



सत्यमेव जयते

CHEMICALS & PETROCHEMICALS STATISTICS AT A GLANCE: 2016

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS & FERTILIZERS
DEPARTMENT OF CHEMICALS &
PETROCHEMICALS
STATISTICS AND MONITORING DIVISION
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Government of India
Ministry of Chemicals and Fertilizers
Department of Chemicals and Petrochemicals
Statistics and Monitoring Division

Foreword

The publication “Chemicals & Petrochemicals Statistics at a Glance” is brought out by Statistics and Monitoring Division of the Department of Chemicals & Petrochemicals from 2007. The publication contains the latest available information on the chemical & petrochemical sector in respect of India and world as well. This has been made possible with inputs by various Ministries and Departments of the Government of India and concerned manufacturing units in Chemical and Petrochemical sectors.

2. We express our deep sense of gratitude to all the data providers to the Ministry and record our appreciation for the efforts put in by the officers of the Statistics and Monitoring Division viz., Shri Dinesh Kumar, Director; Shri Karan Singh Tanwar, Research Officer; Shri Darshan Singh, Senior Statistical Officer; Shri Bharat Kumar, Junior Statistical Officer and Shri Rakesh Kumar, Jr. Statistical Officer. The valuable contribution of Shri Jasbir Singh, Consultant in the Department is also acknowledged.

3. We hope the publication ‘Chemicals & Petrochemicals Statistics at a Glance: 2016’ will prove useful to all stakeholders and welcome suggestions for improvement.

A.K.Mathur
Deputy Director General

New Delhi
24th November, 2016

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Acronyms	
CAN	Acrylonitrile
AF	Acrylic Fibre (including Dry Spun)
CARG	Compound Annual Growth Rate
DMT	Dimethyl Terephthalate
EO	Ethylene Oxide
EPDM	Ethyl Propylene Dimers
EVA	Ethyl Vinyl Acetate
EX-PS	Expandable Polystyrene
FDI	Foreign Direct Investment
HDPE	High Density Polyethylene
IIP	Index of Industrial Production
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
MT	Metric Tonne
MMSCM	Million Standard Cubic Meters
NBR	Nitrile Butadiene Rubber
NFY	Nylon Filament Yarn
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
VAM	Vinyl Acetate Monomer
WPI	Wholesale Price Index

Coverage, Definitions & Limitations

The product coverage, definitions and sources used in the publication are given as under:

1. Major Chemicals

The following major chemicals have been covered:

- (i) Alkali Chemicals (3) : Soda Ash, Caustic Soda and Liquid Chlorine
- (ii) Inorganic Chemicals (9) : Aluminium Fluoride, Calcium Carbide, Carbon Black, Potassium Chlorate, Sodium Chlorate, Titanium Dioxide and Red Phosphorous Hydrogen Peroxide, and Calcium Carbonate
- (iii) Organic Chemicals (21) : Acetic Acid, Acetic Anhydride, Acetone, Phenol, Methanol, Formaldehyde, Nitrobenzene, Citric Acid, Malefic Anhydride, Pentaerythritol, Aniline, Chloro Methanes, ONCB, PNCB, MEK, Acetaldehyde, Ethanolamines, Ethyl Acetate, Menthol and Ortho-Nitro Toluene, isobutyl benzene
- (iv) Pesticides (Technical Grade) (57) : 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, Dicofof
- (v) Dyes and Pigments (18) : 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 and Other Dyes

2. Major Petrochemicals

The following major petrochemicals have been covered:

A. Basic major petrochemicals

- (1) Synthetic Fibres (9) : 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, Polyester Industrial Yarn.
- (2) Polymers (8) : Low Density Polyethylene, High Density Polyethylene, Polystyrene, Polypropylene (Inc. Co-Polymer), Expandable Polystyrene, Poly Vinyl Chloride, Linear Low Density Polyethylene, PVC Compound.)
- (3) Synthetic Rubber (Elastomers) (6) : Styrene Butadiene Rubber (SBR), Poly Butadiene Rubber (PBR) and Nitrile Butadiene Rubber (NBR), Ethyl Propylene Dimers (EPDM), Ethyl Vinyl Acetate (EVA), Butyl Rubber
- (4) Synthetic Detergent Intermediates (2) : Linear Alkyl Benzene (LAB), Ethylene Oxide (EO)
- (5) Performance Plastics (7) : Acrylonitrile Butadiene Styrene (ABS) Resin, Nylon-6, Nylon 6,6, Polymethyl Methacrylate (PMMA) and Styrene Acrylonitrile (SAN) Resin, Polytetrafluoroethylene (PTFE), Polyester Chips/PET Chips.

B. Intermediates

- (1) Fibre Intermediates (5) : Acrylonitrile, Caprolactum, Mono Ethylene Glycol (MEG), Dimethyl Terephthalate (DMT) and Purified Terephthalic Acid (PTA)
- (2) Building Blocks
 - (i) Olefins (3) : Ethylene, Propylene and Butadiene
 - (ii) Aromatics (5) : Benzene, Toluene, Orthoxylene, Paraxylene and Mixed Xylene

C. Other Petro-based Chemicals (33)

- : Diethylene Glycol, Diacetone Alcohol, Ethylene Dichloride, Butanol, Oxo Alcohol, 2-Ethyl Hexanol, Vinyl Chloride Monomer, Epichlorohydrin, 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.

