12	236.93	226.13	216.33	217.25	213.33	286.83	3.07	77.20
Total	1314.58	1299.78	1537.75	891.10	906.27	944.15	1001.53	1052.87	1058.48	1063.83	1063.41	2.56	69.15
Organic Chemicals													
ACETIC ACID	159.62	141.62	142.05	160.56	157.17	159.61	157.91	158.51	157.07	153.80	167.86	0.64	118.17
ACETIC ANHYDRIDE	115.43	113.33	119.18	87.15	80.85	93.84	92.99	94.82	97.09	95.47	74.15	-2.28	62.22
ACETONE	47.14	47.14	47.14	37.05	28.58	25.98	24.96	26.79	32.87	40.74	36.27	-0.31	76.94
PHENOL	76.75	76.75	76.75	59.92	46.39	42.26	40.42	43.57	53.45	65.39	57.85	-0.50	75.37
METHANOL	474.30	474.30	474.30	254.91	307.26	209.83	162.62	176.96	260.49	271.93	176.05	-5.15	37.12
FORMALDEHYDE	411.30	411.30	411.30	275.36	268.29	255.95	242.09	244.19	248.23	226.61	260.41	-0.79	63.31
NITROBENZENE	112.05	112.05	129.45	83.70	76.51	69.72	68.37	69.71	71.41	68.80	61.14	-4.39	47.23
MALEIC ANHYDRIDE	6.40	6.40	7.66	2.48	2.92	3.20	3.54	3.53	3.31	4.56	5.02	10.59	65.59
PENTAERYTHRITOL	13.72	15.76	15.76	11.49	12.18	13.46	13.97	14.01	14.10	14.99	15.21	4.08	96.51
ANILINE	54.10	54.10	54.10	48.23	40.62	34.47	39.40	41.45	41.88	37.85	25.44	-8.73	47.02
CHLORO METHANES	219.92	279.25	279.25	197.74	214.03	220.71	220.18	221.51	222.43	285.53	296.91	5.98	106.32
ISOBUTYLBENZENE	13.80	13.80	16.80	6.63	6.08	4.30	7.24	6.92	8.95	9.70	9.44	5.18	56.20
ONCB	30.00	30.00	30.00	15.41	16.82	16.13	19.26	22.55	24.90	23.70	19.84	3.67	66.12
PNCB	30.00	48.40	48.40	24.40	27.06	26.96	31.27	34.19	37.78	36.07	31.90	3.91	65.92

Table 3:- Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2019-20
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MEK	10.00	10.00	10.00	2.49	3.72	4.02	5.75	6.54	6.40	7.00	9.83	21.65	98.34
ACETALDEHYDE	163.01	151.01	151.01	76.27	79.66	67.77	58.96	60.46	65.74	61.89	77.10	0.16	51.06
ETHANOLAMINES	17.76	17.76	17.76	7.05	11.20	13.76	13.25	13.11	13.20	16.70	15.39	11.80	86.66
ETHYL ACETATE	526.63	517.83	562.06	305.26	382.39	327.94	360.40	371.27	411.49	440.56	473.39	6.47	84.22
MENTHOL	33.65	33.65	33.65	19.70	18.34	17.45	14.73	14.54	13.68	6.24	7.44	-12.98	22.12
ORTHO NITRO TOLUENE	19.00	20.69	44.80	10.68	12.31	11.74	11.52	13.80	14.39	16.89	25.98	13.54	57.98
Total	2534.57	2575.12	2671.41	1686.48	1792.34	1619.11	1588.83	1638.44	1798.85	1884.42	1846.62	1.30	69.13
Pesticides and Insecticides													
D.D.T.	6.34	3.14	6.34	3.87	2.79	3.63	2.09	2.26	1.27	1.37	1.10	-16.42	17.39
MALATHION	3.80	3.20	3.80	1.71	2.04	2.24	2.04	2.26	3.29	4.39	3.79	12.07	99.82
DIMETHOATE	1.45	1.45	1.45	0.81	1.36	1.43	1.44	1.37	1.18	1.26	1.45	8.71	99.72
D.D.V.P.	33.62	33.62	33.62	4.41	5.52	6.66	7.22	8.13	8.13	9.14	0.00	-100.00	0.00
QUINALPHOS	2.20	2.20	2.20	1.35	1.74	1.88	0.84	1.29	1.18	0.89	0.86	-6.26	38.91
MONOCROTOPHOS	13.94	13.84	13.94	8.25	4.27	6.97	5.48	6.58	5.50	5.30	5.82	-4.86	41.73
PHOSPHAMIDON	2.00	2.00	2.00	0.02	0.05	0.13	0.13	0.09	0.11	0.00	0.00	-100.00	0.00
PHORATE	12.40	12.40	12.40	5.75	6.85	6.62	5.92	5.91	7.02	5.85	0.00	-100.00	0.00
ETHION	2.20	2.20	2.80	0.94	1.51	1.60	1.72	2.11	2.38	1.32	2.13	12.44	75.96
FENVALERATE	3.60	3.60	4.96	0.48	0.75	0.51	0.56	0.53	0.74	0.70	0.67	4.91	30.77
CYPERMETHRIN	24.43	25.10	23.83	7.78	9.26	8.59	8.53	7.88	8.25	10.95	10.87	4.89	45.60
ACEPHATE	18.97	17.50	20.50	15.76	14.51	17.97	16.58	16.27	18.27	19.63	21.08	4.24	102.83
CHLORPYRIPHOS	18.48	18.08	13.60	7.52	9.54	9.73	6.87	5.87	7.98	7.14	6.50	-2.06	47.76
TRIAZOPHOS	3.36	3.36	3.36	0.93	0.99	1.00	1.72	2.37	1.54	0.89	0.00	-100.00	0.00
TEMEPHOS	0.25	0.25	0.25	0.20	0.25	0.00	0.08	0.08	0.10	0.08	0.15	-4.41	59.20
DELTAMETHRIN	0.62	0.73	0.79	0.52	0.52	0.51	0.38	0.37	0.55	0.68	0.69	4.13	86.71
ALPHAMETHRIN	0.50	0.49	0.48	0.54	0.56	0.75	0.23	0.10	0.32	0.34	0.44	-3.05	91.25
PROFENOFOS													
TECHNICAL	10.50	10.50	10.50	5.01	7.18	7.58	6.85	10.50	9.95	12.45	12.36	13.77	117.72
PRETILACHLOR													
TECHNICAL	2.58	4.24	4.24	1.93	2.22	1.88	1.94	2.58	3.60	3.63	3.07	6.85	72.31
LAMBDA CYHALOTHRIN	2.60	2.60	2.85	0.43	0.55	0.47	0.42	0.74	1.14	0.62	2.30	27.21	80.60
PHENTHOATE	0.90	0.90	0.90	0.96	1.24	1.40	1.11	1.14	1.32	1.53	1.41	5.59	156.44
PERMETHRIN TECH	1.67	1.67	1.80	1.04	1.39	1.70	1.30	1.10	1.53	1.86	1.22	2.30	67.89

Table 3:- Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2019-20
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
IMIDACALOPRID TECH	1.13	0.20	0.15	0.23	0.94	0.56	0.20	0.18	0.34	0.10	0.02	-29.32	13.33
CAPTAN & CAPTAFOL	3.43	3.43	3.43	0.56	1.12	2.38	2.12	1.79	1.76	1.93	1.46	14.69	42.62
ZIRAM(THIO BARBAMATE)	0.70	0.70	0.70	0.55	0.60	0.58	0.51	0.60	0.72	0.76	0.63	2.16	90.96
CARBENDZIM(BAVISTIN)	0.98	0.98	0.78	0.34	0.31	0.36	0.24	0.13	0.03	0.02	0.00	-100.00	0.00
MANCOZAB	82.39	84.70	84.70	45.30	57.82	61.40	66.38	78.48	70.25	69.33	60.88	4.31	71.88
HEXACONAZOLE	1.08	1.20	1.70	0.44	0.58	0.59	0.62	0.46	0.59	0.50	0.75	7.94	44.29
METCONAZOLE	0.75	0.75	0.75	0.63	0.70	0.61	0.39	0.35	0.40	0.34	0.21	-14.60	27.60
2, 4-D	27.00	27.00	27.00	15.44	17.90	11.62	18.46	23.36	25.83	24.24	22.56	5.57	83.54
BUTACHLOR	0.50	0.50	0.50	0.18	0.04	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	0.00
ETHOFUMESATE TECHNICAL	1.43	1.43	1.65	1.22	1.01	0.62	0.50	1.04	1.29	1.04	0.79	-5.95	48.00
THIAMETHOXAM TECHNICAL	3.10	3.75	4.55	3.12	3.31	1.66	1.92	2.51	3.28	5.57	6.15	10.20	135.21
PENDIMETHALIN	4.50	4.70	6.00	1.03	1.71	2.26	2.82	4.04	3.78	2.82	2.75	15.02	45.88
METRIBUZIN	1.20	1.35	1.95	0.24	0.74	0.52	0.91	1.12	0.88	1.92	2.65	40.58	135.79
TRICLOPYR ACID TECH	0.30	0.30	0.30	0.21	0.20	0.19	0.30	0.28	0.15	0.13	0.13	-6.16	44.00
ISOPROTURON	6.25	6.25	6.00	4.05	2.35	2.43	1.95	0.13	0.00	0.00	0.00	-100.00	0.00
GLYPHOSATE	12.92	12.87	12.92	6.12	8.48	9.69	6.96	6.35	6.29	6.68	5.91	-0.50	45.75
DIURON	3.72	3.72	6.00	0.14	0.07	0.12	1.26	3.68	3.26	3.62	3.40	58.36	56.62
ATRAZIN	0.50	0.50	1.20	0.65	1.24	1.20	1.21	1.90	2.25	1.48	1.73	14.96	144.17
ZINC PHOSPHIDE	1.92	1.92	1.92	0.60	0.65	1.29	1.50	1.31	1.40	1.26	1.32	11.77	68.54
ALUMINIUM PHOSPHIDE	4.74	4.74	4.74	4.16	4.47	5.05	5.75	6.40	4.77	4.91	4.91	2.40	103.67
DICOFOL	0.15	0.10	0.15	0.05	0.07	0.11	0.09	0.09	0.08	0.05	0.01	-19.59	6.67
Total	325.09	324.16	333.69	155.42	179.38	186.47	187.52	213.72	212.70	216.70	192.15	3.08	57.58
Dyes and Pigments													
AZO DYES	21.14	21.14	21.14	12.72	13.46	10.59	9.82	9.98	11.04	9.05	8.54	-5.53	40.40
ACID DIRECT DYES(OTHER THAN AZO)	34.90	40.90	40.90	17.58	19.00	17.23	20.57	19.86	21.15	24.13	22.75	3.75	55.62
DISPERSE DYES	67.21	67.21	75.01	28.26	29.21	29.56	43.57	41.35	46.72	55.24	61.94	11.86	82.58

Table 3:- Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2019-20
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
FAST COLOUR BASES	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	-100.00	
INGRAIN DYES	1.44	0.00	0.00	0.58	0.51	0.44	0.30	0.00	0.00	0.00	0.00	-100.00	
OIL SOLUBLE (SOLVENT DYES)	3.60	3.60	3.60	2.31	2.26	1.80	2.20	2.23	2.07	2.29	2.41	0.64	67.03
OPTICAL WHITENING AGENTS	40.80	41.16	67.68	18.17	23.74	22.94	24.70	23.77	23.21	29.30	20.74	1.91	30.65
ORGANIC PIGMENT	87.04	87.04	88.36	44.46	68.67	76.89	61.31	63.74	73.34	73.94	75.08	7.77	84.98
PIGMENT EMULSION	5.41	5.41	5.41	6.48	7.34	9.64	9.67	10.61	10.16	9.78	9.69	5.92	178.89
REACTIVE DYES	186.69	194.69	195.73	87.60	95.42	89.47	106.23	120.96	151.91	151.38	156.71	8.66	80.06
SULPHUR DYES (SULPHUR BLACK)	8.25	8.25	8.25	6.58	7.57	9.38	9.55	10.07	7.32	7.54	7.45	1.78	90.28
VAT DYES	2.86	3.04	2.86	1.38	1.60	1.77	1.44	1.52	1.65	1.78	2.13	6.40	74.34
SOLUBILISED VAT DYES	0.13	0.13	0.13	0.03	0.02	0.03	0.03	0.02	0.02	0.00	0	-100.00	0.00
FOOD COLOURS	0.00	0.00	0.00	0.25	0.62	0.66	0.71	0.75	0.78	0.79	0.671	15.02	
NAPTHOLS	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
INORGANIC PIGMENTS	18.05	18.05	18.05	13.14	14.18	14.82	14.19	15.41	17.88	16.29	16.12	2.96	89.29
Total	478.42	491.52	528.02	239.53	283.60	285.23	304.28	320.27	367.25	381.51	384.22	6.98	72.77
Total (All Group)	13926.79	14112.17	15159.94	9459.41	9642.75	9659.94	9883.95	10233.88	11068.57	11589.11	11943.20	3.39	78.78

Note: Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 4:- Installed Capacities of Selected Chemicals (Group-Wise) from 2012-13 to 2019-20

(Figures in 000'MT)

GROUP / PRODUCT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1. Alkali Chemicals	8075	8075	8214	8422	8822	9274	9422	10089
2. Inorganic Chemicals	1238	1228	1259	1316	1313	1315	1300	1538
3. Organic Chemicals	2409	2463	2537	2580	2529	2535	2575	2671
4. Pesticides (Tech.)	283	297	302	307	322	325	324	334
5. Dyes & Pigments	422	434	460	456	471	478	492	528
TOTAL MAJOR CHEMICALS	12427	12496	12772	13082	13456	13927	14112	15160

Note: Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 5:- Consumption of Selected Major Chemicals (Product-Wise) during 2012-13 to 2019-20

(Figures in 000'MT)

PRODUCTS								
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Alkali Chemicals								
SODA ASH	3048.51	2877.33	3159.80	3197.66	3244.35	3652.11	3826.32	3779.39
CAUSTIC SODA	2619.10	2620.25	2808.67	2905.94	2935.48	3003.98	2961.45	3258.79
LIQUID CHLORINE	1669.61	1693.52	1717.03	1709.31	1795.64	1895.73	2064.68	2246.29
Inorganic Chemicals								
ALUMINIUM FLUORIDE	29.19	26.28	34.02	34.98	54.39	57.07	67.63	44.05
CALCIUM CARBIDE	127.09	142.75	165.10	145.04	140.22	142.48	128.17	112.19
CARBON BLACK	436.79	428.67	469.70	478.95	331.84	594.29	702.09	553.62
POTASSIUM CHLORATE	7.27	6.99	5.96	2.81	-1.55	-1.57	-2.19	13.06
SODIUM CHLORATE	25.04	28.08	21.79	17.29	7.33	7.75	13.43	24.08
TITANIUM DIOXIDE	64.50	60.60	60.30	70.52	64.18	61.96	64.26	59.67
RED PHOSPHORUS	0.52	0.61	0.56	0.35	0.32	0.43	0.45	0.40
HYDROGEN PEROXIDE	157.13	190.35	175.78	196.82	205.66	225.38	240.45	174.76
POTASSIUM IODATE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
CALCIUM CARBONATE	570.31	728.40	759.32	907.92	882.97	1026.48	1252.32	1416.88
Organic Chemicals								
ACETIC ACID	800.68	814.63	865.50	942.30	993.41	1029.36	1073.28	1081.60
ACETIC ANHYDRIDE	85.46	76.21	76.43	77.30	76.65	81.83	89.30	74.15
ACETONE	130.33	144.66	149.63	152.58	159.46	174.69	146.60	97.67
PHENOL	232.24	258.34	240.37	282.35	321.74	337.27	292.48	179.58
METHANOL	1469.22	1535.78	1801.99	1830.49	1801.79	2034.32	2247.70	2449.38
FORMALDEHYDE	270.66	262.35	248.90	233.68	235.87	237.66	214.15	246.27
NITROBENZENE	83.53	76.36	70.78	74.16	83.80	86.73	86.91	76.54
CITRIC ACID	54.33	62.09	65.63	74.49	80.01	81.87	92.96	88.55
MALEIC ANHYDRIDE	39.33	39.64	41.56	50.86	54.11	55.71	74.39	71.80

Table 5:- Consumption of Selected Major Chemicals (Product-Wise) during 2012-13 to 2019-20

(Figures in 000'MT)

PRODUCTS								
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PENTAERYTHRITOL	24.76	26.37	25.58	31.82	31.35	29.95	31.11	33.94
ANILINE	63.48	72.27	70.48	77.61	85.94	107.14	126.17	106.32
CHLORO METHANES	197.85	214.14	220.68	220.75	221.68	222.85	286.87	299.26
ISOBUTYLBENZENE	-6.68	-8.05	-9.64	-5.33	-6.51	-3.39	-2.04	-0.26
ONCB	17.12	14.94	14.29	18.66	22.42	24.90	23.70	19.84
PNCB	22.30	25.09	29.96	38.01	39.26	37.78	36.07	31.90
MEK	33.68	30.50	30.89	46.45	37.25	51.71	53.69	35.10
ACETALDEHYDE	76.08	79.72	67.80	59.03	60.55	65.81	60.84	76.08
ETHANOLAMINES	16.65	19.98	24.02	22.19	23.08	24.50	30.21	30.40
ETHYL ACETATE	137.50	192.44	213.04	255.88	279.24	305.98	324.80	367.17
MENTHOL	7.85	3.80	4.82	6.83	4.05	2.31	-5.78	-6.59
ORTHO NITRO TOLUENE	9.74	11.73	11.67	10.47	13.30	12.01	12.67	18.76

Note: 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of Imports and Exports is DGCIS, Kolkata, M/O Commerce and Industry.

3. Derived consumption as Production + Imports - Exports

Table 5A:- Consumption of Selected Pesticides (Tech. Grade) (State -wise) during 2015-16 to 2019-20

(Figures in MT)

S. No.	States/UTs	2015-16	2016-17	2017-18	2018-19	2019-20
1	Andhra Pradesh	2,713	2,015	1,738	1689	1559
2	Bihar	831	790	840	850	850
3	Chhattisgarh	1,625	1,660	1,685	1770	1672
4	Goa	48	22	24	25	30
5	Gujarat	1,980	1,713	1,692	1608	1784
6	Haryana	4,100	4,050	4,025	4015	4200
7	Himachal Pradesh	450	341	467	322	881
8	Jharkhand	493	541	619	646	681
9	Karnataka	1,434	1,288	1,502	1524	1568
10	Kerala	1,123	895	1,067	995	656
11	Madhya Pradesh	732	694	502	540	540
12	Maharashtra	11,665	13,496	15,568	11746	12783
13	Orissa	994	1,050	1,633	1609	1115
14	Punjab	5,743	5,843	5,835	5543	4995
15	Rajasthan	2,475	2,269	2,307	2290	2088
16	Tamil Nadu	2,096	2,092	1,929	1901	2225
17	Telangana	993	3,436	4,866	4894	4915
18	Uttar Pradesh	10,457	10,614	10,824	11049	12217
19	Uttarakhand	217	198	210	195	224
20	West Bengal	3,712	2,624	2,982	3190	3630
Sub Total		53,881	55,631	60,315	56,401	58,613
North-Eastern						
21	Arunachal Pradesh	17	18	NR	5	5
22	Assam	185	306	241	256	410
23	Manipur	30	33	27	NR	25
24	Meghalaya	ORGANIC STATE	ORGANIC STATE	ORGANIC STATE	ORGANIC STATE	ORGANIC STATE
25	Mizoram	NR	9	NR	26	27
26	Nagaland	20	20	20	21	19

Table 5A:- Consumption of Selected Pesticides (Tech. Grade) (State -wise) during 2015-16 to 2019-20

(Figures in MT)

S. No.	States/UTs	2015-16	2016-17	2017-18	2018-19	2019-20
27	Sikkim	ORGANIC STATE	ORGANIC STATE	ORGANIC STATE	ORGANIC STATE	ORGANIC STATE
28	Tripura	293	298	330	349	364
Sub Total		545	684	618	657	850
Union Territories						
29	Andaman & Nicobar	NR	NR	NR	NR	NR
30	Chandigarh	NR	NR	NR	NR	NR
31	Dadra & Nagar Haveli	NR	NR	NR	NR	NR
32	Daman & Diu	NR	NR	NR	NR	NR
33	Delhi	NR	88	NR	110	NR
34	Jammu & Kashmir	2,251	2,188	2,430	2459	2198
35	Lakshadweep	NR	NR	NR	NA	NA
36	Pondicherry	43	43	43	42	40
Sub Total		2,294	2,319	2,473	2,611	2,238
Grand Total		56,720	58,634	63,406	59,669	61,701

Note: States/UTs Zonal Conferences on Inputs (Plant Protection). **NR-** Not reported

Source: Directorate of Plant Protection, Quarantine & Storage, Department of Agriculture Cooperation, Ministry of Agriculture and Farmers Welfare

Section – II

Petrochemical Sector

Table 6:- Performance of Selected Basic Major Petrochemicals (Group Wise) during 2012-13 to 2019-20 At a Glance

(Figures in 000'MT)

Group	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Synthetic Fibres/Yarn									
Capacity	3807	3769	4213	4452	4393	4379	4440	4521	2.22
Production	3127	3149	3532	3558	3599	3625	3601	3893	3.18
Capacity Utilisation (%)	82.1	83.6	83.8	79.9	81.9	82.8	81.1	86.1	
Imports	156	164	236	264	280	260	276	347	12.05
Exports	776	908	887	878	1026	1001	1016	1059	4.55
2. Polymers									
Capacity	8761	8905	8905	9768	10110	10112	10115	12754	5.51
Production	7509	7876	7558	8839	9163	9276	10040	12404	7.43
Capacity Utilisation (%)	85.7	88.4	84.9	90.5	90.6	91.7	99.3	97.3	
Imports	3180	3125	3737	4214	4452	4751	4479	3430	1.09
Exports	1113	1188	903	998	912	1188	1934	1615	5.47
3. Synthetic Rubber									
Capacity	124	244	425	425	425	425	425	411	18.64
Production	96	105	172	242	285	308	351	358	20.65
Capacity Utilisation (%)	77.4	42.8	40.3	56.8	67.0	72.3	82.5	87.1	
Imports	520	580	578	596	560	608	619	575	1.45
Exports	11	13	26	43	38	52	64	74	30.50
4. Synthetic Detergent Intermediates									
Capacity	687	687	687	687	687	687	687	680	-0.16
Production	627	597	596	566	664	743	687	715	1.89
Capacity Utilisation (%)	91.2	86.8	86.7	82.3	96.6	108.1	100.0	105.1	
Imports	127	124	134	218	228	206	227	264	10.96
Exports	50	33	28	10	7	1	1	1	-42.54
5 : Performance Plastics									
Capacity	2452	2958	2983	3018	2945	2947	2963	2919	2.52
Production	1691	1685	1591	1700	1799	1719	1589	1672	-0.16
Capacity Utilisation (%)	69.0	56.9	53.3	56.3	61.1	58.3	53.6	57.3	
Imports	250	311	395	389	417	583	684	741	16.80
Exports	348	475	409	814	973	1051	1080	969	15.75
Total Basic Major Petrochemicals (1 to 5)									
Capacity	15831	16563	17213	18351	18561	18551	18630	21286	4.32
Production	13050	13410	13448	14905	15510	15670	16269	19041	5.55
Capacity Utilisation (%)	82.4	81.0	78.1	81.2	83.6	84.5	87.3	89.5	
Imports	4233	4304	5080	5681	5938	6408	6284	5356	3.42
Exports	2298	2616	2254	2743	2956	3293	4095	3719	7.12

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry.

Table 6A: Projection of Production, Installed Capacity, Export and Import of Selected Basic Major Petrochemical (Group-wise) from the year 2020-21 to 2025-26

(Figures in 000'MT)

	Actual Values								forecast values					
Group	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Synthetic Fibres/Yarn														
Capacity	3807	3769	4213	4452	4393	4379	4440	4521	4687	4774	4764	4832	4906	4996
Production	3127	3149	3532	3558	3599	3625	3601	3893	3914	4002	4045	4139	4246	4389
Capacity Utilisation (%)	82.1	83.6	83.8	79.9	81.9	82.8	81.1	86.1	83.5	83.8	84.9	85.7	86.5	87.8
Imports	156	164	236	264	280	260	276	347	345	370	384	404	430	456
Exports	776	908	887	878	1026	1001	1016	1059	1090	1121	1155	1188	1214	1249
2. Polymers														
Capacity	8761	8905	8905	9768	10110	10112	10115	12754	12105	12774	13352	14046	14786	15340
Production	7509	7876	7558	8839	9163	9276	10040	12404	11914	13159	13756	14589	15212	16211
Capacity Utilisation (%)	85.7	88.4	84.9	90.5	90.6	91.7	99.3	97.3	98	103	103	104	103	106
Imports	3180	3125	3737	4214	4452	4751	4479	3430	3571	3603	3501	3223	2888	2697
Exports	1113	1188	903	998	912	1188	1934	1615	1750	1905	2197	2398	2547	2665
3. Synthetic Rubber														
Capacity	124	244	425	425	425	425	425	411	444	458	447	454	462	471
Production	96	105	172	242	285	308	351	358	431	471	499	538	576	619
Capacity Utilisation (%)	77.4	42.8	40.3	56.8	67.0	72.3	82.5	87.1	97	103	112	119	125	132
Imports	520	580	578	596	560	608	619	575	604	618	614	623	627	629
Exports	11	13	26	43	38	52	64	74	82	91	99	109	119	128
4. Synthetic Detergent Intermediates														
Capacity	687	687	687	687	687	687	687	680	683	682	680	679	677	676
Production	627	597	596	566	664	743	687	715	738	779	809	835	838	861
Capacity Utilisation (%)	91.2	86.8	86.7	82.3	96.6	108.1	100.0	105.1	108	114	119	123	124	127
Imports	127	124	134	218	228	206	227	264	289	303	323	340	359	381
Exports	50	33	28	10	7	1	1	1	-7	-12	-16	-18	-23	-26
5 : Performance Plastics														
Capacity	2452	2958	2983	3018	2945	2947	2963	2919	2965	2965	2913	2931	2946	2929
Production	1691	1685	1591	1700	1799	1719	1589	1672	1678	1679	1679	1626	1616	1649
Capacity Utilisation (%)	69.0	56.9	53.3	56.3	61.1	58.3	53.6	57.3	57	57	58	55	55	56
Imports	250	311	395	389	417	583	684	741	795	874	951	1048	1128	1188
Exports	348	475	409	814	973	1051	1080	969	1250	1342	1446	1459	1557	1650
Total Basic Major Petrochemicals (1 to 5)														
Capacity	15831	16563	17213	18351	18561	18551	18630	21286	20884	21653	22157	22940	23777	24412
Production	13050	13410	13448	14905	15510	15670	16269	19041	18676	20089	20788	21726	22488	23728
Capacity Utilisation (%)	82.4	81.0	78.1	81.2	83.6	84.5	87.3	89.5	89.4	92.8	93.8	94.7	94.6	97.2
Imports	4233	4304	5080	5681	5938	6408	6284	5356	5604	5769	5774	5637	5433	5351
Exports	2298	2616	2254	2743	2956	3293	4095	3719	4165	4448	4882	5135	5414	5666

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry.

3. Projected figures have been calculated by using Forecast formula in MS Excel.

Table 7:- Production, Installed Capacity & Growth of Selected Basic Major Petrochemicals (Group-wise) during 2012-13 to 2019-20.

(Figures in 000' MT)

Group	Installed Capacity			Production / Growth Rate	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	2017-18	2018-19	2019-20										
1	2	3	4	5		6	7	8	9	10	11	12	13
Synthetic Fibers	4379	4440	4521	Production	3105	3127	3149	3532	3558	3599	3625	3601	3893
				Growth Rate (%)		0.7	0.7	12.2	0.7	1.2	0.7	-0.7	8.1
Polymers	10112	10115	12754	Production	7250	7509	7876	7558	8839	9163	9276	10040	12404
				Growth Rate (%)		3.6	4.9	-4.0	17.0	3.7	1.2	8.2	23.5
Elastomers (S.Rubber)	425	425	411	Production	100	96	105	172	242	285	308	351	358
				Growth Rate (%)		-4.2	8.7	64.1	40.8	17.9	8.0	14.0	2.1
Synth. Detergent Intermediates	687	687	687	Production	623	627	597	596	566	664	743	687	715
				Growth Rate (%)		0.7	-4.8	-0.1	-5.1	17.4	11.9	-7.5	4.0
Performance Plastics	2947	2963	2919	Production	1677	1691	1685	1591	1700	1799	1719	1589	1672
				Growth Rate (%)		0.8	-0.4	-5.5	6.9	5.8	-4.5	-7.6	5.2
Total Basic Major Petrochemicals	18551	18630	21293	Production	12755	13050	13410	13448	14905	15510	15670	16269	19041
				Growth Rate %)		2.3	2.8	0.3	10.8	4.1	1.0	3.8	17.0

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2012-13 to 2019-20.

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A : BASIC MAJOR PETROCHEMICALS													
I : Synthetic Fibres / Yarn													
POLYESTER FILAMENT YARN (\$)	2765.81	2827.42	2719.79	1877.53	1811.28	2178.75	2179.00	2200.91	2283.41	2316.43	2520.33	4.30	92.67
NYLON FILAMENT YARN (\$\$)	24.62	24.62	58.52	21.94	24.32	32.45	37.25	40.91	40.01	46.62	48.29	11.93	82.52
NYLON INDUSTRIAL YARN/TYRE CORD(\$\$)	90.50	90.50	152.02	95.07	103.83	100.52	94.87	103.56	107.59	109.55	99.75	0.69	65.62
POLYPROPYLENE FILAMENT YARN(\$\$)	3.60	3.60	3.60	6.43	5.91	5.14	3.47	3.39	3.15	2.36	2.52	-12.54	69.89
Sub Total Yarn (1+2+3+4)	2884.53	2946.14	2933.92	2000.97	1945.34	2316.86	2314.59	2348.77	2434.15	2474.95	2670.89	4.21	91.03
ACRYLIC FIBRE (AF)	107.00	107.00	107.00	74.97	94.38	89.63	105.87	95.39	90.97	99.45	102.90	4.63	96.17
POLYESTER STAPLE FIBREFILL	69.00	69.00	69.00	51.09	56.46	57.30	51.05	53.65	51.33	52.99	49.89	-0.34	72.30
POLYESTER STAPLE FIBRE	1256.56	1256.56	1350.46	974.05	1010.05	1021.25	1039.65	1056.00	1005.30	931.44	1027.49	0.77	76.08
POLYPROPYLENE STAPLE FIBRE	32.13	30.93	30.93	8.06	23.01	25.42	27.04	24.56	22.24	20.74	18.82	12.88	60.84
POLYSTER INDUSTRIAL YARN	21.50	21.50	21.50	15.24	14.75	16.58	15.38	16.33	15.04	14.83	14.73	-0.49	68.51
10.ELASTOMERIC/SPANDEX FILAMENT YARN	8.50	8.50	8.50	2.37	4.74	4.95	4.81	4.70	6.18	7.08	8.06		94.86
Total Synth. Fibre / Yarn	4379.22	4439.63	4521.31	3126.75	3148.73	3531.98	3558.39	3599.40	3625.20	3601.48	3892.78	3.18	86.10
II : Polymers													
LINEAR LOW DENSITY POLYETHYLENE (LLDPE)	No separate Capacity			1011.79	1036.58	910.26	1204.57	1318.26	1290.05	1581.22	2994.03	16.76	
HIGH DENSITY POLYETHYLENE (HDPE)	No separate Capacity			1176.90	1195.04	1155.79	1317.15	1520.04	1578.38	1597.68	1897.57	7.06	
LLDPE/HDPE (Combined) (\$\$\$)	3348.10	3348.10	5158.10	2188.69	2231.62	2066.05	2521.72	2838.30	2868.42	3178.90	4891.59	12.17	94.83
LOW DENSITY POLYETHYLENE (LDPE)	160.00	160.00	560.00	186.58	190.01	184.40	200.03	201.76	185.66	193.05	613.29	18.53	109.52
POLYSTYRENE (PS)	471.00	471.00	471.00	289.84	270.33	281.17	308.58	311.35	301.58	292.86	291.72	0.09	61.94
POLYPROPYLENE(PP)	4514.00	4514.00	4933.80	3506.60	3739.64	3614.82	4284.42	4253.39	4350.20	4779.02	4982.82	5.15	100.99
EXPANDABLE POLYSTYRENE (EXPS)	126.30	128.70	133.30	80.80	77.35	80.68	86.20	96.77	103.91	108.27	110.68	4.60	83.03
POLY VINYL CHLORIDE PVC)	1493.00	1493.00	1498.00	1256.65	1367.00	1330.44	1437.89	1461.53	1466.08	1488.40	1513.59	2.69	101.04
Total Polymers	10112.40	10114.80	12754.20	7509.16	7875.96	7557.57	8838.84	9163.10	9275.85	10040.50	12403.69	7.43	97.25
III : Synthetic Rubber													
STYRENE BUTADIENE RUBBER (SBR)	271.00	271.00	271.00	8.17	11.95	57.25	124.80	167.33	193.97	228.64	227.83	60.88	84.07
POLY BUTADIENE RUBBER (PBR)	114.00	114.00	100.00	77.25	80.87	107.54	113.93	117.09	113.63	122.23	130.25	7.75	130.25
ETHYL VINYL ACETATE (EVA)	15.00	15.00	15.00	10.68	11.21	6.42	2.41	0.00	0.00	0.00	0.00	-100.00	0.00
NITRILE BUTADIENE RUBBER (NBR)	25.30	25.30	25.30	0.10	0.52	0.38	0.39	0.35	0.05	0.00	0.00	-100.00	0.00
Total Synthetic Rubber	425.30	425.30	411.30	96.20	104.54	171.59	241.53	284.78	307.66	350.87	358.08	20.65	87.06
IV : Synthetic Detergent Intermediates													
LINEAR ALKYL BENZENE (LAB)	547.40	547.40	544.79	454.92	405.64	410.54	377.20	447.65	451.53	454.82	413.50	-1.35	75.90
ETHYLENE OXIDE (EO)	140.00	140.00	135.00	171.85	190.89	185.32	188.31	216.06	291.30	232.34	301.18	8.35	223.10
Total Synth. Detergent Intermediates	687.40	687.40	679.79	626.77	596.53	595.86	565.51	663.71	742.82	687.16	714.68	1.89	105.13

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2012-13 to 2019-20.