3. Sources

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	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 fiber.
(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 are 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.

4. Limitations:

The data presented in this publication heavily draws on the narrow definition of chemicals and petrochemicals. The choice of adopting this narrow definition is guided by the availability of authentic detailed data with the Department of Chemicals and Petrochemicals.

5. Disclaimer :

Though due care has been taken in compiling this Publication, the possibility of errors and omissions remains. Users of the information contained in this Publication are urged to verify it independently. The Department of Chemicals and Petrochemicals will not bear any liability for any loss or injury arising out of the use of the information contained in this.

Section – I

*An Overview
of Chemical
and
Petrochemical
Sector*

An Overview of Chemical and Petrochemical Sector

The chemical industry is the main stay 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. Petrochemicals constitute a very important segment of world chemicals market, with a share of nearly 40 per cent.¹ 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 offer 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 and a host of other articles of daily and specialized usage amidst other emerging areas.

2. 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 function. For example, paint, adhesives, electronic chemicals, water management chemicals, oilfield chemicals, flavors and fragrances, rubber processing additives, paper additives, industrial cleaners and fine chemical. Sealants, coatings, catalysts also come under this category.

iii. Agro - Chemicals

Chemicals which essentially are meant for protecting agriculture crops against insects and pests are covered under this sub-group.

3. 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 252.2 million MT in 2015-16. 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

¹ Working Paper 271, 'Feedstock for the Petrochemical Industry', Indian council for Research on International Economic Relations (February 2014)

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 only with the assistance of the Chemicals Industry. It plays a crucial role in housing development.

4. 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 include dental fills, contact lenses and dialyses also depend on the Chemicals Industry.

5. 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 5.06 million tonne in 2008-09 to 8.8 million tonne in 2015-16 (CAGR of 8.3%) while its consumption has increased from 5.98 million tonne to 12.05 million tonne (CAGR of 10.5%).

6. 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 petroleum crude oil or natural gas either by fractionation, isomerization, cracking etc. These generally represented 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.²

7. 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 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 (CH₄), Ethane (C₂H₆), Propane (C₃H₈) and Butane (C₄H₁₀). Rich natural gas, which contains C₂ and C₃ 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 5889 thousand tonne in 2008-09 to **10323 thousand tonne in 2015-16**. Off take of natural gas for petrochemical sector has increased from 1105 million standard cubic meter to **3733 million standard cubic meter during the same period**

8. 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), Phosphate rock, 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 aromatic organic compounds and are mainly based on Benzene, Toluene, Naphthalene (from petroleum fractions), 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.

9. There are four naphtha and four gas based cracker complexes in the country with a combined annual ethylene capacity of 4.3 million MT. There are six aromatic complexes with a combined Xylene capacity of 4.4 million MT. There are six Petro Fluid Catalytic Cracking Units with a combined propylene capacity of 1.7 million MT.

² Dr. G.N.Sarkar, Advanced Petrochemicals, First Edition, Khanna Publishers, New Delhi

10. Innovations in additives, alloys, blends, compounds, composites and high grade reinforcement materials such as glass, nano-clays, carbon nano-tubes and carbon fibers 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 product and make it safe for environment and human health.

11. As per National Industrial Classification (NIC) 2008, Chemical & Chemical products are covered under the industry division 20. The description of product groups at 4-digit level under this division is given below:

Class	Description
2011	Manufacture of basic chemicals
2012	Manufacture of fertilizers and nitrogen compounds
2013	Manufacture of plastics and synthetic rubber in primary forms
2021	Manufacture of pesticides and other agrochemical products
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
2029	Manufacture of other chemical products n.e.c.
2030	Manufacture of man-made fibres
2100	manufacture of pharmaceuticals, medicinal chemicals and botanical products

The industry division 24 of NIC 2004 is equivalent of industry division 20 (manufacture of chemical & chemical products), 21(manufacture of pharmaceuticals, medicinal chemicals and botanical products) and 268 (manufacture of magnetic and optical media) of NIC 2008.

12. According to National Accounts Statistics 2016, brought out by the Central Statistics Office (CSO), chemical and chemical products sector (industry division 20 and 21 of NIC 2008) accounted for 2.33% of the GVA (at 2011-12 prices) in 2014-15, compared to 2.34% in 2013-14. The share of this sector in the GVA of manufacturing sector at 2011-12 prices was 13.60% during 2014-15 as compared to 13.43% in 2013-14. The average Indices of Industrial Production (IIP) for the Chemical and Chemical products (industry division 24: NIC 2004) for the year 2015-16 stand at 143.5, which is 3.8% higher as compared to the previous year. The size of the Indian Chemical industry (Industry division 20 and 21 of NIC 2008) in terms of value of output in the year 2014-15 was Rs. 833,046 crore.

13. As per the European Chemical Industry Council (Cefic 2014) world chemicals (excluding pharmaceuticals) sales in 2013 are valued at 3156 Euro billion. India ranks 4th in Asia and 7th in world

with chemicals sales valued at 72.2 Euro billion in 2013. India's share of world chemicals market sales in 2013 marginally to 2.3% as compared to 2.0% in 2003. In value terms the total sales of chemicals in India increased by 2.7 times as compared to 9.1 times in China in 2013 when compared with 2003. As per UN Comtrade Database for 2015, India ranks 17th 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 27.55 US\$ billion in 2015. India's share in World exports of chemicals was 2.11% as compared to 1.77 % for all HS code Commodities in 2015. India's imports of chemicals (excluding pharmaceutical products) was 47.70 US\$ billion in 2015. India's share in World imports of chemicals was 3.72% as compared to 2.72 % for all HS code Commodities in 2015.