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
V : Performance Plastic													
ABS RESINS	140.00	156.00	210.00	90.53	102.19	107.28	117.01	117.77	145.23	148.18	136.46	6.04	64.98
NYLON-6/ NYLON 6,6	28.20	28.20	68.50	19.34	20.45	20.75	21.44	21.54	20.56	21.52	41.57	11.55	60.69
POLYMETHYL METHACRYLATE (PMMA)	3.50	3.50	3.90	2.54	2.48	1.05	1.47	0.29	0.02	0.00	0.00	-100.00	0.00
STYRENE ACRYLONITRILE (SAN)	148.00	148.00	148.00	80.15	87.61	88.77	98.68	99.24	114.69	131.76	133.79	7.59	90.40
PET Chips/Polyester Chips	2607.66	2607.66	2468.50	1487.15	1459.85	1361.98	1452.93	1548.70	1424.60	1271.09	1344.70	-1.43	54.47
PTFE (TEFLON)	19.80	19.80	20.30	11.03	11.95	11.35	8.75	11.73	13.72	16.24	15.11	4.60	74.43
Total Performance Plastics	2947.16	2963.16	2919.20	1690.73	1684.53	1591.18	1700.27	1799.27	1718.81	1588.79	1671.63	-0.16	57.26
TOTAL BASIC MAJOR PETROCHEMICALS													
(I+II+III+IV+V)	18551.48	18630.29	21285.80	13049.61	13410.29	13448.16	14904.54	15510.25	15670.34	16268.79	19040.86	5.55	89.45
B : INTERMEDIATES													
I : FIBRE INTERMEDIATES													
ACRYLONITRILE (ACN)	41.00	41.00	24.00	32.99	37.04	33.70	1.94	0.00	0.00	0.00	0.00	-100.00	0.00
CAPROLACTUM	120.00	120.00	120.00	98.72	84.86	87.05	86.30	86.96	85.97	92.56	84.06	-2.27	70.05
MONO ETHYLENE GLYCOL (MEG)	1153.40	1153.40	1868.10	1061.22	1069.28	1001.14	1158.97	1110.50	1132.65	1159.76	2007.78	9.54	107.48
PURIFIED TEREPHTHALIC ACID (PTA)	3873.00	3873.00	3873.00	3493.92	3476.51	3755.28	3431.78	3390.56	3492.44	3404.93	3267.07	-0.95	84.36
Total Fibre Intermediates	5187.40	5187.40	5885.10	4686.86	4667.68	4877.16	4678.98	4588.01	4711.06	4657.25	5358.91	1.93	91.06
II : BUILDING BLOCKS													
(a) Olefins													
BUTADIENE	433.00	433.00	552.00	235.14	235.53	239.45	343.45	347.36	332.38	385.76	481.01	10.77	87.14
ETHYLENE	4446.50	4446.50	7147.30	3314.57	3346.39	3191.90	3727.39	4021.73	4222.68	3831.89	6466.75	10.02	90.48
PROPYLENE	4803.42	4803.38	5190.38	3740.73	3988.06	3869.40	4456.69	4425.21	4457.91	4639.53	4887.62	3.89	94.17
Total Olefins	9682.92	9682.88	12889.68	7290.44	7569.97	7300.74	8527.53	8794.29	9012.97	8857.18	11835.39	7.17	91.82
(b) Aromatics													
BENZENE	1566.35	1566.35	1721.35	1048.45	1030.79	1094.38	1332.59	1332.04	1318.03	1414.56	1346.24	3.64	78.21
MIXED XYLENE	898.33	898.33	898.33	199.97	247.54	215.00	269.35	296.03	271.35	249.05	269.63	4.36	30.01
ORTHOXYLENE	420.00	420.00	420.00	444.47	412.41	462.46	499.51	444.88	447.76	406.30	386.39	-1.98	92.00
TOLUENE	288.27	288.27	288.27	108.38	120.39	108.16	115.74	126.76	106.94	141.14	140.16	3.74	48.62
PARAXYLENE (PX)	3131.70	3131.70	3131.70	2359.75	2263.76	2757.84	3266.36	3161.30	3194.52	3331.81	2782.33	2.38	88.84
Total Aromatics	6304.65	6304.65	6459.65	4161.01	4074.89	4637.84	5483.55	5361.02	5338.60	5542.87	4924.74	2.44	76.24
Total Intermediates													
(I+II(a)+II(b))	21174.97	21174.93	25234.43	16138.31	16312.54	16815.75	18690.06	18743.32	19062.62	19057.29	22119.04	4.61	87.65
C : OTHER PETRO-BASED CHEMICALS													
DIETHYLENE GLYCOL	83.30	83.30	132.90	102.88	106.65	100.96	114.24	108.24	105.70	107.41	167.74	7.23	126.21
DIACETONE ALCOHOL	9.50	9.50	9.50	3.15	0.00	0.00	0.00	0.00	0.21	4.07	6.04	9.74	63.60
ETHYLENE DICHLORIDE	593.20	593.20	593.20	316.44	278.03	285.30	277.35	282.57	282.35	339.20	345.29	1.25	58.21
BUTANOL	26.00	26.00	26.00	14.41	5.48	4.20	11.08	12.47	17.39	21.69	16.44	1.90	63.23
2-ETHYL HEXANOL**	55.20	55.20	55.20	49.78	20.19	13.89	44.41	45.59	56.64	58.89	48.75	-0.30	88.31

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2012-13 to 2019-20.

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation
	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
VINYL CHLORIDE MONOMER	541.30	541.30	541.30	668.92	735.47	717.88	790.71	791.26	777.98	803.62	874.47	3.90	161.55
EPICHLHYDRINE	0.00	0.00	0.00	10.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	
PBT*	0.00	0.00	0.00	0.00	0.43	0.50	0.50	0.61	0.58	1.29	6.25		
POLYCARBONATE*	0.00	0.00	0.00	0.00	0.16	0.16	0.17	0.15	0.09	0.12	0.11		
PROPYLENE OXIDE	36.00	36.00	36.00	29.84	33.43	36.61	25.59	29.34	36.00	35.12	34.56	2.12	96.01
PROPYLENE GLYCOL	20.00	20.00	20.00	15.11	14.04	16.25	13.65	16.35	17.64	19.13	19.51	3.72	97.54
POLYVINYL ACETATE RESIN	17.34	17.34	17.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
UNSATURATED POLYSTER RESIN	0.00	0.00	34.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.44		
METHYL METHACRYLATE	4.38	4.38	4.38	3.12	3.23	3.47	2.28	0.54	2.83	3.99	1.71	-8.24	39.02
ISO-BUTANOL	2.80	2.80	2.80	2.38	0.79	0.67	1.86	1.96	2.23	2.21	1.71	-4.60	61.14
C4-RAFFINATE	291.60	291.60	291.60	395.15	392.64	364.61	428.64	437.17	339.20	380.26	413.33	0.64	141.75
PHTHALIC ANHYDRIDE	349.05	349.05	401.91	254.47	263.75	291.52	305.78	296.07	290.01	275.07	269.64	0.83	67.09
VINYL ACTATE MONOMER	30.00	30.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
ISOPROPANOL	70.20	70.20	70.20	70.33	75.90	74.98	71.18	72.47	71.83	58.27	60.51	-2.13	86.19
POLYOL	141.63	141.63	146.76	42.21	40.12	51.78	71.80	78.72	79.43	82.13	81.75	9.90	55.70
Total Other Petro-based Chemicals	2271.49	2271.49	2413.09	1978.87	1970.31	1962.81	2159.22	2173.50	2080.10	2192.46	2364.23	2.57	97.98
Total Major Petrochemical (9 group)	41997.93	42076.70	48933.31	31166.79	31693.14	32226.72	35753.82	36427.08	36813.06	37518.55	43524.13	4.89	88.95

(\$) : Includes capacity of all the units producing PFY, NFY, NIY and PPFY under broadbanding as Synthetic Filament Yarn :

* Nylon 6, 66 includes installed capacity of PBT and Polycarbonate.

(\$\$) : Independent capacity of units producing only NFY, NIY and PPFY.

As the capacities of these products are also included in Synthetic Filament yarn, capacity utilisation can not be worked out.

(\$\$\$) : Combined capacity to produce both LLDPE and HDPE and hence capacity utilisation can not be worked out. However production is independent.

(** : Combined capacity of 2-EH, Butanol & Iso Butanol is given under 2 - EH)

Note : 1.Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 9:- Installed Capacities of Selected Major Petrochemicals (Group Wise) from 2012-13 to 2019-20.

(Figures in 000'MT)

GROUP / PRODUCT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
A : BASIC PETROCHEMICALS								
I : SYNTHETIC FIBRES	3807	3769	4213	4452	4393	4379	4440	4521
II : POLYMERS	8761	8905	8905	9768	10110	10112	10115	12754
III : SYNTHETIC RUBBER (ELASTOMERS)	124	244	425	425	425	425	425	411
IV : SYNTH. DETERGENT INTERMEDIATE	687	687	687	687	687	687	687	680
V : PERFORMANCE PLASTICS	2452	2958	2983	3018	2945	2947	2963	2919
MAJOR PETROCHEMICALS (I TO V)	15831	16563	17213	18351	18561	18551	18630	21286
B : INTERMEDIATES								
VI : FIBRE INTERMEDIATES	5034	5067	5067	5067	5067	5187	5187	5885
VII : OLEFINS	8304	8484	8484	9462	9683	9683	9683	12890
VIII : AROMATICS	5070	5077	6274	6304	6305	6305	6305	6460
Total (VI TO VIII)	18408	18629	19826	20834	21055	21175	21175	25234
C : OTHER PETRO-BASED CHEMICALS	2121	2169	2244	2272	2273	2271	2271	2413
Total (A,B & C)	36360	37361	39283	41457	41888	41998	42077	48933

Note: Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

PRODUCT NAME	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
I. SYNTHETIC FIBRE								
ACRYLIC FIBRE	85.07	95.81	88.55	97.20	83.83	83.94	94.00	118.72
POLYESTER STAPLE FIBREFILL	51.09	56.46	57.30	51.05	53.65	51.33	52.99	49.89
NYLON FILAMENT YARN	44.14	46.60	58.41	64.58	70.11	58.72	64.08	65.02
NYLON INDUSTRIAL YARN/TYRE CORD	103.23	107.96	102.52	98.16	109.83	112.53	115.76	103.02
POLYESTER FILAMENT YARN	1351.32	1210.26	1602.69	1616.81	1537.24	1648.48	1703.72	1924.18
POLYESTER STAPLE FIBRE	833.40	847.34	919.53	957.55	941.91	866.85	767.76	860.51
POLYPROPYLENE FILAMENT YARN	6.02	4.84	3.62	1.32	2.01	3.62	3.22	2.47
POLYPROPYLENE STAPLE FIBRE	6.09	8.52	15.14	21.40	16.82	16.02	16.19	12.08
POLYSTER INDUSTRIAL YARN	15.24	14.75	16.58	15.38	16.33	15.04	14.83	14.73
Elastomeric/Spandex Filament Yarn	11.55	12.69	16.04	20.36	21.93	27.24	28.89	29.42
Total	2507.15	2405.22	2880.38	2943.80	2853.65	2883.77	2861.43	3180.03
II. POLYMERS								
LOW DENSITY POLYETHYLENE	434.18	427.79	488.78	550.79	566.35	541.99	369.97	825.64
HIGH DENSITY POLYTHYLENE	1656.62	1656.81	1947.02	2122.78	2372.35	2365.65	2042.53	2198.64
POLYESTYRENE	251.65	224.15	247.12	264.80	273.18	284.56	285.18	296.48
POLYPROPYLENE (INC. CO-POLYMER)	3176.05	3275.54	3499.59	4249.93	4460.35	4737.19	4915.80	5438.38
EXPANDABLE POLYESTYRENE	81.53	77.68	78.99	85.42	96.85	103.44	106.44	108.98
POLY VINYL CHLORIDE	2388.51	2574.19	2621.79	2936.15	3157.90	3305.72	3523.84	2439.91
LINEAR LOW DENSITY POLYTHYLENE	1528.82	1522.95	1449.51	1778.76	1734.12	1486.21	1349.40	2910.40
PVC COMPOUND	58.74	54.20	58.29	65.91	42.13	14.35	-7.68	0.00
Total	9576.09	9813.31	10391.10	12054.52	12703.23	12839.10	12585.48	14218.42
III. SYNTHETIC RUBBER								
STYRENE BUTADIENE RUBBER	207.19	244.01	262.79	266.55	289.76	286.26	305.47	285.64
POLY BUTADIENE RUBBER	147.13	166.80	176.09	182.59	196.89	201.40	213.72	207.64
ETHYL PROPYLENE DIMERS	27.19	28.27	30.43	36.65	40.13	42.58	50.34	43.17
ETHYL VINYL ACETATE	118.20	124.76	144.70	166.40	143.11	182.45	178.15	192.67
NITRILE BUTADIENE RUBBER	26.40	29.66	26.66	51.93	36.36	39.93	38.01	40.46
BUTYL RUBBER	78.27	78.53	83.29	90.84	100.26	111.02	120.12	89.29
Total	604.38	672.04	723.95	794.94	806.50	863.64	905.82	858.88
IV. SYNTHETIC DETERGENT INTERMEDIATES								
LINEAR ALKYL BENZENE	532.29	496.97	517.33	585.94	669.30	656.51	681.61	677.34
ETHYLENE OXIDE	171.49	190.44	184.57	188.03	215.58	290.89	231.64	300.36
Total	703.78	687.41	701.90	773.97	884.88	947.39	913.24	977.70
V. PERFORMANCE PLASTICS								
ABS RESIN	146.76	164.91	176.97	206.62	220.16	242.99	267.13	240.78
NYLON-6	96.84	118.59	136.67	150.19	161.53	174.07	216.48	237.01
POLYMETHYL METHACRYLATE	11.18	11.63	7.11	12.62	18.90	26.45	25.22	24.70
STYRENE ACRYLONITRILE	86.35	93.30	95.07	107.67	107.11	122.94	140.56	143.78
NYLON 6,6	0.85	0.91	1.25	1.23	1.17	1.08	1.02	0.73
POLYESTER CHIPS/PET CHIPS	1242.59	1123.03	1153.57	792.03	729.45	676.37	534.81	789.58

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

PRODUCT NAME	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
POLYTETRAFLUOROETHYLENE(PTFE)	7.96	8.52	5.95	4.75	5.64	7.07	7.14	6.84
Total	1592.52	1520.90	1576.58	1275.10	1243.96	1250.96	1192.35	1443.41
TOTAL BASIC MAJOR PETROCHEMICALS								
(I+II+III+IV+V)	14983.93	15098.87	16273.91	17842.34	18492.22	18784.86	18458.32	20678.43
FIBRE INTERMEDIATE								
ACRYLONITRILE	109.69	112.85	137.90	131.08	159.82	139.70	158.27	180.36
CAPROLACTUM	110.29	111.30	107.84	119.33	130.87	138.86	144.33	158.98
DIMETHYL TEREPHTHALATE	2.81	2.10	1.79	2.09	2.22	1.76	2.26	1.45
MONO EHYLENE GLYCOL	1564.68	1644.26	1822.97	1931.46	2198.31	2283.68	2061.67	1501.89
PURIFIED TEREPHTHALIC ACID	3887.52	4138.30	4454.58	4799.80	3955.64	3543.14	3801.61	3812.26
Total	5674.98	6008.81	6525.06	6983.76	6446.86	6107.15	6168.13	5654.95
OLEFINS								
BUTADIENE	133.21	126.70	117.19	170.19	214.64	242.62	231.81	250.62
ETHYLENE	3334.32	3338.36	3371.18	3235.80	3743.33	4102.62	4125.38	3699.24
PROPYLENE	3558.14	3735.74	3988.31	3871.53	4445.58	4415.14	4445.97	4608.31
Total	7025.68	7200.80	7476.67	7277.52	8403.54	8760.38	8803.16	8558.17
AROMATICS								
BENZENE	543.93	446.14	400.29	517.68	417.72	542.62	31.77	-214.30
MIXED XYLENE	58.31	58.58	65.87	206.19	269.45	296.08	273.36	248.71
ORTHO-XYLENE	238.02	278.78	228.28	271.15	299.63	316.81	277.81	203.57
TOLUENE	371.99	410.11	369.35	386.04	454.13	513.67	516.98	565.59
PARAXYLENE	2227.63	2344.68	2220.25	2391.98	3213.80	3557.33	2256.66	1508.80
Total	3439.87	3538.29	3284.04	3773.04	4654.73	5226.49	3356.58	2312.38
OTHER PETRO-BASED CHEMICALS								
DIETHYLENE GLYCOL	102.88	106.65	100.96	114.24	108.24	105.70	107.41	167.74
DIACETONE ALCOHOL	3.15	0.00	0.00	0.00	0.00	0.21	4.07	6.04
ETHYLENE DICHLORIDE	672.25	717.56	750.57	861.55	786.54	950.82	901.70	1044.87
BUTANOL	45.94	47.98	60.40	73.40	68.13	70.21	70.20	75.02
OXO ALCOHOL	0.52	0.51	0.10	0.69	1.92	1.38	-0.24	1.55
2-ETHYL HEXANOL	108.15	120.37	142.40	152.76	110.41	112.13	109.83	130.36
VINYL CHLORIDE MONOMER	965.09	1038.51	1035.81	1140.08	1135.68	1262.37	1261.15	1385.63
EPICHLHYDRINE	29.79	22.98	33.57	43.36	48.06	55.98	64.96	61.06
ISO BUTYLENE	9.26	21.44	13.01	15.83	20.05	48.70	44.56	-7.30
METAXYLENE	-36.69	3.03	0.92	3.02	2.60	2.07	2.93	1.88
METHYL ISOBUTYL KETONE	17.66	18.30	23.04	27.29	21.57	33.75	31.89	27.81
PBT	0.00	0.43	0.50	0.50	0.61	0.58	1.29	6.25
PIB	6.47	3.56	6.30	8.24	13.80	12.42	11.99	10.30
POLYCARBONATE	120.23	120.57	122.26	133.91	134.53	154.11	187.12	172.47
PROPYLENE OXIDE	42.98	45.11	59.52	51.14	52.40	59.44	61.92	54.72
PROPYLENE GLYCOL	52.56	56.77	64.23	67.16	66.82	73.86	83.93	80.95
POLYVINYL ACETATE RESIN	-9.68	-11.26	-11.45	-8.05	-5.72	-3.51	-5.80	-5.47

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2012-13 to 2019-20

(Figures in 000'MT)

PRODUCT NAME	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
UNSATURATED POLYESTER RESIN	25.31	20.41	16.19	18.19	23.71	35.45	28.29	49.55
METHYL METHACRYLATE	3.12	3.23	3.47	2.28	0.54	2.83	3.99	1.71
ISO-BUTANOL	2.38	0.79	0.67	1.86	1.96	2.23	2.21	1.71
ETHYL BENZENE	0.40	0.17	0.13	0.15	0.31	0.35	0.72	0.46
C4-RAFFINATE	395.15	392.64	364.61	428.64	437.17	339.20	380.26	413.33
CELLULOSE ACETATE BUTYRATE	-0.04	-0.09	-0.04	0.00	-0.01	0.00	0.00	0.01
CELLULOSE ACETATE SHEET	0.53	0.92	1.23	1.26	0.98	1.29	1.49	1.32
CELLULOSE NITRATE SHEET	0.13	0.50	0.25	0.09	0.06	0.10	0.10	0.07
MELAMINE MOULDING POWDER	7.51	8.04	3.74	3.88	2.87	-0.06	-1.30	-6.75
POLYACETAL RESIN	25.66	25.73	32.07	34.90	37.50	43.53	48.48	47.34
PHTHALIC ANHYDRIDE	285.98	295.51	305.24	345.13	346.10	382.58	393.37	415.23
STYRENE	574.32	570.41	610.86	716.90	724.54	784.75	811.25	872.56
VINYL ACTATE MONOMER	126.19	143.27	137.99	139.95	150.25	163.70	163.01	159.43
ISOPROPANOL	122.21	123.84	132.04	155.07	162.35	171.29	193.10	204.16
POLYOL	179.44	180.22	200.76	236.94	226.03	274.55	308.30	295.68
Total	3878.82	4078.06	4211.33	4770.34	4679.97	5142.00	5272.18	5669.68

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry.

\$ Derived consumption as Production + Imports - Exports

Section – III

Foreign Trade

Table 11:- Exports and Imports of Chemicals & Chemical Products (excluding Pharmaceutical Products and Fertilizers) during 2012-13 to 2019-20

<i>Values in Rs. Crore</i>										
HS Code	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR (%)
	Total National Exports of which	1634318	1905011	1896445	1716384	1849434	1955541	2307726	2219854	4.5
28	INORGANIC CHEMICALS	7176	8258	8749	7913	9138	11175	14056	12512	8.3
29	ORGANIC CHEMICALS	65865	72860	73069	75295	78386	95305	127567	124195	9.5
32	TANNING OR DYEING	11372	15455	17206	16165	17189	18951	23124	24409	11.5
38	MISCELLANEOUS CHEMICAL PRODUCTS.	15545	18694	19432	20083	21792	25082	32397	35663	12.6
39	PLASTIC AND ARTICLES THEREOF.	28012	34154	31022	34381	35502	40926	56079	48970	8.3
4002	SYNTHETIC RUBBER AND FACTICE	181	245	379	452	480	571	739	759	22.7
54	MAN-MADE FILAMENTS.	12112	15575	14621	13460	13334	13984	16018	16962	4.9
55	MAN-MADE STAPLE FIBRES.	10565	12621	13334	13625	14373	13212	13308	11824	1.6
A: Total Chemicals and Petrochemical Products		150829	177862	177813	181374	190193	219206	283287	275294	9.0
	% share in total export	9.2	9.3	9.4	10.6	10.3	11.2	12.3	12.4	
	Total National Imports of which	2669162	2715434	2737087	2490306	2577675	3001016	3594675	3360954	3.3
28	INORGANIC CHEMICALS	28770	29063	31413	33170	31654	38927	53237	45045	6.6
29	ORGANIC CHEMICALS	85439	103157	108320	101986	103798	123761	156552	140205	7.3
32	TANNING OR DYEING	8004	9254	9821	10467	11186	12995	15460	14518	8.9
38	MISCELLANEOUS CHEMICAL PRODUCTS.	20650	23107	25494	27207	30642	35521	41748	39069	9.5
39	PLASTIC AND ARTICLES THEREOF.	52283	61072	71398	74566	77573	89772	106591	100607	9.8
4002	SYNTHETIC RUBBER AND FACTICE	7562	7339	6697	5205	5654	6687	7896	6079	-3.1
54	MAN-MADE FILAMENTS.	4149	4597	5042	4879	4856	5538	6843	7351	8.5
55	MAN-MADE STAPLE FIBRES.	3052	3722	4539	4401	3826	4658	6508	6785	12.1
B: Total Chemicals and Petrochemical Products		209909	241311	262722	261880	269189	317859	394834	359660	8.0
	% share in total import	7.9	8.9	9.6	10.5	10.4	10.6	11.0	10.7	

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No.4001 with any product of this heading, in primary forms or in plates, sheets; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note : \$ Import and Export includes both technical and formulations.

Note: Data Source in respect of Imports and Exports is DGCIS, Kolkata, M/O Commerce and Industry, as on 10.Feb.2021.

Table 12:- Exports and Imports of Chemicals & Chemical Products (including Pharmaceutical Products and Fertilizers) during 2012-13 to 2019-20

Values in Rs. Crore

HS Code	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CARG (%)
	Total National Exports of which	1634318	1905011	1896445	1716384	1849434	1955541	2307726	2219854	4.5
28,29,32,3 8,4002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	150829	177862	177813	181374	190193	219206	283287	275294	9.0
	% share in total exports	9.2	9.3	9.4	10.6	10.3	11.2	12.3	12.4	
30	Pharmaceutical Products	54774	67404	70815	84481	86705	85445	103240	115473	11.2
	% share in total exports	3.4	3.5	3.7	4.9	4.7	4.4	4.5	5.2	
31	Fertilisers	480	492	555	673	466	685	1038	837	8.3
	% share in total exports	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.04	
A: Total Chemicals and Chemical Products (including		206082	245758	249183	266528	277364	305336	387565	391604	9.6
	% share in total exports	12.61	12.90	13.14	15.53	15.00	15.61	16.79	17.64	
	Total National Imports of which	2669162	2715434	2737087	2490306	2577675	3001016	3594675	3360954	3.3
28,29,32,3 8,4002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	209909	241311	262722	261880	269189	317859	394834	359660	8.0
	% share in total imports	7.9	8.9	9.6	10.5	10.4	10.6	11.0	10.7	
30	Pharmaceutical Products	9522	9371	9961	10742	11515	12241	14581	16530	8.2
	% share in total imports	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	
31	Fertilisers	40412	32639	39106	45973	28754	30108	46457	47397	2.3
	% share in total imports	1.51	1.20	1.43	1.85	1.12	1.00	1.29	1.41	
B: Total Chemicals and Petrochemical Products		259844	283322	311790	318595	309458	360208	455872	423587	7.2
	% share in total imports	9.74	10.43	11.39	12.79	12.01	12.00	12.68	12.60	

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 30: Pharmaceutical Products; Chapter 31: Fertilisers; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No.4001 with any product of this heading, in primary forms or in plates, sheets; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note : \$ Import and Export includes both technical and formulations.

Note: Data Source in respect of Imports and Exports is DGCIS,Kolkata, M/O Commerce and Industry, as on 10.Feb.2021.

Table 12A:- Net Imports of Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers) during 2012-13 to 2019-20

<i>Values in Rs. Crore</i>									
HS Code	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Total National Net Imports of which	1034844	810423	840641	773921	728242	1045475	1286948	1141100
28	INORGANIC CHEMICALS	21594	20805	22664	25256	22516	27753	39181	32533
29	ORGANIC CHEMICALS	19574	30296	35251	26692	25412	28455	28985	16009
32	TANNING OR DYEING	-3368	-6201	-7385	-5698	-6004	-5955	-7664	-9891
38	MISCELLANEOUS CHEMICAL PRODUCTS.	5105	4413	6061	7124	8850	10439	9352	3407
39	PLASTIC AND ARTICLES THEREOF.	24271	26918	40376	40185	42071	48845	50512	51638
4002	SYNTHETIC RUBBER AND FACTICE	7381	7094	6318	4753	5174	6116	7157	5320
54	MAN-MADE FILAMENTS.	-7964	-10978	-9579	-8582	-8479	-8446	-9175	-9611
55	MAN-MADE STAPLE FIBRES.	-7513	-8899	-8795	-9224	-10546	-8554	-6800	-5039
Net Imports of Total Chemicals and Chemical		59080	63449	84909	80506	78995	98653	111548	84366
% share in total national net imports		5.7	7.8	10.1	10.4	10.8	9.4	8.7	7.4
30	Pharmaceutical Products	-45252	-58032	-60854	-73739	-75190	-73204	-88659	-98943
31	Fertilisers	39933	32147	38551	45300	28289	29423	45419	46560
Net Imports of Total Chemicals and Chemical		53761	37564	62607	52067	32094	54872	68308	31983
% share in total national net imports		5.2	4.6	7.4	6.7	4.4	5.2	5.3	2.8

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No.4001 with any product of this heading, in primary forms or in plates, sheets; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note : \$ Import and Export includes both technical and formulations.

Note: Data Source in respect of imports and exports is DGCI, Kolkata, M/O Commerce and Industry, as on 10.Feb.2021.

Table-13: Exports of Major Chemicals (Group Wise) during 2012-13 to 2019-20

(QTY. IN MT ; VALUE IN RS. LAKH)

GROUP	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	144954	33599	164213	35747	73639	17660	106744	29210	154244	39591	273456	86880	239321	87844	329459	82760
INORGANIC CHEMICALS	162645	99228	167449	116036	163592	100558	156683	74466	377587	111322	173071	102270	176900	133248	196035	134079
ORGANIC CHEMICALS	406944	373539	335353	343064	240545	249461	231728	216771	190306	232940	204923	320492	233147	425738	244524	422713
PESTICIDES & INSECTICIDES \$	179518	794635	206960	985161	230227	974682	266915	1126874	342331	1315026	358481	1481031	404783	2004132	398069	2163297
DYES & PIGMENTS	326035	816039	346539	1145588	353220	1285827	376046	1219795	419272	1307546	485741	1439290	525170	1800681	530297	1928414
EXPORTS OF MAJOR CHEMICALS	1220096	2117040	1220514	2625596	1061223	2628188	1138116	2667116	1483740	3006425	1495672	3429963	1579321	4451643	1698384	4731263

Source: Imports & Exports data have been received from DGCI, Ministry of Commerce & Industry, and Kolkata.

Note : \$ Import and Export includes both technical and formulations.

Table-14: Imports of Major Chemicals (Group Wise) during 2012-13 to 2019-20

(QTY. IN MT & VALUE IN RS. LAKH)

GROUP	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	995300	172682	874159	152967	1134146	206474	1117878	218199	1121137	215051	1193978	265347	1049124	225523	1157130	240752
INORGANIC CHEMICALS	689374	237352	873906	265840	911969	267873	1009821	237368	1010071	235237	1228854	308363	1579667	485763	1531826	354602
ORGANIC CHEMICALS	2486575	757437	2495989	957223	2885815	995356	3143476	865684	3170287	904366	3407051	1207748	3644781	1520278	3775333	1078053
PESTICIDES & INSECTICIDES \$	29789	263642	37099	335996	40674	374050	33868	390707	42591	490581	44145	581385	49233	632590	42580	611078
DYES & PIGMENTS	52236	183735	52315	208985	51935	214741	54691	219304	55868	214913	62971	231383	56452	278422	50583	281435
IMPORTS OF MAJOR	4253274	1614848	4333468	1921011	5024539	2058494	5359734	1931262	5399954	2060148	5936999	2594226	6379257	3142576	6557452	2565920

Source: Imports & Exports data have been received from DGCIS, Ministry of Commerce & Industry, and Kolkata.