14. The exports and imports data of 2015-16 shows that in the chemical sector, comprising chapter 28,29,30,31,32,38,39,4002,54,55 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. 73,724 crore, Man-made staple fibers accounted Rs. 9,216 crore, Man-Made Filaments accounted Rs. 8,780 crore and Tanning or Dyeing accounted Rs. 5,597 crore in **net exports** while Fertilizers (chapter 31 HS code) accounted Rs 45,300 crore, Plastic and Articles thereof (Chapter 39 HS code) accounted Rs. 40,248 crore, Organic Chemicals (Chapter 29 HS code) accounted Rs. 26,621 crore, Inorganic Chemicals (Chapter 28 HS code) accounted Rs 25,255 crore, Miscellaneous Chemical Products (Chapter 38 HS code) accounted Rs. 7,140 crore and Synthetic Rubber and Factice (4002 HS code) accounted Rs.4,766 crore in the **net imports** during 2015-16.

The exports of chemicals & petrochemicals (excluding pharmaceuticals products and fertilizers) has increased from Rs.78,104 crore in 2008-09 to Rs. 181,381 in 2015-16. The percentage share of the exports of chemicals & petrochemicals (excluding pharmaceuticals products and fertilizers) in the total national exports increased from 9.3% to 10.6% during the same period. At the product level, the following products accounted more than Rs. thousand crore in the exports in 2015-16.

(Rs. Crore)

POLYESTER FILAMENT YARN	6244
POLYPROPYLENE (INC. CO-POLYMER)	5031
POLYESTER CHIPS/PET CHIPS	4608
PARAXYLENE	4605
PIGMENT EMULSION	3742
BENZENE	3713
REACTIVE DYES	3450

OTHER FUNGICIDE NES	2795
OTHER INSECTICIDES	2764
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	2662
OTHER PESTICIDES	2141
AZO DYES	1620
POLYESTER STAPLE FIBRE	1291
ORTHO-XYLENE	1076

The imports of chemicals & petrochemicals (excluding pharmaceuticals products and fertilizers) has increased from Rs.101,898 crore in 2008-09 to Rs. 261,817 in 2015-16. The percentage share of the

imports of chemicals & petrochemicals (excluding pharmaceuticals products and fertilizers) in the total national imports increased from 7.4% to 10.5% during the same period. At the product level, the following products accounted more than Rs. thousand crore in the imports in 2015-16.

(Rs. Crore)

POLY VINYL CHLORIDE	8788	METHANOL	2853	ETHYL VINYL ACETATE	1620
HIGH DENSITY POLYTHYLENE	7989	POLYOL	2430	STYRENE BUTADIENE RUBBER	1556
POLYPROPYLENE (INC. CO-POLYMER)	5743	NYLON-6	2183	PHENOL	1477
MONO EHYLENE GLYCOL	5397	OTHER INSECTICIDES	2138	BUTYL RUBBER	1267
STYRENE	5165	POLYCARBONATE	2078	ACRYLONITRILE	1217
LINEAR LOW DENSITY POLYTHYLENE	4595	ACETIC ACID	2063	CAUSTIC SODA	1163
PARAXYLENE	4523	LINEAR ALKYL BENZENE	1765	ETHYLENE DICHLORIDE	1050
PURIFIED TEREPHTHALIC ACID	3180	VINYL CHLORIDE MONOMER	1672	SODA ASH	1017
LOW DENSITY POLYETHYLENE	3135	TOLUENE	1638	ABS RESIN	1009

The net imports of chemicals & petrochemicals (excluding pharmaceuticals products and fertilizers) has increased from Rs.23,794 crore in 2008-09 to Rs. 80,436 in 2015-16. The percentage share of the net imports of chemicals & petrochemicals (excluding pharmaceuticals products and fertilizers) in the total national net imports increased from 4.5% to 10.4% during the same period. At the product level, the following products accounted more than Rs. thousand crore in the net imports in 2015-16

(Rs. Crore)

POLY VINYL CHLORIDE	8756	NYLON-6	1930
HIGH DENSITY POLYTHYLENE	7011	LINEAR ALKYL BENZENE	1695
STYRENE	5159	VINYL CHLORIDE MONOMER	1672
MONO EHYLENE GLYCOL	4876	ETHYL VINYL ACETATE	1605
LINEAR LOW DENSITY POLYTHYLENE	4453	TOLUENE	1605
LOW DENSITY POLYETHYLENE	2870	PHENOL	1403
METHANOL	2771	STYRENE BUTADIENE RUBBER	1316
PURIFIED TEREPHTHALIC ACID	2509	BUTYL RUBBER	1236
POLYOL	2163	ACRYLONITRILE	1196
POLYCARBONATE	2032	ETHYLENE DICHLORIDE	1019
ACETIC ACID	2011	ABS RESIN	1003

The following products accounted more than Rs. thousand crore in the total net exports:

(Rs. Crore)

POLYESTER FILAMENT YARN	5383
POLYESTER CHIPS/PET CHIPS	3858
BENZENE	3713
PIGMENT EMULSION	3271
REACTIVE DYES	3180

OTHER PESTICIDES	2014
OTHER FUNGICIDE NES	2011
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	1810
AZO DYES	1580

15. Commissioning of new installed Capacity

15.1 Name Plate capacity of Ethylene is enhanced from 446 KTA to 900 KTA and Propylene from 14.8 KTA to 49 KTA after a new Gas Cracker of 450 KTA capacity has been commissioned in January 2016 and Name plate capacity of Polyethylene is enhanced from 410 KTA to 810 KTA after a new LLDPE/HDPE Swing Unit of 400 KTA capacity has been commissioned in January 2016 **at GAIL, Pata, District-Auraiya , Uttar Pradesh** . The new plants are under post commissioning stabilization and commercial production of Ethylene, propylene and HDPE/LLDPE has already commenced.

15.2 Bharat Petroleum Corporation Limited – Kochi Refinery is expanding the refining capacity through Integrated Refinery Expansion Project (IREP). As part of this project, Petro Fluid Catalytic Cracker Unit (FCCU) is being set up by the BPCL that will produce 500 KTA of Propylene. Propylene production is expected to commence by November, 2016.

15.3 IOCL Refinery at Paradip, Odhisa has been commissioned on 8th February 2016 with capacity at 15 MMTPA. IOCL is building a Fluid Catalytic Cracker (FCC), which is integrated with Paradip Refinery. This Propylene unit to produce 680 KTA of PP is expected to be completed and made operational by the end of 2017. Indmax Technology (FCC) installed at Paradip Refinery will produce both Ethylene & propylene streams, which will be further processed in the upcoming petrochemical units to produce Mono Ethylene Glycol & Polypropylene. Polypropylene project is under construction phase and installation of Mono Ethylene Glycol facilities at Paradip Refinery is under feasibility stage.

15.4 Assam Gas Cracker Project (AGCP), approved in 2006 and implemented by Brahmaputra Cracker and Polymer Limited (BCPL), was commissioned on 2nd January 2016. BCPL has built a dual feed Cracker Complex to produce 220 KTA of ethylene, 60 KTA of propylene, 226 KTA of LLDPE-HDPE and 60 KTA of PP.

15.5 ONGC Petro additions Ltd. (OPaL), a JV of ONGC, GAIL, and Gujarat State Petroleum Corp., is building a grassroots petrochemical complex at the Dahej PCPIR. The complex's ethylene plant will be a dual-feed cracker with capacity of 1.1 million m.t./year of ethylene and 400,000 m.t./year of propylene building blocks which will be polymerized. In the downstream units two 360,000- m.t./year Swing PE units capable of producing high-density PE LLDPE, a 340,000-

m.t./year dedicated HOPE plant and a 340,000-m.t./year PP unit. As on 30/9/2016 the project progress is 98.85% and the commissioning of the complex is in progress in a phased manner with stabilized plant operation envisaged by December 2016. Commissioning Polypropylene (PP) plant is already completed. PP Extruder trial run with bought out feed which includes Pneumatic Pellet Conveying system up to Product Warehouse was also commissioned successfully. Dual feed cracker and PE swing with HDPE/LLDPE unit are under pre commissioning. Pipeline for transportation of Naphtha which is the feed for the cracker, from GCPTCL to OPaL is ready for commissioning and production is expected to commence shortly.

15.6 Reliance Industries is constructing a dual feed off gas cracker with 1.4-million m.t./year ethylene plant, expected on-stream in 2016 -17 which will crack refinery off-gases. Reliance will also adapt its 860,000-m.t./year ethylene plant at Hazira, originally designed to work on naphtha, to partly use gas. Technip is currently performing engineering work for the project. The new Jamnagar cracker will raise Reliance's total ethylene capacity to 3.2 million m.t./year.

16. According to National Sample Survey Office (NSSO)'s latest survey (July 2011-June 2012 NSS 68th round), 20.6 lakh persons (0.44% of the total work force) were engaged in Chemicals and Chemical Products Sector (Industry Division 20 and 21 of NIC 2008) as per their usual status in the country. This includes 8.3 lakh person in Industry Division 21 of NIC 2008 (manufacture of pharmaceutical, medical chemicals and botanical products). The survey reflects that 8 lakh persons were engaged in manufacturing of plastic products (Industry Group 222: NIC 2008)

17. As per Central Statistics office (CSO)'s Annual Survey of Industries (Factory Sector) 2011-12, 12.23 lakh persons were engaged in Chemicals and Chemical Products Sector (Industry Division 20 and 21 of NIC 2008). The survey reflects 3.73 lakh persons were engaged in manufacturing of plastic products (Industry Group 222: NIC 2008) in 2011-12. As per ASI (Factory sector) 2013-14, 13.27 lakh persons were engaged in Chemicals and Chemical Products Sector (Industry Division 20 and 21 of NIC 2008), which is 9.8% of the total persons engaged in all industries covered under the Factory Sector. It reflects 3.72 lakh persons were engaged in manufacturing of plastic products (Industry Group 222: NIC 2008) in 2013-14.

18. As per Annual Survey of Industries (Factory Sector), 2013-14, top seven States, namely, Gujarat (32.7%), Maharashtra (23.9%), Uttar Pradesh (4.8%), Himachal Pradesh (4.5%), Tamilnadu (3.9%), Uttarkhand(3.8%) and Andhra Pradesh (2.8%), contributed 76.4% in the Gross Value Added (GVA) for the chemical & chemical products sector (Industry Division 20 of NIC 2008) and the same seven States, namely, Gujarat (30.1%) Maharashtra (18.8%), Uttar Pradesh (5.8%), Himachal Pradesh (3.5%), Tamilnadu (4.9%) Uttarkhand (3.8%) and Andhra Pradesh (3.3%), contributed 70.1% in the Value of Output.