Note : \$ Import and Export includes both technical and formulations.

Table-15: Net Imports of Major Chemicals (Group Wise) during 2012-13 to 2019-20

(QTY. IN MT & VALUE IN RS. LAKH)

GROUP	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	850346	139083	709946	117220	1060507	188814	1011134	188989	966893	175460	920522	178467	809803	137679	827671	157992
INORGANIC CHEMICALS	526729	138124	706457	149804	748377	167315	853138	162902	632484	123915	1055783	206093	1402767	352515	1335791	220523
ORGANIC CHEMICALS	2079631	383898	2160636	614159	2645270	745895	2911748	648913	2979981	671426	3202128	887256	3411634	1094540	3530809	655340
PESTICIDES & INSECTICIDES \$	-149729	-530993	-169861	-649165	-189553	-600632	-233047	-736167	-299740	-824445	-314336	-899646	-355550	-1371542	-355489	-1552219
DYES & PIGMENTS	-273799	-632304	-294224	-936603	-301285	-1071086	-321355	-1000491	-363404	-1092633	-422770	-1207907	-468718	-1522259	-479714	-1646979
NET IMPORTS OF MAJOR	3033178	-502192	3112954	-704585	3963316	-569694	4221618	-735854	3916214	-946277	4441327	-835737	4799936	-1309067	4859068	-2165343

Source: Imports & Exports data have been received from DGCIS, Ministry of Commerce & Industry, and Kolkata.

Note : \$ Import and Export includes both technical and formulations.

Table 16 :- Exports of Major Chemicals (Productwise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	82144	12766	84254	12506	27720	5166	18613	3927	64377	10793	110087	19377	62457	15202	137749	27137
CAUSTIC SODA	59118	20166	76059	22568	42200	11973	82144	23807	84809	27773	159630	66829	172165	71663	187494	54532
LIQUID CHLORINE	3692	667	3900	673	3719	521	5987	1476	5058	1025	3739	674	4699	979	4216	1091
TOTAL	144954	33599	164213	35747	73639	17660	106744	29210	154244	39591	273456	86880	239321	87844	329459	82760
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	3755	2410	3658	2571	2831	1980	1796	1240	321	265	206	204	442	363	1362	1210
CALCIUM CARBIDE	1758	853	268	148	412	230	371	206	493	284	464	258	325	204	371	244
CARBON BLACK	110697	79285	123679	88731	114119	77832	114668	55019	332172	87414	122287	72959	122832	103643	144017	103457
POTASSIUM CHLORATE	791	567	724	451	634	492	758	576	1658	1145	1941	1245	3024	2124	3178	2190
SODIUM CHLORATE	40	5	7	10	31	21	13	13	118	56	1075	256	810	41	0	6
TITANIUM DIOXIDE	3470	5278	9051	12853	5158	7108	4436	5582	8183	10216	9560	15377	7345	12743	6235	10654
RED PHOSPHORUS	471	1598	411	1557	360	1299	482	1777	454	1757	455	1716	595	2242	650	2567
HYDROGEN PEROXIDE	1789	483	544	217	244	143	351	222	270	284	116	214	263	225	808	482
CALCIUM CARBONATE	39874	8749	29107	9498	39803	11453	33808	9831	33918	9901	36967	10041	41264	11663	39414	13269
TOTAL	162645	99228	167449	116036	163592	100558	156683	74466	377587	111322	173071	102270	176900	133248	196035	134079
ORGANIC CHEMICALS																
ACETIC ACID	6617	2995	7338	3134	6489	3449	8378	5181	12914	6277	12220	5401	17821	10476	12746	6265
ACETIC ANHYDRIDE	3734	1855	6430	3470	20098	11565	18605	9941	20443	10277	19644	13743	18444	13582	20529	12815
ACETONE	2660	1828	674	628	3182	2975	10778	6392	3225	2201	5054	3173	10901	5904	11004	5646
PHENOL	436	1028	2142	3230	2009	3338	6841	7379	4013	8192	4750	9709	4724	11740	22273	23408
METHANOL	184669	34456	81917	22584	49463	11525	44013	8196	12624	3123	9466	2846	10943	3819	12941	3482
FORMALDEHYDE	5041	961	6369	2020	7467	1213	8480	1383	8406	1548	10616	2098	12484	2495	14153	2484
NITROBENZENE	165	141	146	131	150	137	49	38	344	231	60	49	103	110	133	131
CITRIC ACID	2411	1817	2013	1671	1737	1364	1487	1144	1670	1244	2393	1931	2323	2010	2411	1942
MALEIC ANHYDRIDE	23	27	27	36	37	47	80	67	232	164	233	227	87	105	167	193
PENTAERYTHRITOL	1385	2144	1460	2277	1557	2516	1632	2958	2044	3470	2110	3399	2287	4161	2584	4741
ANILINE	193	344	94	143	86	141	129	134	168	207	162	614	137	341	68	148
CHLORO METHANES	42	49	35	353	144	236	38	41	89	121	101	283	75	149	49	107

Table 16 :- Exports of Major Chemicals (Productwise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ISOBUTYLBENZENE	13314	17938	14156	21087	13944	19250	12572	14186	13430	14854	12341	14384	11740	16320	9705	14150
ONCB	378	319	2555	2428	2231	2283	843	883	973	950	0	0	0	0	0	0
PNCB	2096	1442	2370	1763	843	564	1670	1114	1023	738	0	0	0	0	0	0
MEK	408	390	460	2382	673	922	184	795	189	98	19	36	465	477	243	245
ACETALDEHYDE	239	1005	37	118	25	140	2	4	40	44	3	6	1148	912	1139	893
ETHANOLAMINES	832	3173	1235	4665	1027	3696	1129	7119	1692	4996	4801	14201	3143	13553	1686	10522
ETHYL ACETATE	169166	88388	190187	103855	115096	67934	104814	54269	93699	48020	105551	62174	118682	82170	108384	63095
MENTHOL	12181	212575	14988	166411	13135	115160	8836	94548	12006	125246	12749	183951	13351	253213	17089	265334
ORTHO NITRO TOLUENE	954	664	720	678	1152	1006	1168	999	1082	939	2650	2267	4289	4201	7220	7112
TOTAL	406944	373539	335353	343064	240545	249461	231728	216771	190306	232940	204923	320492	233147	425738	244524	422713
PESTICIDES & INSECTICIDES																
MALATHION	328	611	415	819	1260	2346	1010	1943	1264	2274	1977	3682	2499	5792	2318	6230
DIMETHOATE	69	182	184	679	369	1327	20	52	24	58	24	62	126	429	199	603
D.D.V.P.	543	1179	298	707	564	1449	550	1461	322	1145	493	1835	689	2716	12	41
QUINALPHOS	463	1657	950	3360	996	3900	235	1036	384	1772	382	1645	281	1439	338	1606
ENDOSULPHAN	80	260	45	59	0	0	0	0	0	0	0	1	0	0	0	0
CYPERMETHRIN	10268	55107	11982	58546	10487	50407	8837	45949	9416	45742	9706	62713	13609	112381	15122	95462
FENTHION	0	0	0	0	0	0	0	0	10	18	0	0	0	0	0	0
OTHER PESTICIDES	33468	136414	48228	206246	37862	178366	41058	214054	45560	208648	43320	216510	39174	233275	7416	28448
OTHER INSECTICIDES	41853	335623	48918	372937	45483	344754	31146	276427	41471	311285	50008	393497	62714	580271	106352	840555
COPPER-OXYCHLORIDE	478	1231	417	1155	867	2311	810	1818	871	1921	723	1732	806	2427	2240	5896
2, 4-D	15365	27427	14851	27924	10938	18095	19449	29770	20677	27496	24125	36076	22242	46347	19623	32924
ISOPROTURON	4181	13189	2114	7804	2150	7972	1087	3830	356	1295	0	0	0	0	0	0
ALUMINIUM PHOSPHIDE	2341	9758	853	3703	223	562	64	226	127	515	505	1703	481	2084	426	1909
METHYL BROMIDE	104	373	383	1333	551	1940	1274	4641	1756	6229	2000	7292	2208	8384	1628	6682
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	14452	85943	15005	130898	19150	151055	32381	266182	50720	362041	67039	425113	74058	595122	79434	717390
OTHER FUNGICIDE NES	55525	125681	62317	168991	99327	210198	128994	279485	169373	344587	158179	329170	185896	413465	162961	425551
TOTAL	179518	794635	206960	985161	230227	974682	266915	1126874	342331	1315026	358481	1481031	404783	2004132	398069	2163297
DYES & PIGMENTS																

Table 16 :- Exports of Major Chemicals (Productwise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
AZO DYES	54228	111415	57392	172261	51902	194665	55327	161970	60390	162456	69996	181785	72999	225224	68352	210313
ACID DIRECT DYES(OTHER THAN AZO)	3629	9770	5637	21363	4004	20146	3559	17300	4434	19689	5098	21655	5103	26145	5601	28666
BASIC DYES	6957	14815	7148	19082	7646	21701	8173	23896	9229	26186	10757	32222	12017	44585	12730	48887
DISPERSE DYES	7017	19417	9248	33190	12065	48545	13117	52818	16078	59912	14460	56914	20552	107647	23362	133160
FAST COLOUR BASES	3106	9349	2619	10191	2806	11890	2262	11868	2174	15766	2042	9726	2652	14987	5364	46929
OIL SOLUBLE (SOLVENT DYES)	4665	17828	4965	23306	6826	32614	6123	31703	8702	39439	8995	42906	10195	66808	11091	76571
OPTICAL WHITENING AGENTS	23049	29156	23381	36889	27211	44223	25203	46519	26957	46240	30124	48069	30259	66858	26084	82724
ORGANIC PIGMENT	60	386	15	100	191	500	75	531	71	293	62	185	15	98	50	333
PIGMENT EMULSION	69919	295002	71335	353119	76407	365943	81536	374190	88980	392700	102051	441253	110526	494598	110669	534039
REACTIVE DYES	98440	200414	110018	340284	107369	392147	113224	344963	128417	379350	147417	413080	158530	511426	169648	502283
SULPHUR DYES (SULPHUR BLACK)	889	1153	1141	1575	1993	2627	1472	1945	2023	2682	5467	5794	5720	7303	4510	5233
VAT DYES	1954	16816	1955	24387	2132	31855	1364	20523	1404	22737	1707	26607	4475	46284	4524	64023
SOLUBILISED VAT DYES	47	370	31	491	29	283	36	354	31	265	46	529	63	789	71	1185
FOOD COLOURS	21786	51772	22893	65439	26034	77218	27101	79537	28359	79492	31110	87129	29007	107344	25347	107786
NAPTHOLS	1242	2754	887	2597	1139	3113	1489	3463	2076	4753	2329	5725	3276	8341	4169	11467
OTHER DYES	8050	16587	9558	23840	9612	27865	10159	22693	12711	24977	13735	26227	13621	31196	15218	34504
INORGANIC PIGMENTS	20997	19035	18316	17474	15854	10492	25826	25522	27236	30609	40345	39484	46160	41048	43507	40311
TOTAL	326035	816039	346539	1145588	353220	1285827	376046	1219795	419272	1307546	485741	1439290	525170	1800681	530297	1928414

Note: Data Source in respect of Imports and Exports is DGCI, Kolkata, M/o Commerce and Industry.

Table 17 :- Imports of Major Chemicals (Productwise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	692866	96965	569420	79817	725517	112616	633263	101707	695307	102490	772622	111757	840591	144900	847704	152515
CAUSTIC SODA	302385	75577	304653	73038	407981	93584	484133	116303	425795	112391	421298	153382	208267	79927	309345	87982
LIQUID CHLORINE	49	140	86	112	648	274	482	189	35	170	58	208	266	696	81	255
TOTAL	995300	172682	874159	152967	1134146	206474	1117878	218199	1121137	215051	1193978	265347	1049124	225523	1157130	240752
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	26244	19086	24542	17383	30120	20259	27258	18102	46564	26437	49758	29075	62374	56075	40362	37910
CALCIUM CARBIDE	57865	24734	64239	26743	78332	31525	61935	25429	55692	23652	55651	23941	45321	21554	31218	14507
CARBON BLACK	143461	105503	145939	112823	139468	108915	124059	83401	128740	82424	186224	143618	278531	249368	197491	153367
POTASSIUM CHLORATE	7468	4217	7040	4357	6147	3856	3160	2026	100	61	29	22	128	272	55	119
SODIUM CHLORATE	25076	9375	28083	11570	21818	9085	17298	6400	7447	2907	8822	3041	14240	5884	24082	11254
TITANIUM DIOXIDE	17825	31788	16875	29196	17574	28243	16421	25709	13901	22943	13701	24771	14546	28686	16416	30825
RED PHOSPHORUS	298	735	266	750	36	98	0	0	0	1	0	3	14	51	18	57
HYDROGEN PEROXIDE	33129	8191	62527	16443	56276	14311	44084	11211	57068	15910	68474	19305	84261	36931	52727	15858
CALCIUM CARBONATE	378008	33723	524395	46575	562198	51581	715606	65090	700559	60902	846195	64587	1080252	86942	1169457	90705
TOTAL	689374	237352	873906	265840	911969	267873	1009821	237368	1010071	235237	1228854	308363	1579667	485763	1531826	354602
ORGANIC CHEMICALS																
ACETIC ACID	646738	171462	664797	197806	712384	234821	792775	206305	847808	193958	884515	290624	937298	422360	926492	273709
ACETIC ANHYDRIDE	2042	1049	1792	985	2689	1538	2918	1780	2272	1118	4381	2346	12275	9700	20529	11716
ACETONE	95939	54615	116758	81421	126832	82658	138402	55796	135887	63055	146878	74975	116760	52108	72402	28094
PHENOL	172758	139980	214096	172402	200115	183502	248769	147715	282187	176601	288572	202842	231808	217710	144005	99070
METHANOL	1398982	260025	1310438	341804	1641624	319399	1711879	285259	1637457	295762	1783293	400004	1986712	519474	2286274	425567
FORMALDEHYDE	342	217	433	216	412	225	66	42	84	248	46	44	22	13	5	111
NITROBENZENE	0	0	0	4	1208	802	5838	2733	14429	6944	15384	8207	18204	10721	15533	8073
CITRIC ACID	56743	27338	64099	31694	67369	33345	75978	36119	81681	39558	84262	45489	95283	45136	90958	38453
MALEIC ANHYDRIDE	36864	35099	36751	39695	38388	35773	47399	31392	50813	34618	52627	42928	69920	61694	66942	46858
PENTAERYTHRITOL	14650	13819	15650	16423	13681	14646	19486	21468	19380	20690	17963	19614	18407	23000	21311	23116
ANILINE	15441	14410	31742	34853	36095	36876	38341	26965	44650	29368	65416	58924	88454	81524	80946	53293
CHLORO METHANES	153	356	143	296	113	289	608	364	258	223	519	429	1413	1089	2404	2122
ISOBUTYLBENZENE	0	0	26	19	0	0	0	0	0	0	0	0	0	0	2	4
ONCB	2089	1313	672	589	395	410	237	192	839	628	0	0	0	0	0	0
PNCB	0	0	398	295	3838	2301	8408	3886	6095	2899	0	0	0	0	0	0
MEK	31597	25151	27239	23186	27539	25599	40883	26950	30901	16629	45331	36027	47158	40994	25509	19145
ACETALDEHYDE	49	230	97	436	53	176	74	299	130	357	81	243	94	275	113	375

Table 17 :- Imports of Major Chemicals (Productwise) during 2012-13 to 2019-20



[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ETHANOLAMINES	10435	8562	10023	10652	11286	17183	10072	10321	11662	10202	16101	16140	16648	19347	16694	16398
ETHYL ACETATE	1405	1102	240	466	201	453	290	909	1664	861	43	127	2917	2358	2157	1768
MENTHOL	329	2702	457	3889	507	4307	936	7112	1511	10211	1372	8573	1334	12718	3057	30181
ORTHO NITRO TOLUENE	19	7	138	92	1086	1053	117	77	579	436	267	212	74	57	0	0
TOTAL	2486575	757437	2495989	957223	2885815	995356	3143476	865684	3170287	904366	3407051	1207748	3644781	1520278	3775333	1078053
PESTICIDES & INSECTICIDES																
DIMETHOATE	182	422	46	106	0	0	0	0	0	0	0	0	0	0	0	0
D.D.V.P.	0	0	70	99	20	36	64	116	16	28	35	66	1561	3167	0	0
QUINALPHOS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	81
CYPERMETHRIN	8	20	4	11	0	0	0	0	0	0	8	47	5	53	93	849
FENTHION	0	0	35	173	50	236	0	0	0	0	0	0	0	0	0	0
OTHER PESTICIDES	1263	6928	2255	13747	2007	12072	1318	12700	1176	91641	1907	139991	1868	163792	4534	131268
OTHER INSECTICIDES	17157	173226	19563	194422	19369	205845	15634	213829	18067	208838	17307	239549	17188	240036	13525	268040
COPPER-OXYCHLORIDE	0	1	48	122	0	0	0	0	0	1	0	1	0	2	0	0
2, 4-D	0	78	0	0	34	77	72	123	16	27	1824	2735	2819	5935	2382	4311
ISOPROTURON	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0
ALUMINIUM PHOSPHIDE	23	741	8	61	3	54	6	98	0	0	0	0	5	39	1	27
METHYL BROMIDE	779	2591	460	1652	269	1150	53	250	24	70	18	107	2	14	28	141
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	7107	57625	10056	85938	12294	86257	10171	85167	16149	104626	15248	100387	18044	122207	14232	104807
OTHER FUNGICIDE NES	3270	22010	4554	39665	6628	68323	6550	78424	7143	85350	7798	98502	7738	97341	7770	101554
TOTAL	29789	263642	37099	335996	40674	374050	33868	390707	42591	490581	44145	581385	49233	632590	42580	611078
DYES & PIGMENTS																
AZO DYES	527	2844	669	3559	1114	5148	716	4016	630	3509	514	3734	437	4207	306	4096
ACID DIRECT DYES(OTHER THAN AZO)	678	1643	729	2136	436	2036	312	1685	188	1348	248	1942	322	2639	133	1295
BASIC DYES	1189	6195	1075	6569	724	5266	475	4135	560	4183	647	5445	487	6868	529	8213
DISPERSE DYES	11118	28720	8788	33194	4671	26330	6199	28647	4970	23618	4051	23972	1731	19295	2322	23128
FAST COLOUR BASES	374	1308	499	2653	327	2864	510	3058	426	2314	379	2113	169	1743	265	2149
OIL SOLUBLE (SOLVENT DYES)	1239	7434	1131	7329	782	6414	689	5967	762	5446	846	6414	710	7812	590	6250
OPTICAL WHITENING AGENTS	489	4302	675	4708	565	4442	664	5376	612	5455	593	5540	565	6978	738	8746
ORGANIC PIGMENT	124	561	178	694	142	575	190	889	100	678	65	271	138	471	98	272
PIGMENT EMULSION	6955	43711	7069	46089	6663	48423	6578	47122	7085	47759	8261	52679	7985	57272	7303	54365
REACTIVE DYES	2935	19312	3352	24425	3146	26556	3148	27009	3460	28744	3340	24642	3117	26440	3661	27931
SULPHUR DYES (SULPHUR BLACK)	2189	3318	1781	2498	1151	2537	1332	2636	1283	2638	1252	2916	1116	3286	1041	3128

Table 17 :- Imports of Major Chemicals (Productwise) during 2012-13 to 2019-20



[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
VAT DYES	10201	27519	13801	36889	17449	43388	20580	48846	23527	53539	26368	59134	21571	77638	16400	63470
SOLUBILISED VAT DYES	107	483	91	418	82	252	473	1007	337	756	319	764	358	1289	170	810
FOOD COLOURS	367	2778	391	2978	653	3872	1083	5225	1041	4859	1162	5057	1364	6747	1215	6695
NAPTHOLS	1040	3178	1142	4190	1024	3896	1051	3824	1107	3750	1286	4446	1255	5267	1374	6559
OTHER DYES	905	2709	291	1927	271	1868	177	1531	183	1533	512	2239	2337	7151	2265	7188
INORGANIC PIGMENTS	11799	27720	10653	28729	12735	30874	10514	28331	9597	24784	13128	30075	12790	43319	12173	57140
TOTAL	52236	183735	52315	208985	51935	214741	54691	219304	55868	214913	62971	231383	56452	278422	50583	281435

Note: Data Source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table 18 Net Imports of Major Chemicals (Product-wise) during 2012-13 to 2019-20



[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	610722	84199	485166	67311	697797	107450	614650	97780	630930	91697	662535	92380	778134	129698	709955	125378
CAUSTIC SODA	243267	55411	228594	50470	365781	81611	401989	92496	340986	84618	261668	86553	36102	8264	121851	33450
LIQUID CHLORINE	-3643	-527	-3814	-561	-3071	-247	-5505	-1287	-5023	-855	-3681	-466	-4433	-283	-4135	-836
TOTAL	850346	139083	709946	117220	1060507	188814	1011134	188989	966893	175460	920522	178467	809803	137679	827671	157992
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	22489	16676	20884	14812	27289	18279	25462	16862	46243	26172	49552	28871	61932	55712	39000	36700
CALCIUM CARBIDE	56107	23881	63971	26595	77920	31295	61564	25223	55199	23368	55187	23683	44996	21350	30847	14263
CARBON BLACK	32764	26218	22260	24092	25349	31083	9391	28382	-203432	-4990	63937	70659	155699	145725	53474	49910
POTASSIUM CHLORATE	6677	3650	6316	3906	5513	3364	2402	1450	-1558	-1084	-1912	-1223	-2896	-1852	-3123	-2071
SODIUM CHLORATE	25036	9370	28076	11560	21787	9064	17285	6387	7329	2851	7747	2785	13430	5843	24082	11248
TITANIUM DIOXIDE	14355	26510	7824	16343	12416	21135	11985	20127	5718	12727	4141	9394	7201	15943	10181	20171
RED PHOSPHORUS	-173	-863	-145	-807	-324	-1201	-482	-1777	-454	-1756	-455	-1713	-581	-2191	-632	-2510
HYDROGEN PEROXIDE	31340	7708	61983	16226	56032	14168	43733	10989	56798	15626	68358	19091	83998	36706	51919	15376
CALCIUM CARBONATE	338134	24974	495288	37077	522395	40128	681798	55259	666641	51001	809228	54546	1038988	75279	1130043	77436
TOTAL	526729	138124	706457	149804	748377	167315	853138	162902	632484	123915	1055783	206093	1402767	352515	1335791	220523
ORGANIC CHEMICALS																
ACETIC ACID	640121	168467	657459	194672	705895	231372	784397	201124	834894	187681	872295	285223	919477	411884	913746	267444
ACETIC ANHYDRIDE	-1692	-806	-4638	-2485	-17409	-10027	-15687	-8161	-18171	-9159	-15263	-11397	-6169	-3882	0	-1099
ACETONE	93279	52787	116084	80793	123650	79683	127624	49404	132662	60854	141824	71802	105859	46204	61398	22448
PHENOL	172322	138952	211954	169172	198106	180164	241928	140336	278174	168409	283822	193133	227084	205970	121732	75662
METHANOL	1214313	225569	1228521	319220	1592161	307874	1667866	277063	1624833	292639	1773827	397158	1975769	515655	2273333	422085
FORMALDEHYDE	-4699	-744	-5936	-1804	-7055	-988	-8414	-1341	-8322	-1300	-10570	-2054	-12462	-2482	-14148	-2373
NITROBENZENE	-165	-141	-146	-127	1058	665	5789	2695	14085	6713	15324	8158	18101	10611	15400	7942
CITRIC ACID	54332	25521	62086	30023	65632	31981	74491	34975	80011	38314	81869	43558	92960	43126	88547	36511
MALEIC ANHYDRIDE	36841	35072	36724	39659	38351	35726	47319	31325	50581	34454	52394	42701	69833	61589	66775	46665
PENTAERYTHRITOL	13265	11675	14190	14146	12124	12130	17854	18510	17336	17220	15853	16215	16120	18839	18727	18375
ANILINE	15248	14066	31648	34710	36009	36735	38212	26831	44482	29161	65254	58310	88317	81183	80878	53145
CHLORO METHANES	111	307	108	-57	-31	53	570	323	169	102	418	146	1338	940	2355	2015
ISOBUTYLBENZENE	-13314	-17938	-14130	-21068	-13944	-19250	-12572	-14186	-13430	-14854	-12341	-14384	-11740	-16320	-9703	-14146
ONCB	1711	994	-1883	-1839	-1836	-1873	-606	-691	-134	-322	0	0	0	0	0	0
PNCB	-2096	-1442	-1972	-1468	2995	1737	6738	2772	5072	2161	0	0	0	0	0	0

Table 18 Net Imports of Major Chemicals (Product-wise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
MEK	31189	24761	26779	20804	26866	24677	40699	26155	30712	16531	45312	35991	46693	40517	25266	18900
ACETALDEHYDE	-190	-775	60	318	28	36	72	295	90	313	78	237	-1054	-637	-1026	-518
ETHANOLAMINES	9603	5389	8788	5987	10259	13487	8943	3202	9970	5206	11300	1939	13505	5794	15008	5876
ETHYL ACETATE	-167761	-87286	-189947	-103389	-114895	-67481	-104524	-53360	-92035	-47159	-105508	-62047	-115765	-79812	-106227	-61327
MENTHOL	-11852	-209873	-14531	-162522	-12628	-110853	-7900	-87436	-10495	-115035	-11377	-175378	-12017	-240495	-14032	-235153
ORTHO NITRO TOLUENE	-935	-657	-582	-586	-66	47	-1051	-922	-503	-503	-2383	-2055	-4215	-4144	-7220	-7112
TOTAL	2079631	383898	2160636	614159	2645270	745895	2911748	648913	2979981	671426	3202128	887256	3411634	1094540	3530809	655340
PESTICIDES & INSECTICIDES																
MALATHION	-328	-611	-415	-819	-1260	-2346	-1010	-1943	-1264	-2274	-1977	-3682	-2499	-5792	-2318	-6230
DIMETHOATE	113	240	-138	-573	-369	-1327	-20	-52	-24	-58	-24	-62	-126	-429	-199	-603
D.D.V.P.	-543	-1179	-228	-608	-544	-1413	-486	-1345	-306	-1117	-458	-1769	872	451	-12	-41
QUINALPHOS	-463	-1657	-950	-3360	-996	-3900	-235	-1036	-384	-1772	-382	-1645	-281	-1439	-323	-1525
ENDOSULPHAN	-80	-260	-45	-59	0	0	0	0	0	0	0	-1	0	0	0	0
CYPERMETHRIN	-10260	-55087	-11978	-58535	-10487	-50407	-8837	-45949	-9416	-45742	-9698	-62666	-13604	-112328	-15029	-94613
FENTHION	0	0	35	173	50	236	0	0	-10	-18	0	0	0	0	0	0
OTHER PESTICIDES	-32205	-129486	-45973	-192499	-35855	-166294	-39740	-201354	-44384	-117007	-41413	-76519	-37306	-69483	-2882	102820
OTHER INSECTICIDES	-24696	-162397	-29355	-178515	-26114	-138909	-15512	-62598	-23404	-102447	-32701	-153948	-45526	-340235	-92827	-572515
COPPER-OXYCHLORIDE	-478	-1230	-369	-1033	-867	-2311	-810	-1818	-871	-1920	-723	-1731	-806	-2425	-2240	-5896
2, 4-D	-15365	-27349	-14851	-27924	-10904	-18018	-19377	-29647	-20661	-27469	-22301	-33341	-19423	-40412	-17241	-28613
ISOPROTURON	-4181	-13189	-2114	-7804	-2150	-7972	-1087	-3830	-356	-1295	0	0	3	4	0	0
ALUMINIUM PHOSPHIDE	-2318	-9017	-845	-3642	-220	-508	-58	-128	-127	-515	-505	-1703	-476	-2045	-425	-1882
METHYL BROMIDE	675	2218	77	319	-282	-790	-1221	-4391	-1732	-6159	-1982	-7185	-2206	-8370	-1600	-6541
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	-7345	-28318	-4949	-44960	-6856	-64798	-22210	-181015	-34571	-257415	-51791	-324726	-56014	-472915	-65202	-612583
OTHER FUNGICIDE NES	-52255	-103671	-57763	-129326	-92699	-141875	-122444	-201061	-162230	-259237	-150381	-230668	-178158	-316124	-155191	-323997
TOTAL	-149729	-530993	-169861	-649165	-189553	-600632	-233047	-736167	-299740	-824445	-314336	-899646	-355550	-1371542	-355489	-1552219
DYES & PIGMENTS																
AZO DYES	-53701	-108571	-56723	-168702	-50788	-189517	-54611	-157954	-59760	-158947	-69482	-178051	-72562	-221017	-68046	-206217
ACID DIRECT DYES(OTHER THAN AZO)	-2951	-8127	-4908	-19227	-3568	-18110	-3247	-15615	-4246	-18341	-4850	-19713	-4781	-23506	-5468	-27371
BASIC DYES	-5768	-8620	-6073	-12513	-6922	-16435	-7698	-19761	-8669	-22003	-10110	-26777	-11530	-37717	-12201	-40674
DISPERSE DYES	4101	9303	-460	4	-7394	-22215	-6918	-24171	-11108	-36294	-10409	-32942	-18821	-88352	-21040	-110032
FAST COLOUR BASES	-2732	-8041	-2120	-7538	-2479	-9026	-1752	-8810	-1748	-13452	-1663	-7613	-2483	-13244	-5099	-44780

Table 18 Net Imports of Major Chemicals (Product-wise) during 2012-13 to 2019-20



[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OIL SOLUBLE (SOLVENT DYES)	-3426	-10394	-3834	-15977	-6044	-26200	-5434	-25736	-7940	-33993	-8149	-36492	-9485	-58996	-10501	-70321
OPTICAL WHITENING AGENTS	-22560	-24854	-22706	-32181	-26646	-39781	-24539	-41143	-26345	-40785	-29531	-42529	-29694	-59880	-25346	-73978
ORGANIC PIGMENT	64	175	163	594	-49	75	115	358	29	385	3	86	123	373	48	-61
PIGMENT EMULSION	-62964	-251291	-64266	-307030	-69744	-317520	-74958	-327068	-81895	-344941	-93790	-388574	-102541	-437326	-103366	-479674
REACTIVE DYES	-95505	-181102	-106666	-315859	-104223	-365591	-110076	-317954	-124957	-350606	-144077	-388438	-155413	-484986	-165987	-474352
SULPHUR DYES (SULPHUR BLACK)	1300	2165	640	923	-842	-90	-140	691	-740	-44	-4215	-2878	-4604	-4017	-3469	-2105
VAT DYES	8247	10703	11846	12502	15317	11533	19216	28323	22123	30802	24661	32527	17096	31354	11876	-553
SOLUBILISED VAT DYES	60	113	60	-73	53	-31	437	653	306	491	273	235	295	500	99	-375
FOOD COLOURS	-21419	-48994	-22502	-62461	-25381	-73346	-26018	-74312	-27318	-74633	-29948	-82072	-27643	-100597	-24132	-101091
NAPTHOLS	-202	424	255	1593	-115	783	-438	361	-969	-1003	-1043	-1279	-2021	-3074	-2795	-4908
OTHER DYES	-7145	-13878	-9267	-21913	-9341	-25997	-9982	-21162	-12528	-23444	-13223	-23988	-11284	-24045	-12953	-27316
INORGANIC PIGMENTS	-9198	8685	-7663	11255	-3119	20382	-15312	2809	-17639	-5825	-27217	-9409	-33370	2271	-31334	16829
TOTAL	-273799	-632304	-294224	-936603	-301285	-1071086	-321355	-1000491	-363404	-1092633	-422770	-1207907	-468718	-1522259	-479714	-1646979