19. According to estimates of the CSO, during 2014-15 the corporate sector contributed 99.33% and 86.27% in the Gross Value Added (at current prices) of chemicals and chemical products sector (Industry Division 20 and 21 of NIC 2008) and the manufacturing sector respectively. 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 2012-13 and 2013-14 are given in the table below:

Class	Description	Total Output (Rs. crore)	
		2012-13	2013-14
2011	Manufacture of basic chemicals	100161.87	108217.83
2012	Manufacture of fertilizers and nitrogen compounds	104117.52	106807.15
2013	Manufacture of plastics and synthetic rubber in primary forms	73020.58	89700.01
2021	Manufacture of pesticides and other agrochemical products	28024.9	36786.17
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	31320.28	34268.9
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	53592.8	60435.93
2029	Manufacture of other chemical products n.e.c.	61651.23	50263.93
2030	Manufacture of man-made fibres	21079.09	27423.46
Total		472968.27	513903.38

Source: Annual Survey of Industries 2012-13 and 2013-14 (Factory sector), Ministry of Statistics & Programme Implementation

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Section – II

Chemical Sector

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Table-1: Performance of selected Major Chemicals (Group-Wise) during 2008-09 to 2015-16 at a
(Figures in 000'MT)

GROUP	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	CARG (%) (15- 16/08-09)
1	2	3	4	5	6	7	8	9	10
1. Alkali Chemicals									
Capacity	7751	8095	8094	8160	8075	8075	8214	8422	1.19
Production	5545	5830	6271	6478	6487	6481	6625	6802	2.96
Capacity Utilisation (%)	72	72	77	79	80	80	81	81	
Imports	511	868	630	658	995	874	1134	1118	11.82
Exports	148	342	347	345	145	164	74	107	-4.58
2. Inorganic Chemicals									
Capacity	1083	1015	1155	1235	1238	1228	1259	1316	2.83
Production	793	832	911	895	891	906	944	1002	3.40
Capacity Utilisation (%)	73	82	79	72	72	74	75	76	
Imports	314	356	455	479	689	874	912	1010	18.14
Exports	118	399	406	327	163	167	164	157	4.20
3. Organic Chemicals									
Capacity	2312	2468	2511	2538	2409	2463	2537	2580	1.58
Production	1414	1448	1550	1640	1686	1792	1619	1589	1.68
Capacity Utilisation (%)	61	59	62	65	70	73	64	62	
Imports	1639	1548	1639	2182	2487	2496	2886	3143	9.75
Exports	83	143	187	315	407	335	241	232	15.83
4. Pesticides (Tech.)									
Capacity	173	198	236	288	269	283	288	292	7.75
Production	130	135	144	156	155	179	186	188	5.39
Capacity Utilisation (%)	75	68	61	54	58	63	65	64	
Imports\$	18	20	27	30	30	37	41	34	9.59
Exports\$	112	128	125	154	180	207	230	267	13.20
5. Dyes & Pigments									
Capacity	243	344	375	408	418	430	457	452	9.28
Production	168	220	245	241	240	284	285	304	8.81
Capacity Utilisation (%)	69	64	65	59	57	66	62	67	
Imports	32	36	41	48	52	52	52	55	8.19
Exports	207	249	272	288	326	347	353	376	8.90
Total Major Chemicals (1 to 5)									
Capacity	11562	12120	12371	12629	12410	12479	12754	13063	1.76
Production	8050	8465	9121	9409	9459	9643	9660	9884	2.98
Capacity Utilisation (%)	70	70	74	75	76	77	76	76	
Imports	2514	2828	2792	3397	4253	4333	5025	5360	11.42
Exports	668	1261	1337	1429	1220	1221	1061	1138	7.92

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

Table -2 : Production, Installed Capacity & Growth of Selected Major Chemicals (Group-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Group	Installed Capacity			Production / Growth Rate								
	2013-14	2014-15	2015-16		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7	8	9	10	11	12	13
Alkali Chemicals	8075	8214	8422	Production	5545	5830	6271	6478	6487	6481	6625	6802
				Growth Rate (%)	0.80	5.14	7.57	3.30	0.14	-0.09	2.22	2.67
Inorganic Chemicals	1228	1259	1316	Production	793	832	911	895	891	906	944	1002
				Growth Rate (%)	-11.22	5.03	9.49	-1.84	-0.40	1.70	4.18	6.08
Organic Chemicals	2463	2537	2580	Production	1414	1448	1550	1640	1686	1792	1619	1589
				Growth Rate (%)	-16.47	2.42	7.06	5.80	2.83	6.28	-9.67	-1.87
Pesticides	283	288	292	Production	130	135	144	156	155	179	186	188
				Growth Rate (%)	4.30	3.98	6.59	8.52	-0.48	15.41	3.95	0.57
Dyes & Pigments	430	457	452	Production	168	220	245	241	240	284	285	304
				Growth Rate (%)	-2.70	30.63	11.32	-1.63	-0.56	18.40	0.58	6.60
Total Major Chemicals	12479	12754	13063	Production	8050	8465	9121	9409	9459	9643	9660	9884
				Growth Rate (%)	-3.98	5.16	7.75	3.16	0.53	1.94	0.18	2.32

Note: Product coverage under each group is given at page v.