Note: Data Source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table 19:-Top Five Export Destinations of selected Chemicals during 2019-20

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODA ASH	BANGLADESH PR	57370.013	9702.550
	INDONESIA	41554.106	7011.229
	NEPAL	13564.399	2581.711
	SRI LANKA DSR	12699.970	2445.211
	THAILAND	3530.582	548.827
	Product Total	128719.070	22289.528
CAUSTIC SODA	KENYA	19986.233	5352.392
	TANZANIA REP	17917.039	5101.601
	VIETNAM SOC REP	14291.130	4074.609
	NIGERIA	11849.961	3635.142
	INDONESIA	9547.963	2303.463
	Product Total	73592.326	20467.207
LIQUID CHLORINE	SRI LANKA DSR	893.000	81.125
	KENYA	822.700	200.614
	DJIBOUTI	630.120	154.653
	NEPAL	562.419	46.669
	U ARAB EMTS	507.017	353.098
	Product Total	3415.256	836.159
ALUMINIUM FLUORIDE	U ARAB EMTS	1100.000	1010.734
	JAPAN	140.000	143.616
	SOUTH AFRICA	122.000	54.809
	SINGAPORE	0.300	0.332
	GERMANY	0.025	0.086
	Product Total	1362.325	1209.577
CALCIUM CARBIDE	BANGLADESH PR	210.000	131.569
	SAUDI ARAB	98.000	57.271
	ANGOLA	24.000	13.940
	OMAN	20.000	11.698
	BHUTAN	15.202	15.540
	Product Total	367.202	230.018
CARBON BLACK	SRI LANKA DSR	26961.662	17416.783
	VIETNAM SOC REP	21127.628	13011.084
	THAILAND	13367.536	10696.748
	JAPAN	11882.654	10895.692
	KOREA RP	11781.505	8434.954
	Product Total	85120.985	60455.261
POTASSIUM CHLORATE	KENYA	476.000	302.152
	THAILAND	459.500	308.084
	MEXICO	449.000	307.648
	PHILIPPINES	252.000	209.196
	SOUTH AFRICA	168.000	112.987
	Product Total	1804.500	1240.067
SODIUM CHLORATE	NEPAL	0.246	0.674
	CANADA	0.100	0.059
	IRAQ	0.054	1.002
	UGANDA	0.041	0.039
	TOGO	0.025	0.153
	Product Total	0.466	1.927

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
TITANIUM DIOXIDE	U S A	2249.604	3756.374
	JAPAN	1122.000	1618.439
	ITALY	1032.025	1863.695
	SPAIN	420.000	731.388
	U ARAB EMTS	178.260	276.185
	Product Total	5001.889	8246.081
RED PHOSPHORUS	ITALY	160.200	537.148
	U S A	146.052	543.149
	BRAZIL	54.000	246.856
	U ARAB EMTS	38.975	193.824
	CANADA	28.000	108.068
	Product Total	427.227	1629.045
HYDROGEN PEROXIDE	NEPAL	188.493	84.736
	U ARAB EMTS	167.231	45.162
	QATAR	103.660	28.874
	DJIBOUTI	66.280	30.933
	TANZANIA REP	63.010	17.001
	Product Total	588.674	588.674
CALCIUM CARBONATE	NEPAL	19051.401	4181.241
	BANGLADESH PR	4972.139	2726.936
	NIGERIA	2182.004	710.128
	SOUTH AFRICA	1783.628	518.998
	PAKISTAN IR	1619.225	306.196
	Product Total	29608.397	8443.499
ACETIC ACID	BANGLADESH PR	4081.270	1956.381
	U ARAB EMTS	1789.524	682.712
	OMAN	638.232	353.925
	SRI LANKA DSR	632.906	299.370
	SOUTH AFRICA	624.045	293.463
	Product Total	7765.977	3585.851
ACETIC ANHYDRIDE	BELGIUM	14234.705	8471.372
	NETHERLAND	3120.130	2074.667
	BANGLADESH PR	821.000	564.288
	U S A	538.012	323.999
	THAILAND	424.000	291.995
	Product Total	19137.847	11726.321
ACETONE	IRAN	3701.200	2132.461
	CHINA P RP	1960.000	734.476
	KENYA	1008.971	487.464
	U ARAB EMTS	941.299	493.290
	TANZANIA REP	586.540	275.432
	Product Total	8198.010	8198.010
PHENOL	CHINA P RP	8594.965	5360.791
	IRAN	6301.200	6643.122
	U ARAB EMTS	2242.173	2028.934
	EGYPT A RP	1495.239	1153.732
	MALAYSIA	1194.053	716.935
	Product Total	19827.630	15903.514
	SRI LANKA DSR	4374.135	872.893

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
METHANOL	NEPAL	3631.514	1039.216
	KENYA	1427.337	427.273
	NIGERIA	1182.020	322.551
	TANZANIA REP	839.987	247.391
	Product Total	11454.993	2909.324
FORMALDEHYDE	NEPAL	11713.689	1720.916
	KENYA	403.185	90.923
	U ARAB EMTS	401.790	73.503
	SRI LANKA DSR	298.129	151.661
	VENEZUELA	208.000	56.099
	Product Total	13024.793	2093.102
NITROBENZENE	JAPAN	40.000	28.308
	THAILAND	40.000	32.328
	U S A	21.995	38.900
	INDONESIA	20.000	16.679
	NEPAL	8.444	8.720
	Product Total	130.439	130.439
CITRIC ACID	U S A	1093.672	966.686
	LITHUANIA	750.000	421.906
	BANGLADESH PR	92.096	100.873
	SRI LANKA DSR	71.730	81.863
	PUERTO RICO	57.000	50.052
	Product Total	2064.498	1621.380
MALEIC ANHYDRIDE	IRAN	112.600	136.614
	BANGLADESH PR	22.840	26.612
	U ARAB EMTS	20.000	18.564
	NEPAL	7.700	6.590
	SRI LANKA DSR	4.025	4.048
	Product Total	167.165	192.428
PENTAERYTHRITOL	U S A	1636.052	3012.127
	NETHERLAND	360.000	483.830
	COLOMBIA	198.000	265.124
	BELGIUM	135.000	458.353
	NEPAL	116.040	154.495
	Product Total	2445.092	4373.929
ANILINE	THAILAND	32.096	34.408
	U S A	16.005	18.054
	TURKEY	9.800	11.627
	PAKISTAN IR	6.000	6.421
	MEXICO	2.000	3.352
	Product Total	65.901	73.862
CHLORO METHANES	SAUDI ARAB	18.000	20.849
	U ARAB EMTS	18.000	23.838
	U S A	6.080	25.788
	NEPAL	4.455	2.186
	MYANMAR	2.400	20.221
	Product Total	48.935	48.935
	CHINA P RP	6300.365	8858.081
	U S A	2465.000	3093.099

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ISOBUTYLBENZENE	JAPAN	929.000	2169.245
	NETHERLAND	9.000	25.697
	VIETNAM SOC REP	2.000	3.509
	Product Total	9705.365	14149.631
MEK	U ARAB EMTS	149.230	110.092
	IRAN	85.000	103.480
	KYRGHYZSTAN	4.030	6.732
	NEPAL	2.685	6.305
	ETHIOPIA	0.825	0.984
	Product Total	241.770	227.593
ACETALDEHYDE	TURKEY	995.510	729.933
	IRAN	118.000	130.936
	SPAIN	17.140	12.874
	EGYPT A RP	3.540	8.344
	IRAQ	2.300	3.351
	Product Total	1136.490	885.438
ETHANOLAMINES	U K	244.155	1782.490
	AUSTRALIA	207.970	334.361
	U ARAB EMTS	186.463	219.894
	U S A	185.084	557.446
	IRAN	184.600	419.519
	Product Total	1008.272	3313.710
ETHYL ACETATE	BELGIUM	16052.480	8679.892
	ITALY	13139.351	7179.628
	RUSSIA	9911.540	5702.308
	EGYPT A RP	8588.167	5224.997
	SPAIN	8353.510	4636.105
	Product Total	56045.048	56045.048
MENTHOL	CHINA P RP	12071.830	177491.920
	U S A	1180.946	20569.325
	SINGAPORE	977.237	14441.125
	FRANCE	463.848	8684.704
	NETHERLAND	436.875	8482.486
	Product Total	15130.736	229669.560
ORTHO NITRO TOLUENE	GERMANY	5047.860	4790.121
	NETHERLAND	1597.740	1734.394
	JAPAN	574.800	587.083
	EGYPT A RP	0.010	0.670
	ZIMBABWE	0.005	0.011
	Product Total	7220.415	7112.279
MALATHION	EGYPT A RP	530.000	1182.940
	MEXICO	380.000	912.093
	IRAN	355.422	1215.443
	TURKEY	291.500	769.847
	MALAYSIA	163.000	426.714
	Product Total	1719.922	4507.037
DIMETHOATE	IRAN	114.560	392.962
	NEPAL	36.303	37.876
	ETHIOPIA	30.000	112.254

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	TURKEY	10.000	28.761
	LIBYA	3.000	11.474
	Product Total	193.863	193.863
QUINALPHOS	VIETNAM SOC REP	250.200	1330.513
	BANGLADESH PR	53.600	157.052
	SAUDI ARAB	32.000	101.908
	SOUTH AFRICA	1.350	13.357
	NEPAL	0.460	3.080
	Product Total	337.610	1605.910
CYPERMETHRIN	CHINA P RP	2002.016	14453.966
	BRAZIL	1344.529	10611.402
	NIGERIA	1204.884	2571.640
	IRAN	1115.336	9122.259
	THAILAND	882.837	6233.451
	Product Total	6549.602	42992.718
OTHER PESTICIDES	BRAZIL	1553.181	6146.871
	NEPAL	1440.719	2704.114
	IRAN	509.502	2493.411
	BANGLADESH PR	370.064	336.587
	TURKEY	270.067	2248.368
	Product Total	4143.533	13929.351
OTHER INSECTICIDES	BRAZIL	32094.815	289005.482
	U S A	7312.667	95850.889
	BANGLADESH PR	5336.555	28151.979
	IRAN	5169.963	28374.340
	NIGERIA	4798.160	13246.369
	Product Total	54712.160	454629.059
COPPER-OXYCHLORIDE	IRAN	982.000	2288.323
	LEBANON	176.500	490.045
	MOROCCO	157.975	473.571
	SPAIN	127.300	347.002
	BELGIUM	118.000	335.977
	Product Total	1561.775	1561.775
2, 4-D	U S A	2827.000	4486.820
	BRAZIL	2768.001	5560.324
	ARGENTINA	2289.200	3494.208
	ETHIOPIA	1759.105	3281.319
	AUSTRALIA	1187.400	1845.138
	Product Total	10830.706	18667.809
ALUMINIUM PHOSPHIDE	BANGLADESH PR	100.651	388.843
	NIGERIA	92.384	453.988
	ETHIOPIA	47.779	245.721
	IRAQ	37.413	177.600
	TURKEY	34.286	146.991
	Product Total	312.513	1413.143
METHYL BROMIDE	VIETNAM SOC REP	362.853	1439.582
	AUSTRALIA	342.000	1293.970
	NEW ZEALAND	337.500	1284.507
	EGYPT A RP	180.000	796.258

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	MALAYSIA	96.000	457.197
	Product Total	1318.353	5271.514
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	U S A	25410.496	317188.453
	BRAZIL	7611.171	80005.414
	AUSTRALIA	4781.126	19551.696
	ARGENTINA	4402.624	59596.223
	FRANCE	3129.504	20563.693
	Product Total	45334.921	496905.479
OTHER FUNGICIDES	BRAZIL	23569.539	71940.080
	BANGLADESH PR	14227.088	12941.671
	COSTA RICA	9838.160	13037.322
	FRANCE	8377.451	24974.795
	INDONESIA	7563.097	13742.616
	Product Total	63575.335	63575.335
AZO DYES	ITALY	11288.577	43253.067
	CHINA P RP	7110.960	20556.932
	SPAIN	5501.987	17117.454
	NETHERLAND	4120.346	9596.301
	BRAZIL	3881.273	13311.488
	Product Total	31903.143	103835.242
ACID DIRECT DYES(OTHER THAN AZO)	U S A	1221.327	5063.506
	ITALY	436.067	2597.860
	CHINA P RP	408.433	2549.826
	KOREA RP	364.092	1566.747
	SWITZERLAND	234.072	1047.046
	Product Total	2663.991	12824.985
BASIC DYES	CHINA P RP	1480.079	5825.849
	U S A	903.520	4535.365
	BRAZIL	648.488	1478.730
	MALAYSIA	628.913	1361.521
	INDONESIA	599.012	1510.160
	Product Total	4260.012	14711.625
DISPERSE DYES	CHINA P RP	4167.878	36139.646
	TURKEY	3284.091	13268.555
	HONDURAS	2100.050	11522.366
	KOREA RP	1418.145	7650.697
	BRAZIL	1358.738	5950.937
	Product Total	12328.902	74532.201
FAST COLOUR BASES	GERMANY	1245.930	12159.679
	CHINA P RP	811.681	7090.808
	U S A	671.261	6281.471
	NETHERLAND	667.925	5572.068
	INDONESIA	339.223	1587.862
	Product Total	3736.020	3736.020
OIL SOLUBLE (SOLVENT DYES)	U K	2012.101	10243.944
	SINGAPORE	1062.342	5278.983
	U S A	900.098	9811.217
	ITALY	793.522	5466.702
	BRAZIL	790.318	3723.419

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	Product Total	5558.381	34524.265
OPTICAL WHITENING AGENTS	AUSTRALIA	2660.333	3792.977
	SOUTH AFRICA	2018.510	5566.229
	BANGLADESH PR	1659.764	3036.798
	SINGAPORE	1566.975	2284.756
	JAPAN	1549.195	1898.579
	Product Total	9454.777	16579.339
ORGANIC PIGMENT	BANGLADESH PR	31.358	211.982
	NIGERIA	10.845	57.714
	GERMANY	3.038	39.457
	AUSTRALIA	2.032	5.559
	SAUDI ARAB	1.220	12.080
	Product Total	48.493	326.792
PIGMENT EMULSION	CHINA P RP	16152.163	64957.993
	U S A	12253.960	63449.281
	NETHERLAND	7340.257	35425.536
	JAPAN	4887.266	25969.460
	BELGIUM	4872.318	22792.116
	Product Total	45505.964	212594.386
REACTIVE DYES	TURKEY	41331.651	104074.005
	BANGLADESH PR	35417.602	77728.951
	HONDURAS	9859.470	35304.797
	SINGAPORE	9518.789	36500.308
	INDONESIA	7587.325	23030.472
	Product Total	103714.837	276638.533
SULPHUR DYES (SULPHUR BLACK)	BANGLADESH PR	1507.981	1521.251
	ITALY	448.175	491.200
	TURKEY	356.334	407.919
	EGYPT A RP	305.500	277.843
	MYANMAR	211.250	248.513
	Product Total	2829.240	2829.240
VAT DYES	CHINA P RP	1309.968	14898.805
	TAIWAN	455.025	1634.370
	SINGAPORE	358.975	2042.664
	VIETNAM SOC REP	286.787	2115.370
	GERMANY	222.881	6953.412
	Product Total	2633.636	27644.621
SOLUBILISED VAT DYES	INDONESIA	55.209	835.283
	BRAZIL	7.675	187.716
	SINGAPORE	2.750	34.875
	ITALY	2.000	84.540
	BANGLADESH PR	1.550	7.277
	Product Total	69.184	1149.691
FOOD COLOURS	U S A	2187.124	13517.290
	CHINA P RP	1868.454	7622.837
	MEXICO	1385.110	5783.439
	INDONESIA	1338.361	6076.613
	BRAZIL	1066.785	4286.080
	Product Total	7845.834	37286.259

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
NAPTHOLS	SOUTH AFRICA	1151.862	1597.361
	RUSSIA	445.810	673.214
	U ARAB EMTS	326.209	1483.011
	CHINA P RP	296.345	1766.921
	U S A	279.913	1110.224
	Product Total	2500.139	6630.731
OTHER DYES	U K	2056.909	2318.538
	CHINA P RP	1867.994	4365.938
	NETHERLAND	1127.890	2274.363
	ITALY	986.535	1944.949
	SPAIN	869.850	2431.995
	Product Total	6909.178	6909.178
INORGANIC PIGMENTS	SOUTH AFRICA	3205.494	1853.901
	KENYA	2931.670	2088.996
	UGANDA	2496.060	1247.016
	BANGLADESH PR	2231.596	2576.659
	TANZANIA REP	2169.913	1191.229
	Product Total	13034.733	8957.801

Note: Data Source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table 20:-Top Five Import Destinations of selected Chemicals during 2019-20

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODA ASH	U S A	270454.967	47933.022
	TURKEY	211178.183	35427.633
	BULGARIA	116980.74	22227.789
	KENYA	78915.38	14012.062
	ROMANIA	58899.5	11280.902
	Product Total	736428.77	130881.408
CAUSTIC SODA	JAPAN	141455.386	38936.385
	KOREA RP	50448.407	15234.169
	CHINA P RP	43982.012	14224.345
	QATAR	29407.585	8920.143
	OMAN	24524.001	4751.48
	Product Total	289817.391	82066.522
LIQUID CHLORINE	KOREA RP	33.558	195.434
	NEPAL	24.375	11.94
	CHINA P RP	12.5	15.852
	FRANCE	10.501	30.099
	IRELAND	0.035	1.322
	Product Total	80.969	254.647
ALUMINIUM FLUORIDE	CHINA P RP	19842	19306.705
	JORDAN	6015	4497.07
	ITALY	5832	5598.171
	INDONESIA	4320	3771.709
	MEXICO	2500	3061.444
	Product Total	38509	36235.099
CALCIUM CARBIDE	CHINA P RP	30559	14178.393
	INDONESIA	540	297.07
	U ARAB EMTS	84	14.874
	BHUTAN	34.5	16.128
	GERMANY	0.004	0.193
	Product Total	31217.504	14506.658
CARBON BLACK	CHINA P RP	70342.128	47312.689
	KOREA RP	63566.757	47149.022
	RUSSIA	13098.761	8639.549
	U ARAB EMTS	8318.054	4902.907
	U S A	6912.501	11981.129
	Product Total	162238.201	119985.296
POTASSIUM CHLORATE	NETHERLAND	30	97.418
	EGYPT A RP	25	18.71
	U K	0.027	0.6
	GERMANY	0.009	2.13
	BELGIUM	0.002	0.131
	Product Total	55.038	118.989
SODIUM CHLORATE	BRAZIL	11651.69	5359.935
	URUGUAY	6250	2983.794
	U S A	3325.008	1524.576
	FINLAND	1313	612.944
	FRANCE	891	382.806
	Product Total	23430.698	10864.055

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
TITANIUM DIOXIDE	KOREA RP	6350	9918.951
	CHINA P RP	5464.41	9167.518
	NETHERLAND	1780.425	4433.237
	JAPAN	773.364	2181.073
	GERMANY	569.981	1487.88
	Product Total	14938.18	27188.659
RED PHOSPHORUS	CHINA P RP	18	55.842
	U S A	0.002	0.936
	U K	0.001	0.262
	BELGIUM	0	0.018
	GERMANY	0	0.214
	Product Total	18.003	57.272
HYDROGEN PEROXIDE	BANGLADESH PR	34073.7	9104.204
	THAILAND	10751.67	3153.803
	INDONESIA	4515.4	1417.106
	KOREA RP	1648.739	458.635
	BELGIUM	831.017	1043.832
	Product Total	51820.526	51820.526
CALCIUM CARBONATE	MALAYSIA	511841.811	43954.977
	VIETNAM SOC REP	456761.076	29681.988
	EGYPT A RP	170829.529	10236.867
	GREECE	5810.703	473.904
	THAILAND	5688.08	529.942
	Product Total	1150931.199	84877.678
ACETIC ACID	CHINA P RP	335260.728	98057.054
	MALAYSIA	263024.308	78244.478
	SINGAPORE	164360.623	50297.042
	TAIWAN	64841	18684.327
	SAUDI ARAB	43461	12255.2
	Product Total	870947.659	257538.101
ACETIC ANHYDRIDE	SAUDI ARAB	16215.74	9153.297
	SINGAPORE	4313.395	2562.773
	JAPAN	0	0.128
	Product Total	20529.135	11716.198
ACETONE	THAILAND	36163.127	12270.506
	SINGAPORE	13364	4091.245
	TAIWAN	7970.755	2623.16
	NETHERLAND	7316.001	2109.365
	KOREA RP	3472.3	1700.613
	Product Total	68286.183	22794.889
PHENOL	THAILAND	53327	37211.385
	U S A	31804.415	21713.731
	SOUTH AFRICA	21059.39	13406.823
	KOREA RP	13390.8	8970.21
	SAUDI ARAB	8176.1	5560.141
	Product Total	127757.705	86862.29
	OMAN	1210304.102	207509.981
	SAUDI ARAB	424729.874	85117.202
	IRAN	320931.5	68860.888

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
METHANOL	QATAR	197464	38160.878
	U ARAB EMTS	100210	17168.345
	Product Total	2253639.476	416817.294
FORMALDEHYDE	GERMANY	1.377	14.373
	SPAIN	1.323	8.278
	CHINA P RP	1.285	55.502
	JAPAN	0.602	24.922
	CANADA	0.281	1.607
	Product Total	4.868	104.682
NITROBENZENE	KOREA RP	15516.2	8029.169
	CHINA P RP	16.025	44.026
	GERMANY	0.824	0.225
	JAPAN	0.002	0.015
	Product Total	15533.051	8073.435
CITRIC ACID	CHINA P RP	90252.078	37253.592
	GERMANY	140.185	685.371
	HONG KONG	125.025	53.357
	THAILAND	100.752	93.88
	U S A	98.266	120.407
	Product Total	90716.306	38206.607
MALEIC ANHYDRIDE	CHINA P RP	26200.617	17853.859
	MALAYSIA	17029.042	12418.36
	TAIWAN	12260	8283.92
	KOREA RP	6143.88	4514.092
	INDONESIA	4016.5	2836.079
	Product Total	65650.039	45906.31
PENTAERYTHRITOL	SAUDI ARAB	7680	8940.619
	CHINA P RP	2779.437	3057.422
	GERMANY	2630.691	3179.819
	SPAIN	2582.001	2909.318
	MALAYSIA	1703	196.2
	Product Total	17375.129	18283.378
ANILINE	CHINA P RP	74327.139	48794.858
	U K	3949	2518.446
	U ARAB EMTS	2368	1526.492
	PORTUGAL	301.9	289.763
	U S A	0.043	163.272
	Product Total	80946.082	53292.831
CHLORO METHANES	CHINA P RP	1830.99	1122.904
	NETHERLAND	566.64	960.634
	U S A	5.847	34.349
	ITALY	0.74	3.763
	JAPAN	0.005	0.167
	Product Total	2404.222	2121.817
ISOBUTYLBENZENE	CHINA P RP	1.6	4.329
	U K	0	0.136
	Product Total	1.6	4.465
	NETHERLAND	7507.5	5424.682

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
MEK	KOREA RP	6363.84	4770.958
	JAPAN	5223.296	3625.505
	SOUTH AFRICA	5100	3807.559
	CHINA P RP	1140.76	1239.438
	Product Total	25335.396	18868.142
ACETALDEHYDE	SWITZERLAND	94.55	170.575
	FRANCE	12.315	53.614
	GERMANY	2.672	57.759
	U S A	2.191	42.445
	U K	1.678	48.509
	Product Total	113.406	372.902
ETHANOLAMINES	THAILAND	3449.578	2367.252
	U ARAB EMTS	3398.269	2128.135
	SAUDI ARAB	2959.652	1990.332
	MALAYSIA	1696.32	1248.803
	CHINA P RP	1627.48	4510.634
	Product Total	13131.299	12245.156
ETHYL ACETATE	SAUDI ARAB	1534.63	804.198
	CHINA P RP	509.73	300.186
	U ARAB EMTS	74.52	16.122
	SWITZERLAND	19.206	300.526
	GERMANY	6.846	142.46
	Product Total	2144.932	1563.492
MENTHOL	MALAYSIA	1641.78	15890.834
	GERMANY	696.41	5362.641
	SINGAPORE	371.26	3940.572
	CHINA P RP	188.502	3146.911
	U S A	56.883	763.309
	Product Total	2954.835	29104.267
ORTHO NITRO TOLUENE	JAPAN	0.003	0.032
	Product Total	0.003	0.032
QUINALPHOS	VIETNAM SOC REP	14.571	80.645
	Product Total	14.571	80.645
CYPERMETHRIN	BRAZIL	84.3	782.434
	UNSPECIFIED	6	56.394
	U S A	2.255	9.994
	Product Total	92.555	848.822
OTHER PESTICIDES	CHINA P RP	3839.751	111496.67
	TAIWAN	268.292	539.568
	U S A	167.352	17799.158
	RUSSIA	87.754	361.202
	BRAZIL	83.748	330.047
	Product Total	4446.897	130526.645
OTHER INSECTICIDES	CHINA P RP	6477.909	109367.261
	TAIWAN	1407.78	3035.053
	U S A	1155.561	55388.944
	KOREA RP	1144.021	28765.604
	ISRAEL	640.799	6517.901
	Product Total	10826.07	203074.763

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
COPPER-OXYCHLORIDE	GERMANY	0.027	0.334
	NETHERLAND	0.001	0.063
	ITALY	0	0.039
	Product Total	0.028	0.436
2, 4-D	CHINA P RP	2378	4302.437
	COTE D' IVOIRE	3.6	7.324
	GERMANY	0.056	1.041
	POLAND	0.001	0.04
	Product Total	2381.657	4310.842
ISOPROTURON	FRANCE	0.001	0.01
	Product Total	0.001	0.01
ALUMINIUM PHOSPHIDE	DENMARK	0.525	22.421
	FRANCE	0.005	4.214
	CHINA P RP	0.002	0.054
	MALAYSIA	0.001	0.045
	Product Total	0.533	26.734
METHYL BROMIDE	U ARAB EMTS	19.122	82.953
	HONG KONG	6.538	49.58
	EGYPT A RP	2	8.622
	Product Total	27.66	141.155
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	CHINA P RP	5136.617	27652.861
	ISRAEL	3708.68	27650.909
	JAPAN	1235.04	21436.44
	U K	1109.856	7337.503
	TAIWAN	985.6	2022.822
	Product Total	12175.793	86100.535
OTHER FUNGICIDE NES	CHINA P RP	1887.231	10141.77
	GERMANY	1716.931	20645.786
	THAILAND	759.432	2068.748
	ISRAEL	757.228	7726.275
	BELGIUM	649.702	21549.851
	Product Total	5770.524	62132.43
AZO DYES	CHINA P RP	78.353	960.215
	SPAIN	50.209	1637.602
	ITALY	32	142.035
	THAILAND	25.505	228.404
	RUSSIA	25.2	28.494
	Product Total	211.267	2996.75
ACID DIRECT DYES(OTHER THAN AZO)	ITALY	45.295	247.289
	CHINA P RP	29.134	393.757
	MALAYSIA	16	45.112
	GERMANY	14.149	77.326
	MEXICO	8.93	127.491
	Product Total	113.508	890.975
BASIC DYES	CHINA P RP	459.113	7585.241
	INDONESIA	18.104	24.433
	GERMANY	15.274	174.708
	U S A	9.95	21.585
	ITALY	9.751	80.843

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	Product Total	512.192	7886.81
DISPERSE DYES	CHINA P RP	1843.458	16419.598
	SINGAPORE	129.365	2055.769
	INDONESIA	101.524	1710.943
	ITALY	42.628	173.227
	KOREA RP	36.65	379.823
	Product Total	2153.625	20739.36
FAST COLOUR BASES	CHINA P RP	251.501	1874.254
	GERMANY	7.282	30.589
	NETHERLAND	5.469	228.221
	JAPAN	0.381	5.773
	SWITZERLAND	0.242	5.142
	Product Total	264.875	2143.979
OIL SOLUBLE (SOLVENT DYES)	CHINA P RP	252.681	4018.524
	KOREA RP	114.59	683.593
	U ARAB EMTS	107.727	379.145
	TAIWAN	57.375	216.737
	HONG KONG	15.6	31.729
	Product Total	547.973	5329.728
OPTICAL WHITENING AGENTS	HONG KONG	193.005	3298.496
	CHINA P RP	188.304	1688.27
	BELGIUM	120	1703.663
	NETHERLAND	86.4	1154.406
	GERMANY	51.821	357.393
	Product Total	639.53	8202.228
ORGANIC PIGMENT	CHINA P RP	64.781	104.738
	U S A	29.765	125.553
	RUSSIA	1.584	1.375
	GERMANY	1.513	22.834
	KOREA RP	0.32	3.782
	Product Total	97.963	258.282
PIGMENT EMULSION	CHINA P RP	3128.179	16408.093
	GERMANY	574.025	8940.211
	MALAYSIA	518.225	1312.802
	U S A	475.984	5370.529
	KOREA RP	474.789	3320.86
	Product Total	5171.202	35352.495
REACTIVE DYES	THAILAND	1705.786	13157.13
	KOREA RP	866.319	3954.269
	CHINA P RP	474.389	6595.928
	SINGAPORE	216.88	1964.182
	ITALY	119.069	676.962
	Product Total	3382.443	26348.471
SULPHUR DYES (SULPHUR BLACK)	CHINA P RP	763.117	2470.458
	SPAIN	271.195	616.741
	SWITZERLAND	3.12	13.846
	JAPAN	1.32	14.612
	KOREA RP	1.06	5.011
	Product Total	1039.812	3120.668

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
VAT DYES	SINGAPORE	9725.195	28560.816
	CHINA P RP	6513.297	34126.564
	BELGIUM	64.54	211.026
	GERMANY	53.996	213.393
	NETHERLAND	19.103	69.551
	Product Total	16376.131	63181.35
SOLUBILISED VAT DYES	SINGAPORE	142.015	465.335
	CHINA P RP	25.954	270.302
	GERMANY	0.9	17.584
	SWITZERLAND	0.611	19.355
	U S A	0.376	20.681
	Product Total	169.856	793.257
FOOD COLOURS	TAIWAN	856.661	2626.437
	KOREA RP	127.96	397.383
	GERMANY	40.785	301.844
	CHINA P RP	36.365	958.447
	U S A	22.51	575.109
	Product Total	1084.281	4859.22
NAPTHOLS	CHINA P RP	1362.243	6357.14
	ITALY	6.4	92.98
	GERMANY	1.282	7.256
	U S A	0.948	29.428
	KOREA RP	0.835	46.999
	Product Total	1371.708	6533.803
OTHER DYES	U K	1981.762	4814.601
	U S A	156.876	1542.336
	THAILAND	39.15	115.16
	SINGAPORE	27.849	205.261
	CHINA P RP	19.013	73.001
	Product Total	2224.65	6750.359
INORGANIC PIGMENTS	U ARAB EMTS	3674.21	4286.151
	CHINA P RP	1557.169	5824.131
	ISRAEL	1292.592	2988.155
	THAILAND	898.414	3070.453
	BELGIUM	646.736	2550.052
	Product Total	8069.121	18718.942

Note: Data Source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table -21: Exports of Major Petrochemicals (Group-wise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