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
ALKALI CHEMICALS													
SODA ASH	2951.00	2951.00	3031.00	1989.05	2058.34	2298.76	2410.82	2437.79	2392.17	2462.00	2583.01	3.80	85.22
CAUSTIC SODA	2948.25	3019.42	3102.02	2113.37	2237.62	2334.45	2408.73	2375.83	2391.66	2442.89	2503.96	2.45	80.72
LIQUID CHLORINE	2176.09	2243.37	2289.26	1442.53	1533.81	1637.62	1658.08	1673.25	1697.33	1720.10	1714.82	2.50	74.91
Total	8075.33	8213.79	8422.28	5544.94	5829.76	6270.82	6477.63	6486.88	6481.15	6624.99	6801.78	2.96	80.76
INORGANIC CHEMICALS													
ALUMINIUM FLUORIDE	25.60	25.60	25.60	15.07	11.55	9.80	7.31	6.70	5.40	6.73	9.51	-6.36	37.16
CALCIUM CARBIDE	112.00	112.00	112.00	66.55	22.02	44.70	66.39	70.98	78.78	87.18	83.47	3.29	74.53
CARBON BLACK	559.00	583.00	640.00	371.40	419.43	452.44	447.67	404.02	406.41	444.35	469.56	3.41	73.37
POTASSIUM CHLORATE	3.00	3.00	3.00	5.79	2.60	0.61	0.34	0.59	0.68	0.45	0.41	-31.59	13.53
TITANIUM DIOXIDE	76.05	82.50	82.50	53.28	61.32	64.02	52.14	50.14	52.78	47.88	58.53	1.35	70.95
RED PHOSPHORUS	1.68	1.68	1.68	0.46	0.58	0.48	0.56	0.69	0.75	0.89	0.84	8.88	49.76
HYDROGEN PEROXIDE	167.87	168.63	169.23	106.02	118.61	129.75	103.07	125.79	128.37	119.75	153.08	5.39	90.46
CALCIUM CARBONATE	282.35	282.35	282.35	174.02	196.33	209.65	217.20	232.18	233.12	236.93	226.13	3.81	80.09
Total	1227.54	1258.75	1316.35	792.59	832.45	911.44	894.68	891.10	906.27	944.15	1001.53	3.40	76.08
ORGANIC CHEMICALS													

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16**(Figures in 000'MT)**

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
ACETIC ACID	192.28	177.43	177.43	214.04	146.44	156.48	160.73	160.56	157.17	159.61	157.91	-4.25	89.00
ACETIC ANHYDRIDE	100.92	148.30	118.30	47.24	56.92	52.91	53.28	87.15	80.85	93.84	92.99	10.16	78.61
ACETONE	47.82	49.46	47.14	46.83	44.25	50.54	42.80	37.05	28.58	25.98	24.96	-8.60	52.95
PHENOL	77.13	79.68	76.75	75.75	71.59	79.81	65.93	59.92	46.39	42.26	40.42	-8.58	52.67
METHANOL	474.30	474.30	474.30	237.12	330.83	374.53	359.93	254.91	307.26	209.83	162.62	-5.25	34.29
FORMALDEHYDE	413.25	411.30	411.30	231.84	261.29	266.61	263.80	275.36	268.29	255.95	242.09	0.62	58.86
NITROBENZENE	103.80	103.80	91.80	56.43	63.41	72.41	74.46	83.70	76.51	69.72	68.37	2.78	74.48
MALEIC ANHYDRIDE	5.40	6.40	6.40	2.97	2.55	2.76	2.63	2.48	2.92	3.20	3.54	2.52	55.30
PENTAERYTHRITOL	12.40	13.72	13.72	13.82	11.21	11.73	11.40	11.49	12.18	13.46	13.97	0.15	101.80
ANILINE	60.10	60.10	60.10	34.67	39.39	41.05	40.09	48.23	40.62	34.47	39.40	1.84	65.56
CHLORO METHANES	211.75	216.75	221.10	128.96	134.79	161.35	188.55	197.74	214.03	220.71	220.18	7.94	99.58
ISOBUTYLBENZENE	12.75	12.75	13.80	3.34	4.07	2.27	1.94	6.63	6.08	4.30	7.24	11.71	52.47
ONCB	30.00	30.00	30.00	15.71	15.44	16.69	13.74	15.41	16.82	16.13	19.26	2.95	64.21
PNCB	30.00	30.00	30.00	25.25	23.57	24.87	22.14	24.40	27.06	26.96	31.27	3.10	104.23
MEK	5.00	5.00	5.00	0.00	0.00	0.00	2.19	2.49	3.72	4.02	5.75	0.00	115.02
ACETALDEHYDE	183.51	172.01	189.01	117.62	59.82	32.26	65.39	76.27	79.66	67.77	58.96	-9.39	31.19

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
ETHANOLAMINES	13.00	16.00	17.76	12.31	7.00	3.45	8.73	7.05	11.20	13.76	13.25	1.06	74.59
ETHYL ACETATE	439.63	479.83	545.83	128.10	147.20	170.48	235.36	305.26	382.39	327.94	360.40	15.93	66.03
MENTHOL	33.65	33.65	33.65	13.65	14.41	15.74	15.80	19.70	18.34	17.45	14.73	1.09	43.77
ORTHO NITRO TOLUENE	16.40	16.40	16.40	8.10	13.80	14.20	11.14	10.68	12.31	11.74	11.52	5.16	70.27
Total	2463.10	2536.88	2579.78	1413.74	1447.96	1550.12	1640.03	1686.48	1792.34	1619.11	1588.83	1.68	61.59
PESTICIDES AND INSECTICIDES													
D.D.T.	6.34	6.34	6.34	3.32	3.61	3.19	3.64	3.87	2.79	3.63	2.09	-6.38	32.94
MALATHION	3.80	2.60	3.80	3.38	1.67	3.05	2.55	1.71	2.04	2.24	2.04	-6.96	53.68
DIMETHOATE	1.45	1.45	1.45	0.56	0.98	1.17	0.73	0.81	1.36	1.43	1.44	14.41	99.10
D.D.V.P.	32.48	35.72	35.72	3.01	3.87	3.48	4.64	4.41	5.52	6.66	7.22	13.33	20.21
QUINALPHOS	2.80	2.80	2.80	0.84	0.99	1.01	1.00	1.35	1.74	1.88	0.84	-0.08	29.96
MONOCROTOPHOS	12.24	13.18	13.94	4.57	5.74	9.93	9.59	8.25	4.27	6.97	5.48	2.64	39.34
PHOSPHAMIDON	2.00	2.00	2.00	0.85	1.00	0.29	0.06	0.02	0.05	0.13	0.13	-23.63	6.40
PHORATE	10.13	10.13	10.13	6.12	7.12	7.67	7.01	5.75	6.85	6.62	5.92	-0.47	58.43
ETHION	2.50	2.50	2.20	1.47	1.51	1.92	1.33	0.94	1.51	1.60	1.72	2.22	78.05
ENDOSULPHAN	0.00	0.00	0.00	11.35	9.90	11.49	1.35	0.00	0.00	0.00	0.00	-100.00	0.00

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
FENVALERATE	2.10	2.10	2.10	0.52	0.55	0.81	0.55	0.48	0.75	0.51	0.56	1.10	26.52
CYPERMETHRIN	15.69	15.69	13.92	5.98	8.89	7.21	10.41	7.78	9.26	8.59	8.53	5.19	61.25
ACEPHATE	19.25	19.25	19.67	12.59	14.90	16.49	17.11	15.76	14.51	17.97	16.58	4.02	84.29
CHLORPYRIPHOS	14.3	16.46	16.85	8.93	9.31	8.72	6.05	7.52	9.54	9.73	6.87	-3.68	40.77
TRIAZOPHOS	3.90	3.90	3.90	2.27	1.06	1.75	0.78	0.93	0.99	1.00	1.72	-3.90	44.05
TEMEPHOS	0.25	0.25	0.25	0.27	0.08	0.12	0.13	0.20	0.25	0.00	0.08	-16.19	31.60
DELTAMETHRIN	0.63	0.63	0.59	0.04	0.12	0.68	0.47	0.52	0.52	0.51	0.38	40.70	64.53
ALPHAMETHRIN	0.35	0.51	0.50	0.02	0.26	0.55	0.57	0.54	0.56	0.75	0.23	46.43	45.83
PROFENOFOS TECHNICAL	14.60	14.90	12.90	2.76	3.28	4.60	6.41	5.01	7.18	7.58	6.85	13.90	53.12
PRETILACHLOR TECHNICAL	2.84	2.56	2.58	1.30	1.17	1.18	1.65	1.93	2.22	1.88	1.94	5.87	75.23
LAMBDA CYHALOTHRIN	0.60	0.60	0.60	0.13	0.13	0.21	0.29	0.43	0.55	0.47	0.42	18.16	69.67
PHENTHOATE	0.90	0.90	0.90	0.00	0.06	0.59	0.59	0.96	1.24	1.40	1.11		123.67
PERMETHRIN TECH	1.80	1.80	1.97	0.44	0.42	0.65	1.41	1.04	1.39	1.70	1.30	16.79	66.04
IMIDACALOPRID TECH	0.83	0.98	1.13	0.14	0.13	0.13	0.39	0.23	0.94	0.56	0.20	5.01	17.78
CAPTAN & CAPTAFOL	4.73	3.85	3.45	0.00	0.00	0.72	0.92	0.56	1.12	2.38	2.12		61.45
ZIRAM(THIO BARBAMATE)	0.65	0.70	0.70	0.11	0.14	0.66	0.73	0.55	0.60	0.58	0.51	24.11	72.88