GROUP	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	775886	777875	907646	1015940	887182	917327	878358	833783	1025740	922018	1001053	977982	1015666	1172008	1059348	1054987
FIBRE																
INTERMEDIATES	80823	61926	67873	53980	73270	57347	247540	121394	323096	153574	351358	181069	456955	275919	234372	123612
POLYMERS	1112662	853586	1187634	1078251	903266	793550	998339	732497	912124	667432	1188233	891771	1934155	1558391	1615451	1095332
SYNTHETIC RUBBER	11489	15082	12834	21597	26040	34492	42688	42428	38204	46387	51889	54589	63550	70696	74036	73065
SYNTHETIC DETERGENT	50478	50928	32971	35845	27992	29004	9634	7768	7058	5941	1413	1468	1048	1534	1044	1479
PERFORMANCE PLASTICS	347916	307451	474528	440224	409365	353492	813967	527737	972750	636450	1050548	747271	1080286	1018773	968791	739010
OLEFINS	123827	138968	119411	88308	72479	45302	149389	76055	117365	101742	260597	179804	368714	276701	336140	188100
AROMATICS	1590660	1188161	1789251	1344539	1888275	1163302	2033143	942807	1749173	885136	3303041	1754998	4550911	2880299	4271477	2337408
OTHER PETRO-BASED CHEMICALS	137082	129315	96237	107611	124125	143644	128670	101261	144135	116773	193342	138613	147298	139759	237571	194934
TOTAL EXPORT OF MAJOR PETRO-	4230823	3523292	4688385	4186295	4411994	3537460	5301728	3385730	5289645	3535453	7401474	4927565	9618583	7394080	8798230	5807927

Note: 1. Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

2. The data of 2012-13 is based on ITCHS 2007 and the data from 2013-14 is based on ITCHS 2012

Table -22: Imports of Major Petrochemicals (Group-wise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

GROUP	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	156291	247329	164136	274315	235590	346205	263774	346368	279993	342993	259632	363079	275617	453356	346600	460883
FIBRE INTERMEDIATES	1402774	878497	1925258	1304669	2179870	1273665	2015419	1026126	1842229	943136	1808425	1072331	1454656	1056882	1919655	1059484
POLYMERS	3179593	2254904	3124986	2531008	3736798	3177068	4214022	3132488	4452258	3267230	4751478	3549286	4479129	3684829	3430180	2639363
SYNTHETIC RUBBER	519670	797499	580333	793037	578400	758949	596101	612690	559919	628042	607867	741750	618500	851418	574832	709547
SYNTHETIC DETERGENT	127493	131685	123846	139467	134035	138461	218097	177489	228229	179003	205984	164533	227136	210428	264058	237426
PERFORMANCE PLASTICS	249709	336062	310899	438390	394766	496367	388796	445847	417442	472270	582692	621047	683851	891721	740577	782460
OLEFINS	34187	29316	26109	21482	49255	43981	25398	20177	83453	60651	50791	43283	69700	57846	75857	51011
AROMATICS	967941	764603	998399	850360	1023472	712564	1204325	633048	1614652	864845	1321018	708548	1320424	910212	1327535	772834
OTHER PETRO-BASED CHEMICALS	2037034	1495971	2203984	1817179	2372654	1897349	2739780	1775978	2650608	1764933	3255244	2232102	3227017	2709229	3543017	2388328
TOTAL IMPORT OF MAJOR PETRO-	8674692	6935866	9457950	8169907	10704840	8844609	11665712	8170211	12128783	8523103	12843131	9495959	12356030	10825921	12222311	9101336

Note: 1. Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

2. The data of 2012-13 is based on ITCHS 2007 and the data from 2013-14 is based on ITCHS 2012

Table -23: Net Imports of Major Petrochemicals (Group-wise) during 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

GROUP	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	-619595	-530546	-743510	-741625	-651592	-571122	-614584	-487415	-745747	-579025	-741421	-614903	-740049	-718652	-712748	-594104
FIBRE INTERMEDIATES	1321951	816571	1857385	1250689	2106600	1216318	1767879	904732	1519133	789562	1457067	891262	997701	780963	1685283	935872
POLYMERS	2066931	1401318	1937352	1452757	2833532	2383518	3215683	2399991	3540134	2599798	3563245	2657515	2544974	2126438	1814729	1544031
SYNTHETIC RUBBER (ELASTOMERS)	508181	782417	567499	771440	552360	724457	553413	570262	521715	581655	555978	687161	554950	780722	500796	636482
SYNTHETIC DETERGENT INTERMEDIATES	77015	80757	90875	103622	106043	109457	208463	169721	221171	173062	204571	163065	226088	208894	263014	235947
PERFORMANCE PLASTICS	-98207	28611	-163629	-1834	-14599	142875	-425171	-81890	-555308	-164180	-467856	-126224	-396435	-127052	-228214	43450
OLEFINS	-89640	-109652	-93302	-66826	-23224	-1321	-123991	-55878	-33912	-41091	-209806	-136521	-299014	-218855	-260283	-137089
AROMATICS	-622719	-423558	-790852	-494179	-864803	-450738	-828818	-309759	-134521	-20291	-1982023	-1046450	-3230487	-1970087	-2943942	-1564574
OTHER PETRO-BASED CHEMICALS	1899952	1366656	2107747	1709568	2248529	1753705	2611110	1674717	2506473	1648160	3061902	2093489	3079719	2569470	3305446	2193394
TOTAL NET IMPORT OF MAJOR PETRO-	4443869	3412574	4769565	3983612	6292846	5307149	6363984	4784481	6839138	4987650	5441657	4568394	2737447	3431841	3424081	3293409

Note: 1. Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

2. The data of 2012-13 is based on ITCHS 2007 and the data from 2013-14 is based on ITCHS 2012

Table -24: Exports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	19258	26183	31562	47385	37420	59176	47911	58966	48332	60060	39213	52227	45932	71700	40505	59726
NYLON FILAMENT YARN	1865	5728	2023	7402	1848	6939	1639	6236	1857	6462	4014	12111	5794	18888	7748	22360
NYLON INDUSTRIAL YARN/TYRE CORD	3756	6810	2896	5696	1752	2937	1122	1471	1474	1872	1620	2239	1895	2827	3624	5116
POLYESTER FILAMENT YARN	576224	588908	647732	743768	648773	677742	634799	624444	748037	690836	717714	730282	696668	839555	711319	750466
POLYESTER STAPLE FIBRE	170318	144355	205341	187652	183575	151547	181813	129129	213903	150316	227441	169364	255455	225045	285157	204876
POLYPROPYLENE FILAMENT YARN	2008	2694	1863	2813	2232	3234	2844	3878	2077	2690	869	1117	494	713	720	965
POLYPROPYLENE STAPLE FIBRE	2300	2657	14892	16220	10611	11862	7531	6885	9755	8767	9497	8663	7892	8446	9509	9103
Elastomeric/Spandex Filament Yarn	157	540	1337	5004	971	3890	699	2774	305	1015	685	1979	1536	4834	766	2375
TOTAL	775886	777875	907646	1015940	887182	917327	878358	833783	1025740	922018	1001053	977982	1015666	1172008	1059348	1054987
FIBRE INTERMEDIATES																
ACRYLONITRILE	2103	2747	2	5	4	85	2323	2132	6	39	1514	1900	1872	3059	2988	3262
CAPROLACTUM	3343	4853	514	902	0	1	0	8	1010	867	53	93	77	129	258	327
DIMETHYL TEREPHTHALATE	0	0	1	2	0	0	1	1	1	1	0	0	1	2	0	1
MONO EHYLENE GLYCOL	71796	52515	67032	53008	73216	57216	72239	52081	62199	45932	137462	90499	292583	175325	151301	81361
PURIFIED TEREPHTHALIC ACID	3581	1811	324	63	50	45	172977	67172	259880	106735	212329	88577	162422	97404	79825	38661
TOTAL	80823	61926	67873	53980	73270	57347	247540	121394	323096	153574	351358	181069	456955	275919	234372	123612
POLYMERS																

Table -24: Exports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
LOW DENSITY POLYETHYLENE	16892	15296	18369	20153	21519	23853	24007	26531	26909	27321	108257	88430	164142	132765	140022	98135
HIGH DENSITY POLYTHYLENE	159341	123866	113344	103538	51663	51095	116114	97840	148142	117815	205797	155550	457416	365235	486892	315945
POLYSTYRENE	74137	68035	83962	91765	73695	69174	86290	72301	82542	75483	69814	67452	63990	64060	49611	43139
POLYPROPYLENE (INC. CO-POLYMER)	828236	616817	943284	832814	726906	620745	735410	503124	574234	382678	552002	397646	718053	596611	539045	386684
EXPANDABLE POLYSTYRENE	3830	3689	3646	4413	4810	5489	3762	3735	3697	3548	3119	3272	3064	3818	2745	2762
POLY VINYL CHLORIDE	1267	1462	1332	2754	1988	2085	3054	3272	6484	6127	6662	6015	2133	1788	2060	1471
LINEAR LOW DENSITY POLYTHYLENE	21821	18582	13451	13366	10854	10267	15825	14160	53215	41558	228952	163632	508135	380841	395076	247196
PVC COMPOUND	7138	5839	10246	9448	11831	10842	13877	11534	16901	12902	13630	9774	17222	13273	0	0
TOTAL	1112662	853586	1187634	1078251	903266	793550	998339	732497	912124	667432	1188233	891771	1934155	1558391	1615451	1095332
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	7646	8461	7483	8024	18007	17961	31053	23969	27139	27423	40704	36382	46179	43572	44929	37838
POLY BUTADIENE RUBBER	1173	1947	267	388	1919	1978	5988	4008	5114	4942	7012	7376	13175	15311	20323	19289
ETHYL PROPYLENE DIMERS	1182	1916	2075	7096	2915	8114	2725	8882	3282	9531	2517	7696	2463	7958	2292	7284
ETHYL VINYL ACETATE	804	848	1215	1494	1141	1734	1274	1510	1494	1751	901	1314	530	1251	999	1614
NITRILE BUTADIENE RUBBER	431	1297	446	1557	444	1124	400	970	451	1092	427	1128	507	1316	719	1316
BUTYL RUBBER	253	613	1348	3038	1614	3581	1248	3089	724	1648	328	693	696	1288	4774	5724
TOTAL	11489	15082	12834	21597	26040	34492	42688	42428	38204	46387	51889	54589	63550	70696	74036	73065
SYNTHETIC DETERGENT INTERMEDIATES																

Table -24: Exports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
LINEAR ALKYL BENZENE	50068	50134	32493	34657	27199	27204	9256	7034	6440	4816	930	809	323	367	193	253
ETHYLENE OXIDE	410	794	478	1188	793	1800	378	734	618	1125	483	659	725	1167	851	1226
TOTAL	50478	50928	32971	35845	27992	29004	9634	7768	7058	5941	1413	1468	1048	1534	1044	1479
PERFORMANCE PLASTICS																
ABS RESIN	666	780	303	424	225	281	465	682	294	473	273	445	449	622	328	598
NYLON-6	9915	16353	15308	25961	16715	28775	14577	25321	17656	29593	21353	34774	19744	38965	21214	40855
POLYMETHYL METHACRYLATE	7849	8626	9775	12115	9306	11215	9158	10541	8557	10230	3563	3584	4323	5218	4632	5586
STYRENE ACRYLONITRILE	43	69	275	249	120	158	579	459	671	450	1179	682	387	380	460	362
POLYESTER CHIPS/PET CHIPS	324307	256947	443104	372102	375421	274943	783106	460787	937251	557185	1014588	655326	1043386	889691	930982	618181
POLYTETRAFLUOROETHYLENE (PTFE)	5136	24676	5763	29373	7578	38120	6082	29947	8321	38519	9592	52460	11997	83897	11175	73428
TOTAL	347916	307451	474528	440224	409365	353492	813967	527737	972750	636450	1050548	747271	1080286	1018773	968791	739010
OLEFINS																
BUTADIENE	117626	135098	119410	88301	72479	45301	129808	66961	106838	97268	103426	73371	136191	113889	174252	103916
ETHYLENE	1	4	1	7	0	1	5119	3789	27	23	136426	97327	193233	140672	152230	79955
PROPYLENE	6200	3866	0	0	0	0	14462	5305	10500	4451	20745	9106	39290	22140	9658	4229
TOTAL	123827	138968	119411	88308	72479	45302	149389	76055	117365	101742	260597	179804	368714	276701	336140	188100
AROMATICS																
BENZENE	652963	445735	635749	437813	576741	348900	914875	371288	789425	366822	1286323	662408	1651123	822052	1408477	635303

Table -24: Exports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
MIXED XYLENE	141564	104472	187239	139394	10464	6923	8	49	66	110	418	278	981	668	410	297
ORTHO-XYLENE	210822	163337	229010	172190	227007	138341	234386	107621	154347	74761	185675	86881	225703	122734	177267	100950
TOLUENE	5412	4167	14798	11449	9994	6409	5268	3314	5843	3764	4103	2772	13601	9501	8124	5564
PARAXYLENE	579899	470450	722455	583693	1064069	662729	878606	460535	799492	439679	1826522	1002659	2659503	1925344	2677199	1595294
TOTAL	1590660	1188161	1789251	1344539	1888275	1163302	2033143	942807	1749173	885136	3303041	1754998	4550911	2880299	4271477	2337408
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	3200	554	9	5	21	14	15839	3103	16	8	44861	6510	19181	4478	80857	20134
BUTANOL	4762	5986	2186	3583	759	993	195	162	2292	1189	863	703	452	655	282	287
OXO ALCOHOL	812	983	1188	1133	1191	907	582	565	1271	731	890	682	2935	1505	1328	1146
2-ETHYL HEXANOL	47	1001	321	654	6391	6405	746	654	2055	1437	2636	1701	3175	2781	46	54
VINYL CHLORIDE MONOMER	0	0	1	8	0	0	0	0	0	0	0	0	0	3	0	0
EPICHLORHYDRINE	13	10	4	7	14	19	28	33	54	55	49	76	48	90	106	183
ISO BUTYLENE	0	0	1815	1382	1	2	28	249	1	3	0	2	0	1	18085	9028
METAXYLENE	41061	32749	4	13	23	146	46	140	64	217	4	263	15	282	35	587
METHYL ISOBUTYL KETONE	5	71	24	53	206	364	287	266	918	788	940	878	2038	1817	2165	1525
PIB	4285	4739	5896	7554	4993	5925	6128	7200	2237	2448	2620	2711	4297	4788	5828	5839
POLYCARBONATE	2509	4332	3022	6103	2459	2772	4790	4597	3990	3284	4926	5370	3432	4605	3331	3621
PROPYLENE GLYCOL	2593	1953	818	986	773	1043	531	724	865	1113	1117	1713	1697	2419	5934	6573

Table -24: Exports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
POLYVINYL ACETATE RESIN	14064	11563	15509	13643	15456	15384	11259	11415	8767	8927	6958	6522	8510	8622	9048	7767
UNSATURATED POLYESTER RESIN	10709	12477	10750	14533	12660	17074	12112	15025	16263	18552	14436	18212	14667	21668	15498	22694
ETHYL BENZENE	4	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0
CELLULOSE ACETATE BUTYRATE	53	78	93	163	44	93	6	81	8	30	1	18	1	15	0	0
CELLULOSE ACETATE SHEET	159	166	63	152	33	84	34	116	85	178	59	145	22	79	33	106
CELLULOSE NITRATE SHEET	46	19	3	14	12	16	3	5	19	14	2	5	7	24	5	9
MELAMINE MOULDING POWDER	1160	940	2168	1431	6339	2284	7993	2541	10124	3072	14754	3747	16578	4758	21691	6495
POLYACETAL RESIN	279	403	540	654	537	598	312	383	387	439	141	279	276	402	334	540
PHTHALIC ANHYDRIDE	12812	11478	23182	20259	38634	26744	40448	22378	42033	25960	37869	25156	26495	18956	28898	17976
STYRENE	17327	16323	2242	2392	6940	6623	793	669	5088	4176	4524	3842	6531	6690	4366	3326
VINYL ACTATE MONOMER	1342	822	4096	2635	1562	1392	1695	1388	11755	6285	21261	13220	8344	6623	3434	2260
ISOPROPANOL	3846	4149	3334	4053	6139	6508	3716	2805	7385	5106	11004	7850	6281	5336	10442	7773
POLYOL	15994	18515	18969	26201	18938	48254	21099	26760	28458	32760	23427	39008	22316	43162	25825	77010
TOTAL	137082	129315	96237	107611	124125	143644	128670	101261	144135	116772	193342	138613	147298	139759	237571	194933
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	4230823	3523292	4688385	4186295	4411994	3537460	5301728	3385730	5289645	3535452	7401474	4927565	9618583	7394080	8798230	5807926

Note: Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	29359	42077	32990	53051	36339	60959	39238	53809	36771	44394	32184	46549	40475	71158	56316	84841
NYLON FILAMENT YARN	24067	52783	24295	54650	27813	59448	28972	54485	31063	53352	22731	43317	23259	52088	24476	49669
NYLON INDUSTRIAL YARN/TYRE CORD	11912	21275	7022	13749	3750	7035	4411	6803	7741	10247	6566	10070	8108	16323	6893	11802
POLYESTER FILAMENT YARN	50013	64792	46713	67653	72718	89105	72605	86166	84367	92492	82784	100756	83954	118045	115170	129162
POLYESTER STAPLE FIBRE	29670	27653	42635	41577	81864	71552	99719	73357	99809	70113	88990	71053	91775	89685	118176	94729
POLYPROPYLENE FILAMENT YARN	1598	2673	792	1056	716	1002	697	1001	695	850	1343	1715	1362	2007	670	954
POLYPROPYLENE STAPLE FIBRE	331	495	401	567	329	461	1885	1997	2016	2181	3281	3378	3333	3863	2778	3097
Elastomeric/Spandex Filament Yarn	9341	35581	9288	42012	12061	56643	16247	68750	17531	69364	21753	86241	23351	100187	22121	86629
TOTAL	156291	247329	164136	274315	235590	346205	263774	346368	279993	342993	259632	363079	275617	453356	346600	460883
FIBRE INTERMEDIATES																
ACRYLONITRILE	81964	83719	100862	111632	97388	118956	160202	121692	139709	108192	159778	172707	182234	244043	175867	200713
CAPROLACTUM	15917	21673	23494	34307	32276	43571	44577	45299	52906	50601	58413	75965	66497	99336	68049	75256
DIMETHYL TEREPHTHALATE	2104	1592	1786	1466	2094	1594	2216	1400	1761	1051	2256	1520	1455	1137	1807	1199
MONO EHYLENE GLYCOL	654831	374593	820724	512134	1003540	550364	1111582	539689	1235385	604838	1066477	584695	634714	371592	787574	312149
PURIFIED TEREPHTHALIC ACID	647958	396920	978392	645130	1044572	559180	696842	318046	412468	178454	521501	237444	569756	340774	886358	470167
TOTAL	1402774	878497	1925258	1304669	2179870	1273665	2015419	1026126	1842229	943136	1808425	1072331	1454656	1056882	1919655	1059484
POLYMERS																
LOW DENSITY POLYETHYLENE	264483	204752	256147	239302	325901	295717	374761	313547	391501	330125	464591	398992	341063	310441	352372	282510

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
HIGH DENSITY POLYTHYLENE	639062	464130	575117	545552	842892	811233	921743	798927	1000457	824364	993072	840665	902265	872720	787964	634354
POLYESTYRENE	35949	45289	37772	49378	39647	50104	42514	47364	44374	54225	52790	64224	56312	69827	54371	62759
POLYPROPYLENE (INC. CO-POLYMER)	497691	427654	479176	472948	611673	589950	700914	574265	781188	611882	938998	762085	854828	837001	994615	853958
EXPANDABLE POLYESTYRENE	4560	4436	3978	4682	3113	3441	2981	2723	3779	3554	2644	2744	1241	1611	1037	1184
POLY VINYL CHLORIDE	1133124	647857	1208529	755732	1293338	854467	1501311	878823	1702852	1015835	1846296	1123738	2037570	1354121	928376	587544
LINEAR LOW DENSITY POLYTHYLENE	538849	414080	499817	413556	550109	515931	590015	459471	469075	381387	425112	335698	276313	228745	311445	217054
PVC COMPOUND	65875	46706	64450	49858	70125	56225	79783	57368	59032	45858	27975	21140	9537	10363	0	0
TOTAL	3179593	2254904	3124986	2531008	3736798	3177068	4214022	3132488	4452258	3267230	4751478	3549286	4479129	3684829	3430180	2639363
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	206663	292471	239544	287779	223549	264399	172802	155614	149559	155436	132989	161301	123010	156987	102738	118659
POLY BUTADIENE RUBBER	71052	115107	86200	109762	70471	79518	74646	63210	84910	93064	94772	122673	104671	138315	97712	107321
ETHYL PROPYLENE DIMERS	28373	60006	30347	50127	33348	54653	39370	60759	43411	54947	45099	59035	52800	80061	45465	59429
ETHYL VINYL ACETATE	108324	109280	114764	125169	139414	155970	165264	162033	144604	141686	183348	184503	178684	202884	193671	212988
NITRILE BUTADIENE RUBBER	26733	47496	29596	45051	26719	44760	51937	44391	36451	45999	40310	63203	38519	73014	41179	60140
BUTYL RUBBER	78525	173139	79882	175149	84899	159649	92082	126683	100984	136910	111349	151035	120816	200157	94067	151010
TOTAL	519670	797499	580333	793037	578400	758949	596101	612690	559919	628042	607867	741750	618500	851418	574832	709547
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	127440	131486	123825	139218	133994	137918	217997	176537	228092	177675	205910	163748	227111	210012	264026	236771
ETHYLENE OXIDE	53	199	21	249	41	543	100	952	137	1328	74	785	25	416	32	655

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
TOTAL	127493	131685	123846	139467	134035	138461	218097	177489	228229	179003	205984	164533	227136	210428	264058	237426
PERFORMANCE PLASTICS																
ABS RESIN	56897	72383	63020	86113	69910	94132	90081	100935	102685	114201	98026	131230	119398	173631	104643	126833
NYLON-6	88264	159031	114365	214028	133891	237580	144545	218291	158810	233711	175945	299915	215718	430268	217382	345202
POLYMETHYL METHACRYLATE	16488	21487	18924	25935	15367	21697	20309	30401	27175	35588	29994	47445	29540	55142	29331	45525
STYRENE ACRYLONITRILE	6248	7062	5973	7523	6411	7884	9569	9061	8542	8299	9430	10630	9188	11431	10452	11103
POLYESTER CHIPS/PET CHIPS	79743	60854	106283	90135	167015	123074	122206	74948	117996	68960	266358	113614	307111	199059	375865	233917
POLYTETRAFLUOROETHYLE NE(PTFE)	2069	15245	2334	14656	2172	12000	2086	12211	2234	11511	2939	18213	2896	22190	2904	19880
TOTAL	249709	336062	310899	438390	394766	496367	388796	445847	417442	472270	582692	621047	683851	891721	740577	782460
OLEFINS																
BUTADIENE	9187	10430	1071	820	3223	2823	994	706	2105	1657	2859	3104	1048	1363	14	82
ETHYLENE	23784	17219	24791	19461	43905	38467	21050	14753	80917	57116	39119	32795	60583	50604	64816	43283
PROPYLENE	1216	1667	247	1201	2127	2691	3354	4718	431	1878	8813	7384	8069	5879	11027	7646
TOTAL	34187	29316	26109	21482	49255	43981	25398	20177	83453	60651	50791	43283	69700	57846	75857	51011
AROMATICS																
BENZENE	50660	32106	5250	3146	47	35	0	5	0	8	60	66	22264	12820	11153	5330
MIXED XYLENE	169	197	5567	4339	1647	1155	108	96	113	125	2424	1200	641	433	122	139
ORTHO-XYLENE	45134	37444	44879	41678	35697	23547	34502	16871	26275	14609	15730	8337	22974	15464	16382	9962
TOLUENE	307145	215447	263759	193333	287877	183823	343662	163765	392749	183101	414144	194854	438055	235492	464497	238119

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
PARAXYLENE	564833	479409	678944	607864	698204	504004	826053	452311	1195515	667002	888660	504091	836490	646003	835381	519284
TOTAL	967941	764603	998399	850360	1023472	712564	1204325	633048	1614652	864845	1321018	708548	1320424	910212	1327535	772834
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	359009	53578	439537	98004	465292	117028	600033	104976	503987	86304	713334	108450	581677	141440	780433	182591
BUTANOL	36290	27372	44683	37454	56954	42657	62512	31380	57959	26234	53679	30719	48955	35342	58865	33488
OXO ALCOHOL	1329	2102	1698	3182	1285	3866	1270	4347	3186	6713	2272	6324	2696	7376	2873	6210
2-ETHYL HEXANOL	58418	54709	100495	88209	134894	117375	109095	66012	66867	37312	58129	39652	54107	44522	81656	56216
VINYL CHLORIDE MONOMER	296171	145623	303042	167918	317925	178829	349371	167169	344423	177368	484390	247256	457532	252913	511166	280807
EPICHLHYDRINE	19109	18276	22986	22594	33588	33629	43383	37643	48112	34563	56024	51446	65013	83311	61163	72337
ISO BUTYLENE	9260	7938	23254	21809	13010	12222	15853	10526	20051	14133	48702	36009	44558	40254	10787	7475
METAXYLENE	4371	3851	3029	3223	946	902	3064	2755	2667	2600	2078	2064	2943	3306	1910	1991
METHYL ISOBUTYL KETONE	17668	20184	18318	21987	23243	26643	27576	22104	22487	17388	34684	31270	33932	29589	29977	18245
PIB	10754	11817	9456	13554	11290	16394	14367	17322	16034	16949	15041	16964	16287	20089	16125	19857
POLYCARBONATE	122742	175907	123434	183633	124555	189828	138535	207756	138365	204195	158944	256209	190435	369272	175692	263317
PROPYLENE OXIDE	13141	13052	11676	13076	22914	25917	25552	25697	23064	21699	23446	23594	26800	30694	20160	20127
PROPYLENE GLYCOL	40036	34340	43547	40750	48749	50720	54045	46881	51339	39956	57333	49579	66498	69089	67372	54615
POLYVINYL ACETATE RESIN	4388	7094	4246	8824	4003	8300	3209	5941	3043	3829	3448	5059	2713	3894	3578	4955
UNSATURATED POLYSTER RESIN	36013	43468	31157	40025	28855	33910	30303	36568	39975	42255	49888	53751	42954	59992	48616	58735
ETHYL BENZENE	407	360	172	228	128	182	150	146	308	267	351	320	719	806	463	471

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
CELLULOSE ACETATE BUTYRATE	8	151	0	1	1	5	2	12	3	18	3	10	0	0	12	18
CELLULOSE ACETATE SHEET	692	312	980	569	1260	749	1295	775	1066	564	1346	921	1516	1122	1356	1013
CELLULOSE NITRATE SHEET	178	248	502	843	263	467	88	260	75	250	99	327	106	396	75	270
MELAMINE MOULDING POWDER	8668	9858	10210	12619	10081	12356	11872	13961	12997	15304	14699	16993	15280	20127	14945	18772
POLYACETAL RESIN	25933	23667	26266	25418	32605	29992	35212	34173	37883	37829	43672	43617	48759	59046	47673	53004
PHTHALIC ANHYDRIDE	44321	36815	54934	48521	52350	39837	79803	44118	92058	53567	130440	86282	144801	107477	174482	110039
STYRENE	591646	492433	572654	602695	617800	543696	717696	516539	729627	557571	789273	654655	817779	744118	876922	610879
VINYL ACTATE MONOMER	127536	69804	147364	87273	139553	114477	141649	88260	162004	87159	184964	117193	171353	135851	162866	98977
ISOPROPANOL	55724	42087	51271	42756	63194	51016	87606	47646	97262	55519	110464	71816	141113	98531	154095	83539
POLYOL	153222	200925	159073	232014	167916	246352	186239	243011	175766	225387	218541	281622	248491	350672	239755	330380
TOTAL	2037034	1495971	2203984	1817179	2372654	1897349	2739780	1775978	2650608	1764933	3255244	2232102	3227017	2709229	3543017	2388328
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	8674692	6935866	9457950	8169907	10704840	8844609	11665712	8170211	12128783	8523103	12843131	9495959	12356030	10825921	12222311	9101336

Note: Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table - 26 : Net Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	10101	15894	1428	5666	-1081	1783	-8673	-5157	-11561	-15666	-7029	-5678	-5457	-542	15811	25115
NYLON FILAMENT YARN	22202	47055	22272	47248	25965	52509	27333	48249	29206	46890	18717	31206	17465	33200	16728	27309
NYLON INDUSTRIAL YARN/TYRE CORD	8156	14465	4126	8053	1998	4098	3289	5332	6267	8375	4946	7831	6213	13496	3269	6686
POLYESTER FILAMENT YARN	-526211	-524116	-601019	-676115	-576055	-588637	-562194	-538278	-663670	-598344	-634930	-629526	-612714	-721510	-596149	-621304
POLYESTER STAPLE FIBRE	-140648	-116702	-162706	-146075	-101711	-79995	-82094	-55772	-114094	-80203	-138451	-98311	-163680	-135360	-166981	-110147
POLYPROPYLENE FILAMENT YARN	-410	-21	-1071	-1757	-1516	-2232	-2147	-2877	-1382	-1840	474	598	868	1294	-50	-11
POLYPROPYLENE STAPLE FIBRE	-1969	-2162	-14491	-15653	-10282	-11401	-5646	-4888	-7739	-6586	-6216	-5285	-4559	-4583	-6731	-6006
Elastomeric/Spandex Filament Yarn	9184	35041	7951	37008	11090	52753	15548	65976	17226	68349	21068	84262	21815	95353	21355	84254
TOTAL	-619595	-530546	-743510	-741625	-651592	-571122	-614584	-487415	-745747	-579025	-741421	-614903	-740049	-718652	-712748	-594104
FIBRE INTERMEDIATES																
ACRYLONITRILE	79861	80972	100860	111627	97384	118871	157879	119560	139703	108153	158264	170807	180362	240984	172879	197451
CAPROLACTUM	12574	16820	22980	33405	32276	43570	44577	45291	51896	49734	58360	75872	66420	99207	67791	74929
DIMETHYL TEREPHTHALATE	2104	1592	1785	1464	2094	1594	2215	1399	1760	1050	2256	1520	1454	1135	1807	1198
MONO EHYLENE GLYCOL	583035	322078	753692	459126	930324	493148	1039343	487608	1173186	558906	929015	494196	342131	196267	636273	230788
PURIFIED TEREPHTHALIC ACID	644377	395109	978068	645067	1044522	559135	523865	250874	152588	71719	309172	148867	407334	243370	806533	431506
TOTAL	1321951	816571	1857385	1250689	2106600	1216318	1767879	904732	1519133	789562	1457067	891262	997701	780963	1685283	935872
POLYMERS																
LOW DENSITY POLYETHYLENE	247591	189456	237778	219149	304382	271864	350754	287016	364592	302804	356334	310562	176921	177676	212350	184375

Table - 26 : Net Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
HIGH DENSITY POLYTHYLENE	479721	340264	461773	442014	791229	760138	805629	701087	852315	706549	787275	685115	444849	507485	301072	318409
POLYESTYRENE	-38188	-22746	-46190	-42387	-34048	-19070	-43776	-24937	-38168	-21258	-17024	-3228	-7678	5767	4760	19620
POLYPROPYLENE (INC. CO-POLYMER)	-330545	-189163	-464108	-359866	-115233	-30795	-34496	71141	206954	229204	386996	364439	136775	240390	455570	467274
EXPANDABLE POLYESTYRENE	730	747	332	269	-1697	-2048	-781	-1012	82	6	-475	-528	-1823	-2207	-1708	-1578
POLY VINYL CHLORIDE	1131857	646395	1207197	752978	1291350	852382	1498257	875551	1696368	1009708	1839634	1117723	2035437	1352333	926316	586073
LINEAR LOW DENSITY POLYTHYLENE	517028	395498	486366	400190	539255	505664	574190	445311	415860	339829	196160	172066	-231822	-152096	-83631	-30142
PVC COMPOUND	58737	40867	54204	40410	58294	45383	65906	45834	42131	32956	14345	11366	-7685	-2910	0	0
TOTAL	2066931	1401318	1937352	1452757	2833532	2383518	3215683	2399991	3540134	2599798	3563245	2657515	2544974	2126438	1814729	1544031
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	199017	284010	232061	279755	205542	246438	141749	131645	122420	128013	92285	124919	76831	113415	57809	80821
POLY BUTADIENE RUBBER	69879	113160	85933	109374	68552	77540	68658	59202	79796	88122	87760	115297	91496	123004	77389	88032
ETHYL PROPYLENE DIMERS	27191	58090	28272	43031	30433	46539	36645	51877	40129	45416	42582	51339	50337	72103	43173	52145
ETHYL VINYL ACETATE	107520	108432	113549	123675	138273	154236	163990	160523	143110	139935	182447	183189	178154	201633	192672	211374
NITRILE BUTADIENE RUBBER	26302	46199	29150	43494	26275	43636	51537	43421	36000	44907	39883	62075	38012	71698	40460	58824
BUTYL RUBBER	78272	172526	78534	172111	83285	156068	90834	123594	100260	135262	111021	150342	120120	198869	89293	145286
TOTAL	508181	782417	567499	771440	552360	724457	553413	570262	521715	581655	555978	687161	554950	780722	500796	636482
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	77372	81352	91332	104561	106795	110714	208741	169503	221652	172859	204980	162939	226788	209645	263833	236518
ETHYLENE OXIDE	-357	-595	-457	-939	-752	-1257	-278	218	-481	203	-409	126	-700	-751	-819	-571

Table - 26 : Net Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
TOTAL	77015	80757	90875	103622	106043	109457	208463	169721	221171	173062	204571	163065	226088	208894	263014	235947
PERFORMANCE PLASTICS																
ABS RESIN	56231	71603	62717	85689	69685	93851	89616	100253	102391	113728	97753	130785	118949	173009	104315	126235
NYLON-6	78349	142678	99057	188067	117176	208805	129968	192970	141154	204118	154592	265141	195974	391303	196168	304347
POLYMETHYL METHACRYLATE	8639	12861	9149	13820	6061	10482	11151	19860	18618	25358	26431	43861	25217	49924	24699	39939
STYRENE ACRYLONITRILE	6205	6993	5698	7274	6291	7726	8990	8602	7871	7849	8251	9948	8801	11051	9992	10741
POLYESTER CHIPS/PET CHIPS	-244564	-196093	-336821	-281967	-208406	-151869	-660900	-385839	-819255	-488225	-748230	-541712	-736275	-690632	-555117	-384264
POLYTETRAFLUOROETHYLENE (PTFE)	-3067	-9431	-3429	-14717	-5406	-26120	-3996	-17736	-6087	-27008	-6653	-34247	-9101	-61707	-8271	-53548
TOTAL	-98207	28611	-163629	-1834	-14599	142875	-425171	-81890	-555308	-164180	-467856	-126224	-396435	-127052	-228214	43450
OLEFINS																
BUTADIENE	-108439	-124668	-118339	-87481	-69256	-42478	-128814	-66255	-104733	-95611	-100567	-70267	-135143	-112526	-174238	-103834
ETHYLENE	23783	17215	24790	19454	43905	38466	15931	10964	80890	57093	-97307	-64532	-132650	-90068	-87414	-36672
PROPYLENE	-4984	-2199	247	1201	2127	2691	-11108	-587	-10069	-2573	-11932	-1722	-31221	-16261	1369	3417
TOTAL	-89640	-109652	-93302	-66826	-23224	-1321	-123991	-55878	-33912	-41091	-209806	-136521	-299014	-218855	-260283	-137089
AROMATICS																
BENZENE	-602303	-413629	-630499	-434667	-576694	-348865	-914875	-371283	-789425	-366814	-1286263	-662342	-1628859	-809232	-1397324	-629973
MIXED XYLENE	-141395	-104275	-181672	-135055	-8817	-5768	100	47	47	15	2006	922	-340	-235	-288	-158
ORTHO-XYLENE	-165688	-125893	-184131	-130512	-191310	-114794	-199884	-90750	-128072	-60152	-169945	-78544	-202729	-107270	-160885	-90988
TOLUENE	301733	211280	248961	181884	277883	177414	338394	160451	386906	179337	410041	192082	424454	225991	456373	232555

Table - 26 : Net Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
PARAXYLENE	-15066	8959	-43511	24171	-365865	-158725	-52553	-8224	396023	227323	-937862	-498568	-1823013	-1279341	-1841818	-1076010
TOTAL	-622719	-423558	-790852	-494179	-864803	-450738	-828818	-309759	-134521	-20291	-1982023	-1046450	-3230487	-1970087	-2943942	-1564574
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	355809	53024	439528	97999	465271	117014	584194	101873	503971	86296	668473	101940	562496	136962	699576	162457
BUTANOL	31528	21386	42497	33871	56195	41664	62317	31218	55667	25045	52816	30016	48503	34687	58583	33201
OXO ALCOHOL	517	1119	510	2049	94	2959	688	3782	1915	5982	1382	5642	-239	5871	1545	5064
2-ETHYL HEXANOL	58371	53708	100174	87555	128503	110970	108349	65358	64812	35875	55493	37951	50932	41741	81610	56162
VINYL CHLORIDE MONOMER	296171	145623	303041	167910	317925	178829	349371	167169	344423	177368	484390	247256	457532	252910	511166	280807
EPICHLHYDRINE	19096	18266	22982	22587	33574	33610	43355	37610	48058	34508	55975	51370	64965	83221	61057	72154
ISO BUTYLENE	9260	7938	21439	20427	13009	12220	15825	10277	20050	14130	48702	36007	44558	40253	-7298	-1553
METAXYLENE	-36690	-28898	3025	3210	923	756	3018	2615	2603	2383	2074	1801	2928	3024	1875	1404
METHYL ISOBUTYL KETONE	17663	20113	18294	21934	23037	26279	27289	21838	21569	16600	33744	30392	31894	27772	27812	16720
PIB	6469	7078	3560	6000	6297	10469	8239	10122	13797	14501	12421	14253	11990	15301	10297	14018
POLYCARBONATE	120233	171575	120412	177530	122096	187056	133745	203159	134375	200911	154018	250839	187003	364667	172361	259696
PROPYLENE OXIDE	13141	13052	11676	13076	22914	25917	25552	25697	23064	21698	23446	23594	26800	30694	20160	20126
PROPYLENE GLYCOL	37443	32387	42729	39764	47976	49677	53514	46157	50474	38843	56216	47866	64801	66670	61438	48042
POLYVINYL ACETATE RESIN	-9676	-4469	-11263	-4819	-11453	-7084	-8050	-5474	-5724	-5098	-3510	-1463	-5797	-4728	-5470	-2812
UNSATURATED POLYESTER RESIN	25304	30991	20407	25492	16195	16836	18191	21543	23712	23703	35452	35539	28287	38324	33118	36041
ETHYL BENZENE	403	356	172	228	128	182	150	144	308	267	351	320	719	806	463	471

Table - 26 : Net Imports of Major Petrochemicals (Product-wise) 2012-13 to 2019-20

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
CELLULOSE ACETATE BUTYRATE	-45	73	-93	-162	-43	-88	-4	-69	-5	-12	2	-8	-1	-15	12	18
CELLULOSE ACETATE SHEET	533	146	917	417	1227	665	1261	659	981	386	1287	776	1494	1043	1323	907
CELLULOSE NITRATE SHEET	132	229	499	829	251	451	85	255	56	236	97	322	99	372	70	261
MELAMINE MOULDING POWDER	7508	8918	8042	11188	3742	10072	3879	11420	2873	12232	-55	13246	-1298	15369	-6746	12277
POLYACETAL RESIN	25654	23264	25726	24764	32068	29394	34900	33790	37496	37390	43531	43338	48483	58644	47339	52464
PHTHALIC ANHYDRIDE	31509	25337	31752	28262	13716	13093	39355	21740	50025	27607	92571	61126	118306	88521	145584	92063
STYRENE	574319	476110	570412	600303	610860	537073	716903	515870	724539	553395	784749	650813	811248	737428	872556	607553
VINYL ACTATE MONOMER	126194	68982	143268	84638	137991	113085	139954	86872	150249	80874	163703	103973	163009	129228	159432	96717
ISOPROPANOL	51878	37938	47937	38703	57055	44508	83890	44841	89877	50413	99460	63966	134832	93195	143653	75766
POLYOL	137228	182410	140104	205813	148978	198098	165140	216251	147308	192627	195114	242614	226175	307510	213930	253370
TOTAL	1899952	1366656	2107747	1709568	2248529	1753705	2611110	1674717	2506473	1648160	3061902	2093489	3079719	2569470	3305446	2193394
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	4443869	3412574	4769565	3983612	6292846	5307149	6363984	4784481	6839138	4987650	5441657	4568394	2737447	3431841	3424081	3293409

Note: Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table 27:- Top Five Export Destinations of selected Petrochemical products during 2019-20

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLIC FIBRE	IRAN	21808.330	34207.967
	KENYA	8215.461	7448.457
	ETHIOPIA	2466.748	1964.013
	MYANMAR	963.166	2473.824
	SOUTH AFRICA	947.879	2452.680
	Product Total	34401.584	48546.941
NYLON FILAMENT YARN	BRAZIL	1309.640	3293.127
	NEW ZEALAND	1132.560	3568.608
	AUSTRALIA	896.830	2550.385
	TURKEY	675.344	1484.110
	SRI LANKA DSR	375.081	1291.423
	Product Total	4389.455	12187.653
NYLON INDUSTRIAL YARN/TYRE CORD	U ARAB EMTS	812.377	1282.565
	U S A	529.587	795.435
	BANGLADESH PR	493.320	643.902
	MEXICO	383.104	510.452
	BELGIUM	163.351	216.628
	Product Total	2381.739	3448.982
POLYESTER FILAMENT YARN	TURKEY	208705.610	211106.897
	BRAZIL	151564.057	132734.690
	BANGLADESH PR	41511.605	51069.212
	EGYPT A RP	38891.516	37244.816
	KOREA RP	26269.174	25835.802
	Product Total	466941.962	457991.417
POLYESTER STAPLE FIBRE	BANGLADESH PR	35146.021	23968.859
	U S A	32074.825	23091.130
	NEPAL	27283.818	18757.785
	INDONESIA	25906.861	17339.896
	BELGIUM	15879.670	11438.052
	Product Total	136291.195	94595.722
POLYPROPYLENE FILAMENT YARN	ETHIOPIA	216.493	276.217
	NIGERIA	87.569	108.755
	TAIWAN	71.345	92.964
	NEPAL	63.894	92.523
	MALAYSIA	45.385	66.780
	Product Total	484.686	637.239
POLYPROPYLENE STAPLE FIBRE	U S A	7871.744	7205.643
	BANGLADESH PR	694.595	696.328
	AUSTRALIA	510.473	597.946
	NEPAL	271.636	355.024
	U ARAB EMTS	68.939	92.803
	Product Total	9417.387	8947.744
	TURKEY	188.505	493.653
	BANGLADESH PR	153.315	490.098

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
Elastomeric/Spandex Filament Yarn	COLOMBIA	137.906	413.425
	VIETNAM SOC REP	54.503	156.737
	U K	42.103	145.356
	Product Total	576.332	1699.269
ACRYLONITRILE	U ARAB EMTS	2981.000	3177.231
	JAPAN	3.405	80.059
	BANGLADESH PR	3.040	3.913
	NEPAL	0.060	0.785
	EGYPT A RP	0.003	0.031
	Product Total	2987.508	3262.019
CAPROLACTUM	SAUDI ARAB	230.000	233.189
	INDONESIA	12.000	18.536
	BANGLADESH PR	11.450	19.030
	NIGERIA	4.000	4.430
	SPAIN	0.097	23.683
	Product Total	257.547	298.868
DIMETHYL TEREPHTHALATE	JAPAN	0.150	0.766
	SWITZERLAND	0.010	0.007
	U ARAB EMTS	0.005	0.126
	Product Total	0.165	0.899
MONO EHYLENE GLYCOL	CHINA P RP	101216.380	44870.156
	U S A	21076.230	15488.675
	TAIWAN	6798.000	5507.510
	MALAYSIA	5626.000	2283.252
	MEXICO	5390.000	3914.743
	Product Total	140106.610	72064.336
PURIFIED TEREPHTHALIC ACID	OMAN	31590.000	16407.838
	SOUTH AFRICA	23051.000	10697.708
	TURKEY	17352.000	7265.679
	MALAYSIA	6024.000	2596.481
	SAUDI ARAB	1068.000	543.503
	Product Total	79085.000	37511.209
LOW DENSITY POLYETHYLENE	CHINA P RP	98104.849	62980.997
	TURKEY	12181.150	9466.487
	U ARAB EMTS	4519.511	2815.158
	BANGLADESH PR	4036.962	3269.545
	PORTUGAL	2780.000	2555.410
	Product Total	121622.472	81087.597
HIGH DENSITY POLYTHYLENE	CHINA P RP	357978.650	218913.423
	VIETNAM SOC REP	41985.150	27129.208
	NEPAL	25050.634	17470.367
	KENYA	10452.710	7063.825
	U ARAB EMTS	8473.339	8153.341
	Product Total	443940.483	278730.164
	BANGLADESH PR	14018.711	11466.026

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYESTYRENE	HONG KONG	4754.555	3694.790
	SRI LANKA DSR	2803.797	2209.642
	U S A	2360.173	2942.527
	EGYPT A RP	2294.870	1900.840
	Product Total	26232.106	22213.825
POLYPROPYLENE (INC. CO-POLYMER)	CHINA P RP	124702.162	85937.736
	TURKEY	92518.123	67660.083
	VIETNAM SOC REP	39308.842	28126.114
	NEPAL	37597.472	28073.238
	PORTUGAL	27905.024	19687.108
	Product Total	322031.623	229484.279
EXPANDABLE POLYESTYRENE	INDONESIA	1352.000	1267.992
	VIETNAM SOC REP	398.570	463.850
	U ARAB EMTS	301.592	311.878
	TAIWAN	264.000	264.372
	SINGAPORE	132.000	126.037
	Product Total	2448.162	2434.129
POLY VINYL CHLORIDE	U ARAB EMTS	1035.543	684.982
	NEPAL	649.090	435.049
	IRAN	250.000	236.578
	KENYA	37.410	31.274
	BANGLADESH PR	28.360	22.374
	Product Total	2000.403	1410.257
LINEAR LOW DENSITY POLYTHYLENE	CHINA P RP	233094.886	142145.896
	TURKEY	27297.438	17280.918
	BANGLADESH PR	24215.339	15566.992
	NEPAL	16806.598	10937.065
	VIETNAM SOC REP	16236.180	10524.487
	Product Total	317650.441	196455.358
STYRENE BUTADIENE RUBBER	THAILAND	11553.786	9896.015
	VIETNAM SOC REP	5327.085	4215.977
	CHINA P RP	5102.751	4101.127
	SRI LANKA DSR	3492.909	3115.374
	BANGLADESH PR	2821.515	3462.391
	Product Total	28298.046	24790.884
POLY BUTADIENE RUBBER	THAILAND	10770.060	10201.096
	SRI LANKA DSR	3620.875	3542.775
	CHINA P RP	3525.870	3156.740
	BANGLADESH PR	932.575	940.597
	VIETNAM SOC REP	775.985	730.926
	Product Total	19625.365	18572.134
ETHYL PROPYLENE DIMERS	TURKEY	1558.364	5589.451
	COLOMBIA	166.851	612.398
	VIETNAM SOC REP	158.460	315.081
	U ARAB EMTS	134.106	186.131

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	SAUDI ARAB	72.200	146.228
	Product Total	2089.981	2089.981
ETHYL VINYL ACETATE	IRAN	434.750	607.747
	BANGLADESH PR	228.060	239.838
	NEPAL	87.555	105.731
	U ARAB EMTS	54.409	135.974
	NIGERIA	42.000	125.352
	Product Total	846.774	1214.642
NITRILE BUTADIENE RUBBER	U ARAB EMTS	264.540	357.829
	U S A	145.260	404.390
	MALAYSIA	108.580	71.343
	BELGIUM	43.000	53.065
	THAILAND	26.550	74.696
	Product Total	587.930	961.323
BUTYL RUBBER	CHINA P RP	3107.047	3364.720
	SRI LANKA DSR	581.821	922.923
	THAILAND	302.490	334.006
	BANGLADESH PR	198.076	282.975
	INDONESIA	195.510	229.049
	Product Total	4384.944	5133.673
LINEAR ALKYL BENZENE	NIGERIA	78.832	98.338
	EGYPT A RP	29.880	41.527
	HUNGARY	28.800	39.980
	NEPAL	20.320	25.951
	COTE D'IVOIRE	16.000	4.470
	Product Total	173.832	210.266
ETHYLENE OXIDE	MALAYSIA	256.000	215.062
	THAILAND	243.247	498.771
	VIETNAM SOC REP	208.000	173.598
	INDONESIA	80.000	66.388
	SPAIN	30.020	176.632
	Product Total	817.267	1130.451
ABS RESIN	CHINA P RP	63.621	101.978
	U S A	62.831	132.153
	NEPAL	57.057	102.066
	U ARAB EMTS	34.251	45.022
	MALAYSIA	23.175	11.942
	Product Total	240.935	393.161
NYLON-6	JAPAN	3702.746	6067.040
	HONG KONG	1915.350	3448.610
	CHINA P RP	1377.933	2790.293
	MALAYSIA	1317.977	3563.588
	THAILAND	1082.051	2264.396
	Product Total	9396.057	18133.927
	NEPAL	2531.524	2091.791

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYMETHYL METHACRYLATE	SRI LANKA DSR	397.851	326.046
	GERMANY	249.001	911.971
	BANGLADESH PR	227.315	248.295
	U ARAB EMTS	186.636	210.218
	Product Total	3592.327	3788.321
STYRENE ACRYLONITRILE	NIGERIA	380.000	233.567
	PHILIPPINES	23.500	33.897
	IRAN	18.000	23.080
	TANZANIA REP	18.000	23.401
	SRI LANKA DSR	6.000	9.244
	Product Total	445.500	323.189
POLYESTER CHIPS/PET CHIPS	U ARAB EMTS	90872.044	60200.400
	ITALY	85695.000	56499.817
	BANGLADESH PR	59351.328	39852.546
	JAPAN	50215.620	33447.243
	ISRAEL	45903.000	29919.519
	Product Total	332036.992	219919.525
POLYTETRAFLUOROETHYLENE(PTFE)	U S A	3522.189	23580.701
	GERMANY	3146.482	20618.563
	ITALY	1270.102	6688.359
	CHINA P RP	697.708	3948.718
	TURKEY	544.224	3999.553
	Product Total	9180.705	58835.894
BUTADIENE	KOREA RP	57373.000	33915.178
	MALAYSIA	55524.000	33251.193
	TAIWAN	18013.000	11936.455
	INDONESIA	16375.000	9051.592
	THAILAND	14300.000	8359.231
	Product Total	161585.000	96513.649
ETHYLENE	QATAR	53161.000	27383.272
	CHINA P RP	39308.000	21190.590
	INDONESIA	26775.000	14055.930
	TAIWAN	20780.000	10911.129
	ROMANIA	4846.000	2149.247
	Product Total	144870.000	75690.168
PROPYLENE	CHINA P RP	7119.000	3266.744
	INDONESIA	2539.000	962.192
	SLOVAK REP	0.001	0.381
	Product Total	9658.001	4229.317
BENZENE	SAUDI ARAB	709747.715	323590.726
	SPAIN	171985.893	77500.563
	BELGIUM	103825.800	47752.949
	CHINA P RP	84138.002	36593.855
	U S A	64536.000	25838.619
	Product Total	1134233.410	511276.712

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
MIXED XYLENE	QATAR	279.738	178.590
	SRI LANKA DSR	34.882	42.700
	LEBANON	29.000	18.974
	SYRIA	29.000	19.996
	TANZANIA REP	20.000	12.937
	Product Total	392.620	273.197
ORTHO-XYLENE	CHINA P RP	53449.000	29875.480
	TAIWAN	48287.500	26299.042
	INDONESIA	21524.003	12807.612
	BELGIUM	21074.000	12308.697
	ITALY	15135.400	8729.981
	Product Total	159469.903	90020.812
TOLUENE	U ARAB EMTS	2124.910	1065.038
	KENYA	1345.594	859.037
	UGANDA	937.460	599.855
	NEPAL	676.684	429.691
	EGYPT A RP	636.550	299.012
	Product Total	5721.198	3252.633
PARAXYLENE	CHINA P RP	1522204.600	913361.058
	MALAYSIA	441521.750	260200.392
	INDONESIA	338152.052	200719.524
	PAKISTAN IR	122206.240	83543.191
	THAILAND	96312.050	52281.015
	Product Total	2520396.692	1510105.180
ETHYLENE DICHLORIDE	U ARAB EMTS	76173.004	18939.907
	OMAN	4509.000	1053.263
	SAUDI ARAB	134.000	70.801
	THAILAND	35.770	63.436
	ITALY	4.728	4.273
	Product Total	80856.502	20131.680
BUTANOL	QATAR	74.840	63.273
	NEPAL	72.394	56.038
	KENYA	40.745	31.088
	UGANDA	24.285	17.726
	SRI LANKA DSR	15.523	11.441
	Product Total	227.787	179.566
OXO ALCOHOL	CHINA P RP	710.675	262.903
	U S A	362.853	309.348
	NETHERLAND	173.900	445.871
	BELGIUM	28.169	25.300
	JAPAN	28.000	27.920
	ZAMBIA	0.001	0.021
	Product Total	1303.598	1071.363
	COLOMBIA	33.000	40.549
	NEPAL	11.360	11.469

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
2-ETHYL HEXANOL	NIGERIA	0.850	0.929
	BANGLADESH PR	0.510	0.640
	BURUNDI	0.100	0.144
	Product Total	45.820	53.731
EPICHLHYDRINE	IRAN	42.690	75.242
	SOUTH AFRICA	38.400	60.464
	BANGLADESH PR	22.240	36.524
	U ARAB EMTS	2.180	4.114
	TAIWAN	0.072	3.478
	Product Total	105.582	179.822
ISO BUTYLENE	INDONESIA	7356.000	3695.546
	CHINA P RP	5894.000	2851.787
	SAUDI ARAB	3785.000	2017.706
	PHILIPPINES	1050.000	462.346
	NEPAL	0.320	0.694
	Product Total	18085.320	9028.079
METAXYLENE	BANGLADESH PR	21.000	13.684
	BELGIUM	7.247	48.461
	DENMARK	5.600	518.118
	GERMANY	0.864	3.076
	NIGER	0.250	0.489
	Product Total	34.961	583.828
METHYL ISOBUTYL KETONE	U ARAB EMTS	550.350	309.019
	VIETNAM SOC REP	492.450	338.211
	NIGERIA	427.070	339.444
	COSTA RICA	225.980	169.824
	MALAYSIA	117.000	66.605
	Product Total	1812.850	1223.103
PIB	SINGAPORE	2712.000	2310.363
	CHINA P RP	1174.075	964.731
	THAILAND	315.820	293.531
	IRAN	240.205	375.461
	U ARAB EMTS	221.180	249.004
	Product Total	4663.280	4193.090
POLYCARBONATE	KOREA RP	892.609	936.973
	ITALY	590.050	483.953
	MALAYSIA	374.000	270.526
	CHINA P RP	311.940	432.465
	BELGIUM	308.000	263.489
	Product Total	2476.599	2387.406
PROPYLENE OXIDE	BELGIUM	0.283	0.939
	EGYPT A RP	0.020	0.264
	NEPAL	0.020	0.070
	OMAN	0.002	0.001
	MYANMAR	0.001	0.015

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	Product Total	0.326	1.289
PROPYLENE GLYCOL	IRAN	4867.105	5145.197
	U ARAB EMTS	241.016	227.409
	NEPAL	200.931	229.028
	YEMEN REPubLC	71.155	90.688
	QATAR	66.945	80.007
	Product Total	5447.152	5772.329
POLYVINYL ACETATE RESIN	NIGERIA	1248.800	560.417
	U S A	1020.800	1379.061
	TURKEY	807.200	939.007
	NEPAL	738.792	502.280
	BELGIUM	683.300	697.787
	Product Total	4498.892	4078.552
UNSATURATED POLYSTER RESIN	NEPAL	1586.984	1645.469
	QATAR	1564.330	2213.004
	NIGERIA	1012.058	1130.184
	BANGLADESH PR	995.591	1618.518
	U ARAB EMTS	895.335	1643.693
	Product Total	6054.298	8250.868
ETHYL BENZENE	SUDAN	0.012	0.065
	NEPAL	0.010	0.035
	SRI LANKA DSR	0.003	0.027
	CHINA P RP	0.001	0.120
	JORDAN	0.001	0.034
	Product Total	0.027	0.281
CELLULOSE ACETATE SHEET	THAILAND	32.795	104.361
	SEYCHELLES	0.503	0.553
	BANGLADESH PR	0.100	0.374
	NEPAL	0.022	0.069
	CAMEROON	0.002	0.784
	Product Total	33.422	106.141
CELLULOSE NITRATE SHEET	NIGERIA	4.000	3.708
	ETHIOPIA	0.560	1.682
	CAMEROON	0.200	1.185
	GHANA	0.200	0.948
	TANZANIA REP	0.126	0.619
	Product Total	5.086	8.142
MELAMINE MOULDING POWDER	NEPAL	19096.231	3419.179
	U ARAB EMTS	328.325	360.199
	GABON	259.000	182.964
	CHINA P RP	177.204	258.620
	INDONESIA	174.000	244.924
	Product Total	20034.760	4465.886
	NEPAL	96.341	114.349
	IRAN	94.000	128.421

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYACETAL RESIN	CHINA P RP	64.265	124.274
	BANGLADESH PR	56.100	106.719
	SRI LANKA DSR	8.225	16.226
	GERMANY	3.706	10.728
	Product Total	322.637	500.717
PHTHALIC ANHYDRIDE	U ARAB EMTS	11339.005	7085.432
	SAUDI ARAB	6136.051	3710.693
	EGYPT A RP	3006.000	1831.080
	TUNISIA	2731.004	1758.516
	ALGERIA	1292.000	824.014
	Product Total	24504.060	15209.735
STYRENE	U ARAB EMTS	2367.116	1648.198
	SRI LANKA DSR	957.580	794.249
	NIGERIA	686.140	570.053
	NEPAL	137.395	122.833
	EGYPT A RP	111.842	97.944
	Product Total	4260.073	3233.277
VINYL ACTATE MONOMER	EGYPT A RP	2093.000	1310.199
	ETHIOPIA	247.000	190.261
	BANGLADESH PR	211.000	130.013
	U ARAB EMTS	209.000	135.435
	NEPAL	172.100	127.172
	Product Total	2932.100	1893.080
ISOPROPANOL	U ARAB EMTS	3041.044	1866.385
	IRAN	1822.000	1528.309
	SRI LANKA DSR	582.095	379.275
	U S A	568.410	473.736
	JORDAN	534.621	371.317
	Product Total	6548.170	4619.022
POLYOL	U ARAB EMTS	2742.839	3080.336
	SINGAPORE	2623.361	36953.592
	IRAN	2616.072	3549.960
	INDONESIA	2036.200	3259.384
	BANGLADESH PR	1748.856	2568.909
	Product Total	11767.328	49412.181

Note: Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table 28:- Top Five Import Destinations of selected Petrochemical products during 2019-20

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLIC FIBRE	THAILAND	12480.437	18145.64
	GERMANY	11799.284	17436.376
	JAPAN	5965.335	8965.774
	NEPAL	5628.073	12181.358
	TURKEY	5491.494	7549.096
	Product Total	41364.623	64278.244
NYLON FILAMENT YARN	CHINA P RP	14175.739	26498.438
	TAIWAN	3696.649	6918.615
	VIETNAM SOC REP	2812.802	5158.136
	KOREA RP	679.766	1355.291
	INDONESIA	518.88	1176.303
	Product Total	21883.836	41106.783
NYLON INDUSTRIAL YARN/TYRE CORD	CHINA P RP	4715.432	7863.619
	LITHUANIA	927.209	1479.313
	KOREA RP	385.978	276.608
	U K	266.726	534.417
	INDONESIA	237.504	296.476
	Product Total	6532.849	10450.433
POLYESTER FILAMENT YARN	CHINA P RP	68051.585	66175.01
	INDONESIA	18054.65	20206.903
	KOREA RP	7202.306	10564.497
	TAIWAN	4496.3	5903.117
	THAILAND	3713.262	6988.536
	Product Total	101518.103	109838.063
POLYESTER STAPLE FIBRE	CHINA P RP	73168.499	56223.004
	KOREA RP	13515.745	12168.857
	INDONESIA	11572.588	9721.397
	THAILAND	5620.042	4287.841
	MALAYSIA	4211.096	3488.003
	Product Total	108087.97	85889.102
POLYPROPYLENE FILAMENT YARN	TURKEY	534.281	723.232
	CHINA P RP	49.943	66.306
	U S A	35.61	26.623
	ITALY	24.999	108.375
	SAUDI ARAB	14.779	15.944
	Product Total	659.612	940.48
POLYPROPYLENE STAPLE FIBRE	SAUDI ARAB	1640.612	1741.648
	CHINA P RP	824.166	928.898
	U ARAB EMTS	185.998	217.717
	BELGIUM	70.85	102.153
	KOREA RP	44.385	69.746
	Product Total	2766.011	3060.162
	VIETNAM SOC REP	13193.56	45751.21
	KOREA RP	3288.242	11876.385

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
Elastomeric/Spandex Filament Yarn	SINGAPORE	2717.961	14687.747
	CHINA P RP	1885.314	8714.48
	THAILAND	525.811	2827.686
	Product Total	21610.888	83857.508
ACRYLONITRILE	KOREA RP	47195.2	53988.844
	LATVIA	34913	38560.042
	U S A	30782.001	35793.722
	NETHERLAND	19070.21	22429.889
	CHINA P RP	12859	13866.685
	Product Total	144819.411	164639.182
CAPROLACTUM	KOREA RP	36288	41837.603
	RUSSIA	12600	12761.474
	BELGIUM	8009.5	8492.212
	POLAND	6250	6565.438
	THAILAND	2416	2608.48
	Product Total	65563.5	72265.207
DIMETHYL TEREPHTHALATE	KOREA RP	1044	701.957
	GERMANY	348.004	236.292
	TURKEY	267	168.208
	JAPAN	88	60.166
	CHINA P RP	60	32.744
	Product Total	1807.004	1199.367
MONO EHYLENE GLYCOL	KUWAIT	422828.408	165882.212
	SAUDI ARAB	239293.017	95968.613
	U S A	46362.102	17668.558
	OMAN	29125	11407.861
	SINGAPORE	25730.852	10610.065
	Product Total	763339.379	301537.309
PURIFIED TEREPHTHALIC ACID	KOREA RP	370677.007	197450.504
	TAIWAN	161009.512	89024.488
	THAILAND	146017.442	78608.043
	BELGIUM	124564.662	59574.719
	CHINA P RP	34488.605	19289.629
	Product Total	836757.228	443947.383
LOW DENSITY POLYETHYLENE	SAUDI ARAB	63385.732	45019.069
	U S A	45359.066	32171.182
	U ARAB EMTS	43525.448	30785.812
	QATAR	43289.08	31275.312
	SINGAPORE	37833.727	29453.9
	Product Total	233393.053	168705.275
HIGH DENSITY POLYTHYLENE	U ARAB EMTS	238696.594	183613.679
	QATAR	107328.858	76150.443
	U S A	103662.141	75065.903
	SINGAPORE	81076.323	64839.881
	SAUDI ARAB	65630.356	46356.281

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	Product Total	596394.272	446026.187
POLYESTYRENE	U ARAB EMTS	18911.138	14557.816
	KOREA RP	9250.559	13169.083
	TAIWAN	5606.101	6081.333
	SINGAPORE	3326.722	3755.282
	U S A	3090.561	6326.143
	Product Total	40185.081	43889.657
POLYPROPYLENE (INC. CO-POLYMER)	U ARAB EMTS	216268.734	164919.064
	SINGAPORE	211881.204	195647.786
	SAUDI ARAB	204897.661	158048.346
	KOREA RP	72809.837	72298.335
	THAILAND	66994.181	61713.607
	Product Total	772851.617	652627.138
EXPANDABLE POLYESTYRENE	CHINA P RP	436.1	434.56
	TAIWAN	357	340.951
	U ARAB EMTS	84	83.386
	U S A	48.401	77.151
	AUSTRIA	46.5	77.751
	Product Total	972.001	1013.799
POLY VINYL CHLORIDE	JAPAN	221601.479	140229.045
	TAIWAN	210839.955	134878.731
	KOREA RP	136920.738	87041.53
	THAILAND	44922.82	29908.117
	RUSSIA	38908.589	24158.369
	Product Total	653193.581	416215.792
LINEAR LOW DENSITY POLYTHYLENE	U ARAB EMTS	82180.176	55590.73
	SINGAPORE	47365.117	33798.378
	SAUDI ARAB	45223.996	31469.795
	U S A	44784.049	29136.971
	QATAR	39881.169	27190.733
	Product Total	259434.507	177186.607
STYRENE BUTADIENE RUBBER	KOREA RP	42169.18	41454.28
	POLAND	21179.503	19194.594
	SINGAPORE	7068.067	12164.541
	GERMANY	4819.661	6354.742
	U S A	4616.093	6573.784
	Product Total	79852.504	85741.941
POLY BUTADIENE RUBBER	KOREA RP	47345.058	51567.088
	SINGAPORE	15157.613	17315.868
	SAUDI ARAB	7106.076	7370.899
	U ARAB EMTS	4234.66	4302.87
	GERMANY	4056.796	4197.555
	Product Total	77900.203	84754.28
	JAPAN	10486.46	15356.822
	U S A	10131.322	12093.465

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYL PROPYLENE DIMERS	KOREA RP	8240.021	10835.054
	SINGAPORE	3888.887	4942.804
	SAUDI ARAB	2628.256	2783.186
	Product Total	35374.946	46011.331
ETHYL VINYL ACETATE	KOREA RP	82608.255	90175.02
	SAUDI ARAB	40045.85	40043.909
	THAILAND	24287.912	27564.723
	BELGIUM	13030.815	13483.61
	U S A	9527.186	9353.598
	Product Total	169500.018	180620.86
NITRILE BUTADIENE RUBBER	KOREA RP	17775.765	22530.579
	JAPAN	5792.527	9079.091
	CHINA P RP	3309.167	3895.258
	TAIWAN	2660.468	4865.413
	FRANCE	2627.578	5983.999
	Product Total	32165.505	46354.34
BUTYL RUBBER	SINGAPORE	31688.519	52695.532
	RUSSIA	29168.36	41742.989
	U ARAB EMTS	11237.02	16398.777
	U S A	7814.015	13918.578
	BELGIUM	4567.306	8217.542
	Product Total	84475.22	132973.418
LINEAR ALKYL BENZENE	SAUDI ARAB	95352	87396.321
	QATAR	68026	57561.508
	THAILAND	50564.718	46496.021
	SPAIN	14393.78	13025.791
	IRAN	7100	6325.175
	Product Total	235436.498	210804.816
ETHYLENE OXIDE	U S A	18.024	487.988
	CHINA P RP	13.38	165.153
	BELGIUM	0.375	1.941
	HONG KONG	0.002	0.259
	Product Total	31.781	655.341
ABS RESIN	KOREA RP	82740.414	101607.087
	TAIWAN	7329.468	7871.994
	SAUDI ARAB	5901.775	5621.715
	MALAYSIA	2738.993	3331.282
	THAILAND	1418.167	2181.215
	Product Total	100128.817	120613.293
NYLON-6	TAIWAN	65437.365	85732.236
	RUSSIA	39010.78	46279.032
	KOREA RP	25158.797	43665.275
	CHINA P RP	20759.783	41812.668
	U S A	18161.25	32705.284
	Product Total	168527.975	250194.495

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYMETHYL METHACRYLATE	KOREA RP	12569.488	20044.852
	SINGAPORE	6259.278	7852.038
	CHINA P RP	2895.344	4260.208
	JAPAN	1503.531	3284.438
	SAUDI ARAB	1297.45	1608.864
	Product Total	24525.091	37050.4
STYRENE ACRYLONITRILE	KOREA RP	6495.926	6643.981
	JAPAN	1218.33	1297.835
	GERMANY	760.543	987.488
	THAILAND	756.165	787.684
	CHINA P RP	687.14	801.747
	Product Total	9918.104	10518.735
POLYESTER CHIPS/PET CHIPS	CHINA P RP	222933.709	155512.607
	TAIWAN	26774.786	16541.492
	BANGLADESH PR	25187.08	9224.758
	U ARAB EMTS	23654.583	12375.393
	U S A	8640.587	4523.094
	Product Total	307190.745	198177.344
POLYTETRAFLUOROETHYLENE(PTFE)	CHINA P RP	783.936	4302.35
	KOREA RP	490.706	2142.42
	U S A	447.74	4262.545
	RUSSIA	296.31	1138.757
	NETHERLAND	256.618	2642.653
	Product Total	2275.31	14488.725
BUTADIENE	CHINA P RP	8.005	30.702
	GERMANY	5.762	47.68
	U S A	0.031	3.117
	ITALY	0.03	0.082
	JAPAN	0.002	0.012
	Product Total	13.83	81.593
ETHYLENE	MALAYSIA	23404.963	15605.252
	SAUDI ARAB	16181.822	9921.003
	U ARAB EMTS	11787.796	6927.462
	INDONESIA	6900	5282.202
	SINGAPORE	6355.031	4750.968
	Product Total	64629.612	42486.887
PROPYLENE	U ARAB EMTS	10550	5842.595
	CHINA P RP	474.426	1782.316
	U S A	2.749	21.133
	GERMANY	0.008	0.046
	Product Total	11027.183	7646.09
BENZENE	THAILAND	11131.002	5303.172
	BELGIUM	22	9.413
	GERMANY	0.16	6.82
	U S A	0.048	4.831

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	ITALY	0.009	5.825
	Product Total	11153.219	5330.061
MIXED XYLENE	BELGIUM	83.852	84.482
	U ARAB EMTS	28.8	21.921
	GERMANY	5.36	19.788
	UNSPECIFIED	3.56	4.075
	JAPAN	0.111	3.04
	Product Total	121.683	133.306
ORTHO-XYLENE	OMAN	10463	6038.113
	IRAN	2805	1817.636
	BRAZIL	2099	1492.489
	U ARAB EMTS	1015	601.859
	GERMANY	0.138	6.371
	Product Total	16382.138	9956.468
TOLUENE	THAILAND	145780.018	75258.454
	SINGAPORE	104171.552	53755.004
	KOREA RP	78934.2	40889.929
	OMAN	60723	30478.14
	MALAYSIA	24376	12393.913
	Product Total	413984.77	212775.44
PARAXYLENE	SINGAPORE	316866.914	197372.713
	JAPAN	279750.98	173837.059
	KUWAIT	145742	88219.433
	SAUDI ARAB	30398.895	18039.444
	U S A	28759.011	21902.129
	Product Total	801517.8	499370.778
ETHYLENE DICHLORIDE	SAUDI ARAB	334529.426	74021.062
	U S A	214882.676	51971.707
	QATAR	145951.749	35222.891
	KOREA RP	47901.732	12354.81
	U ARAB EMTS	12499	3519.844
	Product Total	755764.583	177090.314
BUTANOL	SOUTH AFRICA	13431.17	7343.84
	U S A	12593.136	6721.381
	TAIWAN	9836.7	5763.562
	SINGAPORE	8986	5328.216
	MALAYSIA	8235	4861.974
	Product Total	53082.006	30018.973
OXO ALCOHOL	THAILAND	827.49	1797.209
	INDONESIA	759.93	1836.188
	SINGAPORE	735.88	1277.128
	MALAYSIA	278.206	486.751
	PHILIPPINES	127.67	209.752
	Product Total	2729.176	5607.028
	SINGAPORE	28183.448	19809.447

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
2-ETHYL HEXANOL	U S A	17350.269	10778.915
	MALAYSIA	14611.091	10256.266
	NETHERLAND	6382	4537.799
	KOREA RP	4249.48	2980.202
	Product Total	70776.288	48362.629
VINYL CHLORIDE MONOMER	QATAR	336622.747	183179.113
	JAPAN	68451.173	39656.275
	FRANCE	45322	24182.283
	INDONESIA	44119.122	24012.827
	CHINA P RP	6011	3512.947
	Product Total	500526.042	274543.445
EPICHLHYDRINE	THAILAND	43869.61	51887.334
	TAIWAN	7242.34	8421.422
	SAUDI ARAB	2717.2	3061.478
	KOREA RP	2516.28	3169.918
	U K	1204.322	1363.653
	Product Total	57549.752	67903.805
ISO BUTYLENE	QATAR	9200	6388.818
	SINGAPORE	1575	1053.019
	EGYPT A RP	11	11.7
	HONG KONG	0.48	1.824
	U S A	0.185	16.612
	Product Total	10786.665	7471.973
METAXYLENE	JAPAN	1510.11	1545.667
	THAILAND	358.58	398.009
	TAIWAN	40.63	44.352
	CHINA P RP	0.72	0.652
	GERMANY	0.035	1.767
	Product Total	1910.075	1990.447
METHYL ISOBUTYL KETONE	KOREA RP	20244.832	11566.274
	SOUTH AFRICA	5700	2939.904
	U S A	2105.443	1173.253
	JAPAN	1329.003	731.508
	SINGAPORE	324.34	263.024
	Product Total	29703.618	16673.963
PIB	KOREA RP	9264.517	9925.89
	U S A	3172.417	3626.413
	MALAYSIA	2314.71	2959.326
	FRANCE	391.695	740.024
	JAPAN	225.917	653.542
	Product Total	15369.256	17905.195
POLYCARBONATE	THAILAND	85141.983	120500.541
	KOREA RP	43945.205	67848.162
	SPAIN	12240.922	19467.532
	SAUDI ARAB	9373.201	11810.805

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	U S A	9367.208	15048.651
	Product Total	160068.519	234675.691
PROPYLENE OXIDE	SINGAPORE	14246.76	13598.887
	KOREA RP	2965.4	3392.115
	TAIWAN	1463.86	1597.909
	SAUDI ARAB	1450	1369.452
	CHINA P RP	18.16	88.408
	Product Total	20144.18	20046.771
PROPYLENE GLYCOL	SINGAPORE	21054.669	17676.146
	SAUDI ARAB	15603	10210.183
	CHINA P RP	9882.057	7666.346
	KOREA RP	9557.29	8674.78
	THAILAND	6777.456	6384.09
	Product Total	62874.472	50611.545
POLYVINYL ACETATE RESIN	GERMANY	1281.559	1511.459
	CHINA P RP	913.62	1193.935
	BELGIUM	786.462	1127.247
	U S A	105.199	175.468
	INDONESIA	98.24	92.779
	Product Total	3185.08	4100.888
UNSATURATED POLYESTER RESIN	CHINA P RP	17229.955	17880.82
	TAIWAN	8317.62	8197.744
	SINGAPORE	5519.735	4048.812
	U ARAB EMTS	4639.744	5019.683
	MALAYSIA	4268.145	6554.904
	Product Total	39975.199	41701.963
ETHYL BENZENE	CHINA P RP	311.201	302.502
	BELGIUM	60.541	67.703
	NETHERLAND	54.92	64.25
	KOREA RP	36	34.248
	GERMANY	0.021	1.983
	Product Total	462.683	470.686
CELLULOSE ACETATE BUTYRATE	NETHERLAND	11.941	16.631
	CHINA P RP	0.5	1.168
	Product Total	12.441	17.799
CELLULOSE ACETATE SHEET	CHINA P RP	684.254	566.247
	ITALY	613.08	316.278
	TAIWAN	35.66	69.724
	HONG KONG	23.147	50.474
	U S A	0.109	5.268
	Product Total	1356.25	1007.991
CELLULOSE NITRATE SHEET	JAPAN	72.518	262.306
	CHINA P RP	2.229	4.334
	U K	0.27	2.214
	POLAND	0.158	0.851

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	FRANCE	0.008	0.082
	Product Total	75.183	269.787
MELAMINE MOULDING POWDER	THAILAND	5882.33	6378.076
	CHINA P RP	2139.386	2244.313
	TAIWAN	2030.257	2394.396
	JAPAN	1770.576	2495.38
	NORWAY	827.15	1140.67
	Product Total	12649.699	14652.835
POLYACETAL RESIN	MALAYSIA	11744.697	14157.741
	KOREA RP	10676.299	11500.463
	THAILAND	8818.144	9255.2
	SINGAPORE	4477.911	5552.455
	U S A	3409.753	3882.983
	Product Total	39126.804	44348.842
PHTHALIC ANHYDRIDE	KOREA RP	86465.6	55090.826
	TAIWAN	27377.116	17161.192
	INDONESIA	21530	13585.305
	CHINA P RP	14762.231	9091.237
	THAILAND	12813.66	7974.269
	Product Total	162948.607	102902.829
STYRENE	U S A	223534.378	157964.085
	KOREA RP	173032	118618.223
	SINGAPORE	135397.075	94782.894
	SAUDI ARAB	115315	77214.931
	KUWAIT	106693	74333.549
	Product Total	753971.453	522913.682
VINYL ACTATE MONOMER	SINGAPORE	90970.55	56555.177
	CHINA P RP	35060.213	20933.693
	SAUDI ARAB	34719	20284.412
	TAIWAN	1990	1141.109
	MALAYSIA	77.6	38.565
	Product Total	162817.363	98952.956
ISOPROPANOL	CHINA P RP	80685.12	40623.987
	KOREA RP	30724.581	16465.916
	U S A	18087.767	11155.276
	TAIWAN	10155.456	6152.896
	NETHERLAND	8361.25	4658.486
	Product Total	148014.174	79056.561
POLYOL	CHINA P RP	72494.411	86240.021
	KOREA RP	32966.275	44954.567
	SINGAPORE	28277.858	32148.885
	THAILAND	24797.445	28835.784
	TAIWAN	22543.094	23603.428
	Product Total	181079.083	215782.685

Note: Data source in respect of Imports and Exports is DGCIS, Kolkata, M/o Commerce and Industry.

Table 29:- Exchange Rates of Indian Rupee vis-a-vis US\$

MONTH	RS./US\$
Jan-21	73.11
Dec-20	73.59
Nov-20	74.22
Oct-20	73.46
Sep-20	73.48
Aug-20	74.67
Jul-20	74.99
Jun-20	75.73
May-20	75.66
Apr-20	76.24
Mar-20	74.35
Feb-20	71.49
Jan-20	71.31
Dec-19	71.19
November-19	71.45
October-19	71.04
September-19	71.33
August-19	71.15
July-19	68.81
June-19	69.44
May-19	69.77
April-19	69.43
March-19	69.48
February-19	71.22
January-19	70.73
December-18	70.73
November-18	71.85
October-18	73.63
September-18	72.22
August-18	69.55
July-18	68.69
June-18	67.79
May-18	67.54
April-18	65.64
March-18	65.02
February-18	64.37
January-18	63.64
December-17	64.24
November-17	64.86
October-17	65.08

Table 29:- Exchange Rates of Indian Rupee vis-a-vis US\$

MONTH	RS./US\$
September-17	64.44
August-17	63.97
July-17	64.46
June-17	64.44
May-17	64.42
April-17	64.51

Note : Worked out on the basis of average daily exchange rates, as notified by RBI.

Source:1. <https://www.rbi.org.in/scripts/ReferenceRateArchive.aspx>

(information up to 11.Feb.2021)

2. <https://www.fbil.org.in> (informtion from 11.Feb.2021)

Table 30:- World Exports of Chemicals by top 10 countries- 2019

Value in US\$ Million

Rank	HS Code									
	28		29		30		31		32	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	China	16908	China	56815	Germany	91163	Russian Federation	8402	Germany	13037
2nd	USA	11898	USA	40367	Switzerland	82956	China	7171	USA	7985
3rd	Germany	10089	Ireland	35630	USA	59698	Canada	5641	China	7739
4th	Japan	6249	Belgium	30602	Ireland	53409	USA	5089	Japan	4624
5th	Rep. of Korea	5150	Germany	26027	Belgium	52705	Belarus	3261	Netherlands	4475
6th	Netherlands	4726	Switzerland	22012	Italy	36680	Morocco	2914	Belgium	3904
7th	Brazil	3891	Rep. of Korea	20986	France	35614	Belgium	2301	India	3504
8th	Canada	3729	India	18247	Netherlands	30086	Netherlands	2158	United Kingdom	3452
9th	France	3634	Japan	17852	United Kingdom	27133	Germany	2076	Italy	3417
10th	Russian Federation	3526	Netherlands	16799	Denmark	17478	Qatar	1413	France	3051
World Export		116491		409275		628073		57518		82443

Table - 30 : World Exports of Chemicals by top 10 countries- 2019

Value in US\$ Million

Rank	HS Code									
	38		39		4002		54		55	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	USA	32403	China	84387	Rep. of Korea	2694	China	22212	China	12395
2nd	Germany	26218	USA	68690	USA	2309	Rep. of Korea	2826	USA	2275
3rd	China	17087	Germany	60923	Japan	2274	Other Asia, nes	2703	Indonesia	2263
4th	France	12899	Rep. of Korea	32594	Thailand	2168	India	2343	India	1751
5th	Japan	11883	Belgium	30152	Russian Federation	1578	Japan	2107	Rep. of Korea	1717
6th	Netherlands	11463	Japan	25211	Germany	1492	Italy	2013	Turkey	1367
7th	Belgium	9773	Netherlands	24036	Belgium	1349	USA	1871	Austria	1260
8th	United Kingdom	6995	Italy	21435	Viet Nam	1264	Turkey	1521	Thailand	1230
9th	Singapore	6473	France	20900	Other Asia, nes	1137	Germany	1516	Japan	1220
10th	Italy	6323	Other Asia, nes	19866	Singapore	1003	United Arab Emirates	1373	Italy	1042
World Export		211336		623395		22876		52349		36294

Table - 30 : World Exports of Chemicals by top 10 countries- 2019

Value in US\$ Million

HS Code				
All Chemicals			All Chemicals excluding Pharmaceuticals	
Rank	Country	Trade Value	Country	Trade Value
1st	China	234579	China	225414
2nd	Germany	233542	USA	172887
3rd	USA	232585	Germany	142380
4th	Belgium	136050	Belgium	83345
5th	Switzerland	114117	Rep. of Korea	73004
6th	Ireland	96236	Japan	71550
7th	Netherlands	95469	Netherlands	65384
8th	France	89337	France	53723
9th	Italy	81770	Italy	45090
10th	Japan	77919	Ireland	42827
	World Export	2240050	World Export	1611977

@-Includes all products covered under the HS code 28,29,30,31,32,38,39, 4002,54 and 55 Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter30: Pharmaceutical products; Chapter 31: Fertilizers ; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Source : <http://comtrade.un.org/> (UN Comtrade Database) Date : 19/01/2021

Table 31:- World Imports of Chemicals by top 10 countries- 2019

Rank	Value in US\$ Million									
	HS Code									
	28		29		30		31		32	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	USA	13074	China	57807	USA	128238	Brazil	9146	Germany	6612
2nd	China	10364	USA	54546	Germany	59495	India	7191	China	5000
3rd	Rep. of Korea	8037	Germany	41012	Belgium	45482	USA	7033	USA	4400
4th	Germany	7323	Belgium	29967	China	33614	China	3544	France	3655
5th	Japan	7082	India	20533	Switzerland	31526	France	2073	Italy	2808
6th	India	6811	Italy	16361	United Kingdom	28081	Australia	1697	Netherlands	2773
7th	France	4268	Japan	16105	Italy	27275	Canada	1581	Belgium	2699
8th	Canada	4195	France	15485	Japan	27224	Thailand	1564	Rep. of Korea	2638
9th	Russian Federation	3856	Netherlands	13858	France	25563	Indonesia	1524	United Kingdom	2498
10th	Netherlands	3233	Switzerland	13384	Netherlands	18326	Turkey	1422	Mexico	2434
World Import		126152		440140		640355		65497		79727

Table - 31 : World Imports of Chemicals by top 10 countries- 2019

Value in US\$ Million

Rank	HS Code									
	38		39		4002		54		55	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	China	17507	China	71578	China	6688	Viet Nam	3399	Viet Nam	2959
2nd	Germany	16100	USA	60576	USA	1602	China	2869	China	2258
3rd	USA	14682	Germany	44667	Germany	1219	Turkey	2280	Turkey	1881
4th	Netherlands	9506	Mexico	24586	Malaysia	1214	USA	2146	USA	1741
5th	France	9136	France	24568	Thailand	1056	Indonesia	1681	Germany	1654
6th	Rep. of Korea	8164	Italy	20452	Belgium	1008	Germany	1619	Indonesia	1193
7th	Belgium	7179	United Kingdom	18855	India	908	Italy	1567	Italy	1116
8th	Italy	6347	Belgium	18837	Viet Nam	693	Brazil	1355	Cambodia	1010
9th	United Kingdom	6343	Canada	16360	Indonesia	662	Rep. of Korea	1103	India	965
10th	Japan	5904	Japan	16173	Italy	624	Egypt	1097	Brazil	904
World Import		208242		617266		24576		39809		33348

Table - 31 : World Imports of Chemicals by top 10 countries- 2019

Value in US\$ Million

Rank	HS Code			
	All Chemicals		All Chemicals excluding Pharmaceuticals	
	Country	Trade Value	Country	Trade Value
1st	USA	288038	China	177615
2nd	China	211229	USA	159800
3rd	Germany	180859	Germany	121365
4th	Belgium	110729	Belgium	65247
5th	France	86822	France	61259
6th	Italy	79622	India	59987
7th	Japan	76621	Italy	52347
8th	United Kingdom	71470	Japan	49398
9th	Netherlands	65832	Netherlands	47506
10th	India	62513	Mexico	47425
	World Import	2275112	World Import	1634757

@-Includes all products covered under the HS code 28,29,30,31,32,38,39, 4002,54 and 55

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter30: Pharmaceutical products; Chapter 31: Fertilizers ; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Source : <http://comtrade.un.org/> (UN Comtrade Database) Date : 19/01/2021

Table 32:- India's share in World Exports and Imports of Chemicals-2019

Value in US\$ Million

HS Code	Commodity	Export				Import			
		Trade Value		% of World Export	Rank in the World	Trade Value		% of World Import	Rank in the World
		India	World			India	World		
28	INORGANIC CHEMICALS	1820	116491	1.56	18	6811	126152	5.40	6
29	ORGANIC CHEMICALS	18247	409275	4.46	8	20533	440140	4.67	5
30	PHARMACEUTICAL PRODUCTS	16264	628073	2.59	11	2526	640355	0.39	39
31	FERTILISERS.	127	57518	0.22	48	7191	65497	10.98	2
32	TANNING OR DYEING	3504	82443	4.25	7	2112	79727	2.65	13
38	MISCELLANEOUS CHEMICAL PRODUCTS.	5135	211336	2.43	10	5774	208242	2.77	13
39	PLASTIC AND ARTICLES THEREOF.	7351	623395	1.18	23	14623	617266	2.37	13
4002	SYNTHETIC RUBBER AND FACTICE	103	22876	0.45	25	908	24576	3.70	7
54	MAN-MADE FILAMENTS.	2343	52349	4.47	4	1069	39809	2.69	12
55	MAN-MADE STAPLE FIBRES.	1751	36294	4.82	4	965	33348	2.89	9
All Chemicals @		56646	2240050	2.53	13	62513	2275112	2.75	10
Chemicals (excluding Pharmaceutical		40382	1611977	2.51	11	59987	1634757	3.67	6
Total of all HS code commodities		323251	18720939	1.73	19	478884	18461476	2.59	11

@-Includes all products covered under the HS code 28,29,30,31,32,38,39, 4002,54 and 55

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 30: Pharmaceutical products; Chapter 31: Fertilizers; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Source : <http://comtrade.un.org/> (UN Comtrade Database) Date : 20/01/2021

Section – IV

Foreign Direct Investment (FDI)

Table 33:- Sectors Attracting Highest FDI Equity Inflows during 2017-18 to 2019-20 (March, 20)

<i>Amount in Rs. crores (US\$ in million)</i>				
Ranks	Sector	2017-18 (April – March)	2018-19 (April – March)	2019-20 (April – March)
1.	SERVICES SECTOR **	43,249 (6,709)	63,909 (9,158)	55,429 (7,854)
2.	COMPUTER SOFTWARE & HARDWARE	39,670 (6,153)	45,297 (6,415)	54,250 (7,673)
3.	TELECOMMUNICATIONS	39,748 (6,212)	18,337 (2,668)	30,940 (4,445)
4.	TRADING	28,078 (4,348)	30,963 (4,462)	32,406 (4,574)
5.	CONSTRUCTION DEVELOPMENT: Townships, housing, built-up infrastructure and construction- development projects	3,472 (540)	1,503 (213)	4,350 (617)
6.	AUTOMOBILE INDUSTRY	13,461 (2,090)	18,309 (2,623)	19,753 (2,824)
7.	CHEMICALS (OTHER THAN FERTILIZERS)	8,425 (1,308)	13,685 (1,981)	7,492 (1,058)
8.	CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES	17,571 (2,730)	15,927 (2,258)	14,510 (2,042)
9.	DRUGS & PHARMACEUTICALS	6,502 (1,010)	1,842 (266)	3,650 (518)
10	HOTEL & TOURISM	7,279 (1,132)	7,590 (1,076)	21,060 (2,938)
<i>Note: (i)** Services sector includes Financial, Banking, Insurance, Non-Financial / Business, Outsourcing, R&D, Courier, Tech.</i>				
<i>(ii) FDI Sectoral data has been revalidated / reconciled in line with the RBI, which reflects minor changes in the FDI figures (increase/decrease) as compared to the earlier published sectoral data.</i>				
<i>(iii) Figures are provisional.</i>				
<i>(iv) Source: https://dipp.gov.in/sites/default/files/FDI_Fact_sheet_September_20.pdf</i>				

Section – V

**Index of Industrial Production
(IIP)**

Table 34:- Monthly Production Growth in 'Chemicals and Chemical Products' vis-a-vis Manufacturing Sector during April 2019 to March 2020 (Based on Index of Industrial Production with Base year: 2011-12)

Period	Chemicals and chemical products	Manufacturing	General
Weight	7.87	77.63	100.00
Production Growth (%)			
Apr-19	-9.9	-12.7	-12.2
May-19	2.4	7.6	7.0
Jun-19	-2.4	-5.0	-4.5
Jul-19	7.4	3.6	1.9
Aug-19	-3.5	-4.0	-4.2
Sep-19	-1.2	-1.9	-2.6
Oct-19	-2.2	0.2	0.9
Nov-19	3.4	3.4	3.9
Dec-19	2.3	3.7	4.4
Jan-20	1.5	1.8	2.2
Feb-20	-2.6	-2.7	-2.3
Mar-20	-16.9	-16.8	-12.7
Index of Industrial Production (Base : 2011-12=100)			
Mar-19	128.9	144.6	144.1
Apr-19	116.1	126.2	126.5
May-19	118.9	135.8	135.4
Jun-19	116.0	129.0	129.3
Jul-19	124.6	133.7	131.8
Aug-19	120.3	128.4	126.2
Sep-19	118.8	126.0	122.9
Oct-19	116.2	126.3	124.0
Nov-19	120.2	130.6	128.8
Dec-19	123.0	135.4	134.5
Jan-20	124.9	137.9	137.4
Feb-20	121.7	134.2	134.2
Mar-20	101.1	111.6	117.2

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation as on 11.Feb.2021

Table 35:- Annual Production Growth in Chemicals and Chemical Products Vis -a-Vis Manufacturing Sector during 2014-15 to 2019-20 (Based on Index on Industrial Production with Base year: 2011-12)

Years	Chemicals and Chemical Products	Manufacturing	General
Weight	7.87	77.63	100.00
Production Growth (%)			
2014-15	0.4	3.8	4.0
2015-16	4.1	2.8	3.3
2016-17	2.5	4.4	4.6
2017-18	-0.3	4.6	4.4
2018-19	2.5	3.9	3.8
2019-20	-0.4	-1.4	-0.8
Index of Industrial Production (Base: 2011-12=100)			
2013-14	108.8	108.6	106.7
2014-15	109.2	112.7	111.0
2015-16	113.7	115.9	114.7
2016-17	116.5	121.0	120.0
2017-18	116.1	126.6	125.3
2018-19	119.0	131.5	130.1
2019-20	118.5	129.6	129.0

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation as on 11.Feb.2021

Table 36:- Weights of Products Covered Under Chemical and Chemical Products (Industry Division 20 of NIC- 2008)

NIC 2008	Item groups	Weights (in %)	Name of Source Agencies
20111	Oxygen	0.0423	DIPP
20112	Acetic Acid	0.0191	DCPC
20112	Phosphoric acid	0.0157	DIPP
20112	Purified Terephthalic Acid (PTA)	0.3512	DCPC
20112	Sulphuric Acid	0.0479	DIPP
20114	Dyes and pigments	0.2355	DCPC
20115	ABS resin	0.0188	DCPC
20116	Calcium Carbonate	0.0572	DCPC
20116	Caustic soda (sodium hydroxide)	0.1638	DCPC
20116	Ethyl acetate	0.0571	DCPC
20116	Isopropyl alcohol	0.0178	DCPC
20116	Monoethylene glycol, MEG	0.0413	DCPC
20116	Soda ash/ washing soda	0.1200	DCPC
20116	Titanium dioxide	0.0362	DCPC
20116	Zinc sulphate	0.0150	DIPP
20118	Aromatic Chemicals	0.0806	DIPP
20119	Aniline	0.0154	DCPC
20119	Butadiene	0.0335	DCPC
20119	Catalyst, chemical	0.0415	DIPP
20119	Expandable Polystyrene , EPS (thermocol)	0.0521	DCPC
20119	Fatty Acid	0.0254	DIPP
20119	Linear Alkyl Benzene	0.0563	DCPC
20119	Liquid chlorine	0.0595	DCPC
20119	Phthalic anhydride, PAN	0.0353	DCPC
20119	Polyol	0.0636	DCPC
20119	Sodium Silicate	0.0204	DIPP
20121	Urea	0.5590	D/o Fertilizers
20122	NPK fertilizers	0.3897	D/o Fertilizers
20123	Ammonia	0.2101	DIPP
20123	Ammonium nitrate	0.0118	DIPP
20123	Ammonium sulphate	0.0261	DIPP
20123	Formaldehyde	0.0121	DCPC
20123	Nitric Acid	0.0181	DIPP
20129	Diammonium Phosphate (DAP)	0.0761	D/o Fertilizers
20129	Superphosphate	0.0332	D/o Fertilizers
20131	Polyester chips or Polyethylene terephthalate(PET) chips	0.1108	DCPC
20131	Polymers (incl. Polyethylene, PVC, Poly propylene)	0.5954	DCPC
20131	PTFE (TEFLON)	0.0244	DCPC
20132	Caprolactam	0.0457	DCPC
20132	Synthetic rubber (incl. PBR, SBR)	0.0295	DCPC
20211	Detergent powder and washing powder	0.2578	DIPP
20211	Pesticides-technical grade	0.2116	DCPC

Table 36:- Weights of Products Covered Under Chemical and Chemical Products (Industry Division 20 of NIC- 2008)

NIC 2008	Item groups	Weights (in %)	Name of Source Agencies
20221	Paints (all types)	0.3874	DIPP
20221	Varnish (all types)	0.0209	DIPP
20223	Printing ink	0.0795	DIPP
20229	Thinner	0.0110	DIPP
20231	Toilet soap (excl. baby soap)- incl. liquid soap and foam	0.6078	DIPP
20232	Organic surface active agents/ surfactants, except soap (incl. dishwashing soaps, wetting and cleansing agents)	0.1378	DIPP
20233	Detergent cake, washing soap cake/ bar	0.4607	DIPP
20235	Tooth paste	0.3223	DIPP
20236	Hair dye	0.0468	DIPP
20236	Hair oil	0.0556	DIPP
20236	Hair shampoo	0.0929	DIPP
20237	Creams and lotions for topical application	0.1255	DIPP
20238	Agarbatti	0.1706	DIPP
20291	Safety matches (match box)	0.0638	DIPP
20292	Fire works/pyrotechnic articles	0.0366	DIPP
20292	Gun powder, detonators/ prepared explosives	0.0397	DIPP
20293	Fragrances & Oil essentials	0.1967	DIPP
20295	Adhesive formulations other than natural gum	0.3985	DIPP
20295	Gelatin	0.0233	DIPP
20297	Methanol	0.0291	DCPC
20299	Hydrogen Peroxide	0.0500	DCPC
20299	Mosquito coil	0.0215	DIPP
20302	Man-made fibres (incl. Viscose and Artificial Fibres)	0.1614	DCPC & O/o Textile Commissioner

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation

DIPP: Department of Industrial Policy and Promotion

DCPC: Department of Chemicals and Petrochemicals

Section – VI

Inflation Based on Wholesale Price Index

Table 37:- Annual Inflation of Chemicals & Chemical products vis-à-vis other commodities during 2014-15 to 2019-20 (Based on Wholesale Price Index with base year: 2011-12)

Year	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Weight	100	15.26	64.23	6.47
Inflation(%)				
2014-2015	1.24	5.62	2.49	2.47
2015-2016	-3.69	2.59	-1.80	-3.01
2016-2017	1.73	4.00	1.37	-1.42
2017-2018	2.96	2.07	2.80	1.35
2018-2019	4.26	0.35	3.60	5.87
2019-2020	1.67	8.42	0.34	-1.34
Wholesale Price Index(Base : 2011-12=100)				
2013-2014	112.50	124.50	108.50	113.30
2014-2015	113.90	131.50	111.20	116.10
2015-2016	109.70	134.90	109.20	112.60
2016-2017	111.60	140.30	110.70	111.00
2017-2018	114.90	143.20	113.80	112.50
2018-2019	119.80	143.70	117.90	119.10
2019-2020	121.80	155.80	118.30	117.50

Source :Office of the Economic Advisor (<http://eaindstry.nic.in>) as on 11.Feb.2021

Table 38:- Monthly Inflation of Chemicals & Chemical Products vis-a-vis Other Commodities during April-2019 to March-2020 (Based on Wholesale Price Index with base year: 2011-12)

Month	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Apr-18	1.00	2.98	0.17	0.25
May-18	0.41	1.21	0.08	-0.08
Jun-18	-0.08	1.06	-0.08	-0.67
Jul-18	-0.16	1.38	-0.42	-0.50
Aug-18	0.16	1.17	-0.17	-0.17
Sep-18	-0.16	-0.45	0.08	-0.42
Oct-18	0.58	3.09	-0.08	-0.51
Nov-18	0.25	1.50	0.00	-0.51
Dec-18	0.57	0.00	0.17	-0.26
Jan-19	0.33	-1.29	0.68	0.00
Feb-19	-0.97	-3.61	0.00	-0.34
Mar-19	-1.47	-2.26	-0.17	-0.26
Whole Sale Price Index (Base: 2011-12)				
Mar-18	119.9	144.5	118.3	119.6
Apr-18	121.1	148.8	118.5	119.9
May-18	121.6	150.6	118.6	119.8
Jun-18	121.5	152.2	118.5	119.0
Jul-18	121.3	154.3	118.0	118.4
Aug-18	121.5	156.1	117.8	118.2
Sep-18	121.3	155.4	117.9	117.7
Oct-18	122.0	160.2	117.8	117.1
Nov-18	122.3	162.6	117.8	116.5
Dec-18	123.0	162.6	118.0	116.2
Jan-19	123.4	160.5	118.8	116.2
Feb-19	122.2	154.7	118.8	115.8
Mar-19	120.4	151.2	118.6	115.5

Source :Office of the Economic Advisor (<http://eaindustry.nic.in>) as on 11.Feb.2021

Table 39 :- WPI (Base year 2011-12) of Chemicals & Chemical Products (Group Wise) during 2014-15 to 2019-20

DESCRIPTION	WEIGHT	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Chemicals and Chemical Products	6.47	116.10	112.60	111.00	112.50	119.10	117.50
Basic Chemicals	1.43	114.10	105.80	104.70	111.20	125.00	119.90
Fertilizers and Nitrogen Compounds	1.48	118.90	121.40	118.70	117.10	121.10	123.10
plastic and synthetic rubber in primary form	1.00	124.40	115.30	113.70	113.00	117.60	112.40
Pesticides and Other Agrochemical Products	0.45	120.70	122.60	116.80	115.30	120.20	122.60
paints, Varnishes and Similar Coatings, Printing Ink and Mastics	0.49	111.90	109.80	108.50	108.60	112.70	114.70
Soap and Detergents, Cleaning and Polishing Preparations, Perfumes and Toilet Preparations	0.61	112.40	112.30	113.70	115.20	116.80	118.60
Other Chemical Products	0.69	111.80	108.40	106.50	110.10	116.60	114.20
Man-Made Fibres	0.30	100.90	93.30	94.10	97.50	104.00	97.90

Source :Office of the Economic Advisor (<http://eaindustry.nic.in>) as on 11.Feb.2021

Section – VII

Miscellaneous

Tab 40:- Growth Rates of Core Industries (in %)(Base Year 2011-12)

Sector	Weight	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2019-20 (Apr-Nov)	2020-21 (Apr-Nov)
Coal (%)	10.3335	8.0	4.8	3.2	2.6	7.4	-0.4	12.1	1.8
Crude Oil (%)	8.9833	-0.9	-1.4	-2.5	-0.9	-4.1	-5.9	-3.2	-6.2
Natural Gas (%)	6.8768	-5.3	-4.7	-1.0	2.9	0.8	-5.6	-1.1	-0.8
Refinery Products (%)	28.0376	0.2	4.9	4.9	4.6	3.1	0.2	8.0	-2.0
Fertilizers (%)	2.6276	1.3	7.0	0.2	0.0	0.3	2.7	3.7	-0.4
Steel (%)	17.9166	5.1	-1.3	10.7	5.6	5.1	3.4	3.4	10.9
Cement (%)	5.3720	5.9	4.6	-1.2	6.3	13.3	-0.9	15.0	2.7
Electricity (%)	19.8530	14.8	5.7	5.8	5.3	5.2	0.9	5.3	6.4
Overall Index	100	4.9	3.0	4.8	4.3	4.4	0.4	5.9	3.0

#Refinery Products' yearly growth rate of 2012-13 is not comparable with other years on account of inclusion of RIL (SEZ) production data since April, 2012.

Source: Office of Economic Adviser, DIPP <http://eaindustry.nic.in/home.asp> Accessed on 18/01/2021

Table 41:- Index of Core Industries (Base year 2011-12)

Sector	Weight	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2019-20 (Apr-Nov)	2020-21 (Apr-Nov)
Coal	10.3335	112.6	118.0	121.8	124.9	134.1	133.6	113.1	110.2
Crude Oil	8.9833	98.4	97.0	94.5	93.7	89.8	84.5	85.6	80.4
Natural Gas	6.8768	70.5	67.2	66.5	68.4	69.0	65.1	66.5	58.4
Refinery Products	28.0376	108.8	114.1	119.7	125.2	129.1	129.4	128.0	108.9
Fertilizers	2.6276	99.4	106.4	106.6	106.6	107.0	109.8	109.4	113.5
Steel	17.9166	121.7	120.2	133.1	140.5	147.7	152.6	153.1	123.3
Cement	5.3720	118.1	123.5	122.0	129.7	147.0	145.7	141.8	114.2
Electricity	19.8530	126.6	133.8	141.6	149.2	156.9	158.4	161.7	154.1
Overall Index	100	111.7	115.1	120.5	125.7	131.2	131.6	129.9	115.0

Source: Office of Economic Adviser, DIPP <http://eaindustry.nic.in/home.asp> Accessed on 18/01/2021

Table-42: Consumption of Naphtha, Natural Gas and Fuel oil

Name of Product	Description	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20*
Naphtha	Production	K Tonnes	17391	17861	19946	20006	19786	20679
	Import	K Tonnes	1034	2931	2777	2212	2082	1662
		Value in Rs. Crore	4592	9581	8374	8161	9665	6678
	Export	K Tonnes	7008	7116	8727	8951	6963	8897
		Value in Rs. Crore	31619	20057	24616	29075	28893	31509
	Availability	K Tonnes	11416	13676	13996	13266	14904	13444
	Consumption	K Tonnes	11082	13271	13241	12889	14131	14268
Natural Gas¹	Gross Production	MMSCM	33657	32249	31897	32649	32873	31184
	Net Production	MMSCM	32693	31129	30848	31731	32058	30257
	Import\$	MMSCM	18607	21388	24849	27439	28740	33887
		Value in Rs. Crore	58359	45038	41084	52122	71867	67383
	Availability	MMSCM	51300	52517	55697	59170	60798	64143
	Consumption **	MMSCM	46955	47850	50778	52832	53840	56442
Fuel Oil	Production	K Tonnes	11919	9727	9962	9486	10032	8610
	Import	K Tonnes	902	1170	925	1213	1419	4583
		Value in Rs. Crore	3659	2380	1848	3231	4782	11791
	Export	K Tonnes	4762	2806	2248	2525	2197	1527
		Value in Rs. Crore	14251	4471	3930	5291	6537	3811
	Availability	K Tonnes	8059	8091	8639	8174	9255	11666
	Consumption	K Tonnes	5961	6632	7150	6721	6564	6302
Naphtha	Fertilizers Sector	K Tonnes	301	316	349	368	352	150
	Petrochemical Sector	K Tonnes	9530	10350	10351	10011	10602	10875
Natural Gas **	Fertilizer Industries	MMSCM	15190	16135	15429	14676	14987	16115
	Petrochemicals Industry	MMSCM	2890	3733	4170	4024	3386	3569
Fuel Oil (Furnace oil+LSHS)	Chemicals & allied	K Tonnes	212	214	243	248	309	253

*: Provisional **: Sectorial Sales \$: Imports of LNG Net Production=Gross Production-Flared/Losses

Note: 1. Data of Natural gas is reconciled due to change in nomenclature, rationalisation and classification of
2. The reasons for the variation between the consolidated availability and the consumption can be attributed to stock changes, conversion factor (volume/energy), Flaring/Losses (in case of Natural gas) and the provisional data reported by the companies.

Table 43:- Important indicators of Industry Division 20,21 (Unincorporated Sector) in 2015-16 (July 2015- June 2016)

Description	Rural	Urban	Rural + Urban
Estimated no. of workers in Industry Division 20 (Unincorporated) of NIC 2008	204480	167540	372020
Estimated no. of workers in Industry Division 21 (Unincorporated) of NIC 2008	12692	9454	22146
Estimated no. of workers in Unincorporated Manufacturing sector	18655607	17385712	36041319
Estimated no. of workers in Unincorporated sector (All activities) #	49867273	61403553	111270826
Estimated no. of enterprises in Industry Division 20 (Unincorporated) of NIC 2008	105985	66721	172706
Estimated no. of enterprises in Industry Division 21 (Unincorporated) of NIC 2008	2935	3410	6345
Estimated no. of enterprises in Unincorporated manufacturing sector	11414431	8250444	19664875
Estimated no. of enterprises in Unincorporated sector (All activities) #	32489670	30902305	63391975
Estimated GVA of Industry Division 20 (Unincorporated) (in Rs. Crore)	780	1552	2332
Estimated GVA of Industry Division 21 (Unincorporated) (in Rs. Crore)	130	143	273
Estimated GVA of Manufacturing Sector (Unincorporated) (in Rs. Crore)	89829	178233	268062
Estimated GVA of Unincorporated sector (All activities) (in Rs. Crore)	344872	807437	1152309
Share of GVA from Industry Division 20 (Unincorporated) in GVA Unincorporated sector (All activities) (in %)	0.23	0.19	0.20
Share of GVA from Industry Division 21 (Unincorporated) in GVA Unincorporated sector (All activities) (in %)	0.04	0.02	0.02
Share of GVA from Manufacturing sector (Unincorporated) in GVA Unincorporated sector (All activities) (in %)	26.05	22.07	23.26
GVA per worker of Industry Division 20 (Unincorporated) sector (in Rs.)	38146	92635	62685

Description	Rural	Urban	Rural + Urban
GVA per worker of Industry Division 21 (Unincorporated) sector (in Rs.)	102427	151259	123273
GVA per worker of Manufacturing sector (Unincorporated) (in Rs.)	48151	102517	74376
GVA per worker of unincorporated sector (All Activities) in Rs.	69158	131497	103559
GVA per enterprise of Industry Division 20 (Unincorporated) sector (in Rs.)	73595	232610	135027
GVA per enterprise of Industry Division 21 (Unincorporated) sector (in Rs.)	442930	419355	430260
GVA per enterprise of Manufacturing Sector (Unincorporated) (in Rs.)	78698	216028	136315
GVA per enterprise of Unincorporated Sector (All activities) (in Rs.)	106148	261287	181775

including Manufacturing activities , Noncaptive electricity generation , trading activities and other services (non agricultural enterprises excluding constructions)

Source:NSS Report No. 582 : Economic Characteristics of Unincorporated Non-Agricultural Enterprises excluding constructions in India. NSS 73rd Round (July 2015- June 2016), NSSO

Table 44:- Employment in Chemicals and Chemicals products (Industry Division 20, NIC-2008) during 2012-13 to 2017-18

S.No.	Industry	Number of Person Engaged					
		2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chemicals and Chemicals products (Industry Division 20, NIC 2008)	633659	708401	712994	743438	790263	828315
2	Industries Other than Chemicals and Chemicals products	12316366	12829713	13168392	13556272	14120926	14786304
3	All Industries	12950025	13538114	13881386	14299710	14911189	15614619
4	Share in Employment (%)						
	(a) Share of Chemicals and Chemicals products	4.89	5.23	5.14	5.20	5.30	5.30
	(b) Share of Other than C&PC	95.11	94.77	94.86	94.80	94.70	94.70
5	Growth Rate in Employment (%)						
	(a) Chemicals and Chemicals products	-5.99	11.80	0.65	4.27	6.30	11.42
	(b) Industries Other Than Chemicals and Chemicals products	-3.45	4.17	2.64	2.95	4.17	9.07
	(c) All Industries	-3.57	4.54	2.54	3.01	4.28	9.20

Note: As per NIC- 2008, Chemical & Chemical products are covered under the industry division 20.

Source : Annual Survey of Industries (Factory Sector), Ministry of Statistics & Programme Implementation, New Delhi.

Table 45:- Gross Value Added from Chemical and Chemical products (Industry Division 20: NIC 2008) and Pharmaceutical; medicinal chemicals and botanical product (Industry Division 21: NIC 2008) vis-a-vis Manufacturing sector and all Economic Activities

**At Current Prices
(Rs. In Crore)**

Description	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Industry Division 20: Chemical and chemical products (Corporate)	127623	133521	192668	207565	219473	240571
Industry Division 20: Chemical and chemical products (Household)	950	1067	1222	1029	1422	1543
Industry Division 20: Chemical and chemical products (Corporate +Household)	128573	134588	193890	208594	220895	242114
Growth over previous year (%)		4.7	44.1	7.6	5.9	9.6
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Corporate)	100555	112675	144319	157237	162810	178042
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Household)	708	625	567	667	594	615
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	101263	113300	144886	157904	163404	178657
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	229836	247888	338776	366498	384299	420771
Growth over previous year (%)		7.9	36.7	8.2	4.9	9.5
Manufacturing (Corporate)	1474509	1631823	1850139	2042040	2235182	2431467
Manufacturing (Household)	238943	246546	296050	291682	311426	335300
Manufacturing (Corporate +Household)	1713452	1878369	2146189	2333722	2546608	2766767
Growth over previous year (%)		9.6	14.3	8.7	9.1	8.6
GVA at basic prices for All Economic activities	10363153	11504279	12574499	13965200	15513122	17139962
Growth over previous year (%)		11.0	9.3	11.1	11.1	10.5
Share of GVA of Manufacturing sector in GVA for All Economic Activities	16.5	16.3	17.1	16.7	16.4	16.1
Share of GVA of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)in GVA for All Economic Activities	1.24	1.17	1.54	1.49	1.42	1.41
Share of GVA of Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA for All Economic Activities	2.22	2.15	2.69	2.62	2.48	2.45
Share of GVA of chemical and chemical products (Industry Division 20)in GVA for Manufacturing Sector	7.50	7.17	9.03	8.94	8.67	8.75
Share of GVA of chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)in GVA for Manufacturing Sector	13.41	13.20	15.79	15.70	15.09	15.21

Source: National Accounts Statistics 2019, CSO, Ministry of Statistics & Programme Implementation as on 18.01.2021

Table 46:- Gross Value Added from Chemical and Chemical products (Industry Division 20:NIC 2008) and Pharmaceutical; medicinal chemicals and botanical product (Industry Division 21: NIC 2008) vis-a-vis Manufacturing sector and all Economic Activities

*At Constant Price (2011-12)
(Rs. In Crore)*

Description	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Industry Division 20: Chemical and chemical products (Corporate)	112375	115005	119330	122965	124171	142679
Industry Division 20:Chemical and chemical products (Household)	837	919	1085	927	1264	1296
Industry Division 20: Chemical and chemical products (Corporate +Household)	113212	115924	120415	123892	125435	143975
Growth over previous year (%)		2.4	3.9	2.9	1.2	14.8
Industry Division 21:Pharmaceutical; medicinal chemicals and botanical products (Corporate)	93090	98406	110119	131359	134332	144163
Industry Division 21:Pharmaceutical; medicinal chemicals and botanical products (Household)	656	546	478	557	490	498
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	93746	98952	110597	131916	134822	144661
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	206958	214876	231012	255808	260257	288636
Growth over previous year (%)		3.8	7.5	10.7	1.7	10.9
Manufacturing (Corporate)	1346108	1468900	1643539	1803931	1928554	2042267
Manufacturing (Household)	214601	215038	260311	250834	262238	274376
Manufacturing (Corporate +Household)	1560709	1683938	1903850	2054765	2190792	2316643
Growth over previous year (%)		7.9	13.1	7.9	6.6	5.7
GVA at basic prices for All Economic activities	9063649	9712133	10491870	11328284	12074413	12803128
Growth over previous year (%)		7.2	8.0	8.0	6.6	6.0
Share of GVA of Manufacturing sector in GVA for All Economic Activities	17.2	17.3	18.1	18.1	18.1	18.1
Share of GVA of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)in GVA for All Economic Activities	1.25	1.19	1.15	1.09	1.04	1.12
Share of GVA of Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA for All Economic Activities	2.28	2.21	2.20	2.26	2.16	2.25
Share of GVA of chemical and chemical products (Industry Division 20) in GVA for Manufacturing Sector	7.25	6.88	6.32	6.03	5.73	6.21
Share of GVA of chemical and chemical products, including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)in GVA for Manufacturing Sector	13.26	12.76	12.13	12.45	11.88	12.46

Source: National Accounts Statistics 2019, CSO, Ministry of Statistics & Programme Implementation as on 18.01.2021

Table 47:- Value of Output from Chemicals and Chemical products (Industry Division 20: NIC 2008) and Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21: NIC 2008) vis-a-vis Manufacturing sector

*At Current prices
(Rs. In crore)*

VALUE OF OUTPUT	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Manufacturing (Corporate)	7289565	7803213	7591834	8162260	8896296	10230701
Manufacturing (Household)	678919	698250	825639	824799	986482	1068836
Manufacturing (Corporate +Household)	7968484	8501463	8417473	8987059	9882778	11299537
Chemical and chemical products (Corporate) (Industry Division 20)	553764	626716	668344	662125	714642	820650
Chemical and chemical products (Household) (Industry Division 20)	4745	5327	6100	5137	7102	7706
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	558509	632043	674444	667262	721744	828356
Pharmaceutical; medicinal chemicals and botanical products --Corporate (Industry Division 21)	230764	257134	300519	318143	318398	363864
Pharmaceutical; medicinal chemicals and botanical products --Household (Industry Division 21)	3536	3121	2833	3330	2964	3070
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	234300	260255	303352	321473	321362	366934
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	792809	892298	977796	988735	1043106	1195290

Source: National Accounts Statistics 2019, CSO, Ministry of Statistics & Programme Implementation as on 18.01.2021

Table 48:- Value of Output from Chemicals and Chemical products (Industry Division 20: NIC 2008) and Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21: NIC 2008) vis-a-vis Manufacturing sector

*At constant prices (2011-12)
(Rs. In crore)*

VALUE OF OUTPUT	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Manufacturing (Corporate)	6615483	7057882	7245184	7675612	8072763	8871084
Manufacturing (Household)	611979	612028	732581	712666	831898	873420
Manufacturing (Corporate +Household)	7227462	7669910	7977765	8388278	8904661	9744504
Chemical and chemical products (Corporate) (Industry Division 20)	487601	539807	593556	596509	635238	689043
Chemical and chemical products (Household) (Industry Division 20)	4178	4588	5417	4628	6313	6470
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	491779	544395	598973	601137	641551	695513
Pharmaceutical; medicinal chemicals and botanical products --Corporate (Industry Division 21)	213633	224571	253175	265783	262704	294627
Pharmaceutical; medicinal chemicals and botanical products --Household (Industry Division 21)	3274	2725	2387	2782	2446	2486
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	216907	227296	255562	268565	265150	297113
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	708686	771691	854535	869702	906701	992626

Source: National Accounts Statistics 2019, CSO, Ministry of Statistics & Programme Implementation as on 18.01.2021

Table 49:- All India Estimate of Selected Characteristics of Factory Sector for Chemical and Chemical products (Industry Division 20:NIC 2008) , Pharmaceutical; medicinal chemicals and botanical product (Industry Division 21: NIC 2008) and Maufacture of Megnetic and Optical Media (industry Division 268)

Description	2013-14	2014-15	2015-16	2016-17	2017-18
Industry Division 20: Chemical and chemical products					
No of factories (no.)	11465	11715	12015	12168	12568
No of workers (no.)	494253	519000	541343	588806	614733
Total Output (Rs. crore)	513903	557244	609216	583008	661499
Total Inputs (Rs. crore)	420686	461953	473764	446877	517336
Gross Value Added (Rs. crore)	93217	95292	135452	136131	144163
Industry Division 21:Pharmaceutical; medicinal chemicals and botanical products					
No of factories (no.)	4961	4908	5036	4946	5051
No of workers (no.)	381664	369196	395988	431732	454024
Total Output (Rs. crore)	214564	231834	265742	271959	285014
Total Inputs (Rs. crore)	142230	150713	174162	174414	182832
Gross Value Added (Rs. crore)	72333	81120	91581	97545	102182
Industry Division 268:Maufacture of Megnetic and Optical Media					
No of factories (no.)	4	4	5	3	10
No of workers (no.)	28	48	491	200	529
Total Output (Rs. Lakh)	875	1105	31259	7534	75141
Total Inputs (Rs. Lakh)	775	760	23350	5819	61256
Gross Value Added (Rs. Lakh)	100	345	7909	1715	13885

Source: Collated from Annual Survey of Industries, Ministry of Statistics & Programme Implementation

Table 50:- State wise Estimate of Selected Characteristics of Factory Sector for Industry Division 20: NIC 2008: Chemicals and Chemical Products

State	No. of Factories				GVA (Rs. Lakh)				Total Output (Rs Lakh)			
	2014-15	2015-16	2016-17	2017-18	2014-15	2015-16	2016-17	2017-18	2014-15	2015-16	2016-17	2017-18
Andhra Pradesh	401	401	405	368	241972	399763	331177	356689	1709055	1940284	2130755	2265003
Assam	82	109	129	120	123649	251355	216239	264490	280134	594954	495458	789313
Bihar	48	51	61	44	4850	3609	5813	15373	45252	44830	50286	76265
Chhattisgarh	94	102	113	109	12167	10499	16917	8133	90695	92515	137414	85687
Goa	49	45	45	38	185975	206736	162389	137513	873829	986279	659576	701225
Gujarat	2241	2316	2459	2596	2310593	3685024	4233550	4499173	16377573	19313596	19379723	22062065
Haryana	258	257	305	333	230883	253744	295782	301646	1144328	1059595	1375643	1507216
Himachal Pradesh	200	228	235	208	811380	844599	585106	732011	2902117	2255720	1723963	1722044
Jammu & Kashmir	155	131	126	148	177220	212274	218570	211080	633314	843376	741058	701986
Jharkhand	83	96	107	100	52409	85458	121407	114797	204030	294274	301703	529388
Karnataka	553	567	581	591	308325	315071	295813	340167	1627636	1540735	1419647	1600629
Kerala	140	149	141	139	112723	100787	362628	263532	580152	529190	904458	818774
Madhya Pradesh	259	278	268	319	289811	190960	346909	349899	1113758	1294751	1101147	1530984
Maharashtra	1866	1898	1842	1790	1805835	2711485	2278858	2361059	9148788	10805377	9566108	10814777
Meghalaya	3	3	4	5	3305	4452	4177	2462	7283	9496	8910	4891
Odisha	78	82	95	104	214559	71247	336314	408461	1225941	995024	1041620	1188177
Punjab	158	156	147	180	75556	64196	106447	164390	936265	724185	698169	895038
Rajasthan	323	308	336	398	235706	279905	486262	336071	1920567	1994750	2799626	2443874
Sikkim	4	4	3	3	121330	42560	24694	9299	32172	161410	150743	23123
Tamil Nadu	2495	2588	2521	2639	513454	628206	646481	950622	3501312	3669539	2918077	3610434
Tripura	10	9	10	8	307	226	70	74	686	438	198	119
Uttarkhand	240	243	219	232	626942	1276355	808699	591227	2609193	3134378	2091798	2064430
Uttar Pradesh	688	675	685	716	529410	502485	522193	728207	3412604	2974091	2870926	3813975
West Bengal	291	322	342	333	73656	336783	584589	501561	2033195	2585047	2911301	3278063
Dadra & N Haveli	172	168	177	167	204414	84365	202142	218598	1566385	702076	813926	1006494
Daman & Diu	113	108	118	152	114664	144797	99930	163344	570041	693514	630760	1043393
Chandigarh	NA	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	0
Delhi	75	77	72	69	41718	20789	15696	21407	260479	103882	205669	225011
Puducherry	106	91	97	96	87953	182471	188074	179677	242372	503611	470007	463889
Telagana	528	548	519	558	106993	634399	115427	184446	579136	1066936	693463	874400
All India	11715	12015	12168	12568	9529158	13545238	13613122	14416260	55724410	60921631	58300834	66149864

Source :Annual Survey of Industries (Factory Sector) 2013-14, 2014-15 & 2015-16 Ministry of Statistics & Programme Implementation as on date 05.02.2021.

NA: Not Available

Table 51:- Production, Import, Export, Consumption of Major Chemicals and Petrochemicals and Export as % of Production and Import as % of Consumption

(In Thousand Tonnes)

Group	Description	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Major Chemicals	Production	9459	9643	9660	9884	10234	11069	11589	11943
Major Petrochemicals									
A. Basic major Petrochemicals		13050	13410	13448	14905	15510	15670	16269	19041
B. Intermediates		16138	16313	16816	18690	18743	19063	19057	22119
C. Other Petro-based Chemicals		1979	1970	1963	2159	2174	2080	2192	2364
Total Major Chemicals and Petrochemicals		40626	41336	41887	45638	46661	47882	49108	55467
Major Chemicals	Exports	1220	1221	1061	1138	1484	1496	1579	1698
Major Petrochemicals									
A. Basic major Petrochemicals		2298	2616	2254	2743	2956	3293	4095	3719
B. Intermediates		1795	1977	2034	2430	2190	3915	5377	4842
C. Other Petro-based Chemicals		137	96	124	129	144	193	147	238
Total Major Chemicals and Petrochemicals		5451	5909	5473	6440	6773	8897	11198	10497
Major Chemicals	Imports	4253	4333	5025	5360	5400	5937	6379	6557
Major Petrochemicals									
A. Basic major Petrochemicals		4233	4304	5080	5681	5938	6408	6284	5356
B. Intermediates		2405	2950	3253	3245	3540	3180	2845	3323
C. Other Petro-based Chemicals		2037	2204	2373	2740	2651	3255	3227	3543
Total Major Chemicals and Petrochemicals		12928	13791	15729	17025	17529	18780	18735	18780

Table 51:- Production, Import, Export, Consumption of Major Chemicals and Petrochemicals and Export as % of Production and Import as % of Consumption

(In Thousand Tonnes)

Group	Description	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Major Chemicals	Consumption\$	12493	12756	13623	14106	14150	15510	16389	16802
Major Petrochemicals									
A. Basic major Petrochemicals		14984	15099	16274	17842	18492	18785	18458	20678
B. Intermediates		16748	17286	18034	19505	20094	18328	16525	20600
C. Other Petro-based Chemicals		3879	4078	4211	4770	4680	5142	5272	5670
Total Major Chemicals and Petrochemicals		48103	49218	52143	56223	57416	57765	56645	63750
Major Chemicals	Exports as % of Production	12.9	12.7	11.0	11.5	14.5	13.5	13.6	14.2
Major Petrochemicals									
A. Basic major Petrochemicals		17.6	19.5	16.8	18.4	19.1	21.0	25.2	19.5
B. Intermediates		11.1	12.1	12.1	13.0	11.7	20.5	28.2	21.9
C. Other Petro-based Chemicals		6.9	4.9	6.3	6.0	6.6	9.3	6.7	10.0
Total Major Chemicals and Petrochemicals		13.4	14.3	13.1	14.1	14.5	18.6	22.8	18.9
Major Chemicals	Imports as % of Consumption	348.6	355.1	473.5	470.9	363.9	396.9	403.9	386.1
Major Petrochemicals									
A. Basic major Petrochemicals		28.2	28.5	31.2	31.8	32.1	34.1	34.0	25.9
B. Intermediates		14.4	17.1	18.0	16.6	17.6	17.4	17.2	16.1
C. Other Petro-based Chemicals		52.5	54.0	56.3	57.4	56.6	63.3	61.2	62.5
Total Major Chemicals and Petrochemicals		26.9	28.0	30.2	30.3	30.5	32.5	33.1	29.5

Note: \$ Derived consumption as Production+ Imports-Exports

Table 52:- Exports of all Chemicals as % of Value of output and Imports of all Chemicals as % of Consumption

(Rs. In Crore)

Item	Code	2014-15	2015-16	2016-17	2017-18	2018-19
Exports of Pharmaceutical products	HS code 30	70815	84481	86705	85445	103240
Exports of Fertilizers	HS code 31	555	673	466	685	1038
Exports of all Chemicals (including Pharmaceutical products and Fertilizers)	HS codes 28,29,30,31,32,38, 39,4002,54 and 55	249183	266528	277364	305336	387565
Imports of Pharmaceutical products	HS code 30	9961	10742	11515	12241	14581
Imports of Fertilizers	HS code 31	39106	45973	28754	30108	46457
Imports of Chemicals and Chemical products	HS codes 28,29,30,31,32,38, 39,4002,54 and 55	311790	318595	309458	360208	455872
Value of Output of Chemicals and Chemical products at current prices	Industry Division 20 and 21: NIC 2008	892298	977796	988735	1043106	1195290
Consumption of Chemicals and Chemical products	Value of Output + Imports - Exports	954905	1029863	1020829	1097978	1263598
Exports of all Chemicals as % of Value of Output		27.9	27.3	28.1	29.3	32.4
Imports of all Chemicals as % of Derived Consumption		32.7	30.9	30.3	32.8	36.1

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 30: Pharmaceutical products; Chapter 31: Fertilizers ; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any proChapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note 1: Data source in respect of Imports, Exports (Chapter-wise) is DGCIS Portal as on 11.Feb.2021

Note 2: Data Source in respect of value of output is National Account Statistics, 2019 (CSO)

**Statistics and Monitoring Division
Department of Chemicals and Petrochemicals
Ministry of Chemicals and Fertilizers
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