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
CARBENDZIM(BAVIST IN)	0.98	0.98	0.98	0.20	0.38	0.59	0.43	0.34	0.31	0.36	0.24	2.94	24.49
MANCOZAB	71.56	71.56	72.46	35.34	31.49	26.05	43.46	45.30	57.82	61.40	66.38	9.42	91.61
HEXACONAZOLE	0.58	1.08	1.08	0.34	0.42	0.43	0.47	0.44	0.58	0.59	0.62	8.92	57.38
METCONAZOLE	0.75	0.75	0.75	0.21	0.21	0.36	0.50	0.63	0.70	0.61	0.39	8.91	51.87
2, 4-D	22.00	22.00	22.00	9.57	10.64	12.60	15.03	15.44	17.90	11.62	18.46	9.84	83.89
BUTACHLOR	0.50	0.50	0.50	0.12	0.24	0.29	0.20	0.18	0.04	0.00	0.00	-44.22	0.40
ETHOFUMESATE TECHNICAL	1.65	1.65	1.56	0.00	0.56	0.82	1.14	1.22	1.01	0.62	0.50		32.18
THIAMETHOXAM TECHNICAL	3.00	3.10	3.10	1.81	1.82	1.49	1.63	3.12	3.31	1.66	1.92	0.80	61.81
PENDIMETHALIN	2.00	2.00	3.00	0.00	0.00	0.00	0.00	1.03	1.71	2.26	2.82		93.93
METRIBUZIN	0.75	0.75	1.20	0.00	0.00	0.00	0.00	0.24	0.74	0.52	0.91		75.67
TRICLOPYR ACID TECH	0.30	0.30	0.30	0.09	0.23	0.30	0.10	0.21	0.20	0.19	0.30	18.39	100.00
ISOPROTURON	6.25	6.25	6.25	2.98	2.91	3.68	2.53	4.05	2.35	2.43	1.95	-5.86	31.23
GLYPHOSATE	9.26	9.26	9.26	4.39	4.66	4.86	5.25	6.12	8.48	9.69	6.96	6.80	75.16
DIURON	0.33	0.33	3.30	0.01	0.13	0.23	0.31	0.14	0.07	0.12	1.26	94.42	38.18
ATRAZIN	0.50	0.50	0.50	0.26	0.26	0.25	0.66	0.65	1.24	1.20	1.21	24.36	242.00
ZINC PHOSPHIDE	1.32	1.32	1.32	0.91	0.92	0.86	0.89	0.60	0.65	1.29	1.50	7.47	113.64

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
ALUMINIUM PHOSPHIDE	3.90	3.90	3.90	2.58	3.25	2.82	3.14	4.16	4.47	5.05	5.75	12.12	147.44
DICOFOL	0.15	0.09	0.15	0.09	0.02	0.05	0.08	0.05	0.07	0.11	0.09	0.32	60.00
Total	282.92	288.10	292.00	129.85	135.02	143.92	156.17	155.42	179.38	186.47	187.52	5.39	64.22
DYES AND PIGMENTS													
AZO DYES	22.62	22.62	22.62	13.15	12.68	13.96	12.10	12.72	13.46	10.59	9.71	-4.25	42.90
DYES(OTHER THAN AZO)	45.08	44.90	44.90	10.84	15.34	20.36	19.00	17.58	19.00	17.23	20.57	9.59	45.81
DISPERSE DYES	55.21	55.21	55.21	23.26	25.22	28.72	29.44	28.26	29.21	29.56	43.57	9.38	78.92
FAST COLOUR BASES	0.50	0.50	0.50	0.04	0.05	0.09	0.04	0.02	0.01	0.01	0.00	-100.00	0.00
INGRAIN DYES	1.61	1.61	1.61	1.09	0.93	0.69	0.98	0.58	0.51	0.44	0.30	-16.82	18.63
OIL SOLUBLE (SOLVENT DYES)	3.60	3.60	3.60	2.15	2.25	2.02	2.64	2.31	2.26	1.80	2.20	0.32	61.11
OPTICAL WHITENING AGENTS	37.30	37.30	40.90	9.82	12.36	15.02	14.14	18.17	23.74	22.94	24.70	14.08	60.39
ORGANIC PIGMENT	74.28	79.83	80.75	45.40	49.90	56.35	51.77	44.46	68.67	76.89	61.31	4.38	75.92
PIGMENT EMULSION	5.41	5.41	5.41	3.41	5.04	5.89	5.22	6.48	7.34	9.64	9.67	16.05	178.56
REACTIVE DYES	159.82	180.82	171.82	43.96	73.20	76.88	83.38	87.60	95.42	89.47	106.12	13.42	61.77
SULPHUR DYES (SULPHUR BLACK)	3.00	3.00	3.00	5.64	8.69	8.58	7.02	6.58	7.57	9.38	9.55	7.82	318.37
VAT DYES	2.98	2.98	2.98	1.46	1.70	1.94	1.69	1.38	1.60	1.77	1.44	-0.21	48.42

Table-3: Production,Capacity Utilization & growth of Major Chemicals (Product-wise) during 2008-09 to 2015-16

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08- 09)	Capacity Utilization in 2014-15 (col.
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	3	4	5	6	7	8	9	10	11	12	13	14	15
SOLUBILISED VAT DYES	0.13	0.13	0.13	0.03	0.03	0.04	0.03	0.03	0.02	0.03	0.03	2.14	22.83
FOOD COLOURS	0.00	0.00	0.00	0.20	0.29	0.36	0.36	0.25	0.62	0.66	0.71	19.88	0.00
NAPTHOLS	0.90	0.90	0.90	0.15	0.08	0.07	0.04	0.00	0.00	0.00	0.00	-100.00	0.00
INORGANIC PIGMENTS	17.68	18.05	18.05	7.80	12.23	13.93	13.06	13.14	14.18	14.82	14.19	8.93	78.60
Total	430.12	456.85	452.37	168.39	219.98	244.87	240.88	239.53	283.60	285.23	304.06	8.81	67.21

Table-4 : Installed Capacities of Selected Chemicals (Group-Wise) from 2007-08 to 2015-16

(Figures in 000'MT)

GROUP / PRODUCT	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1. Alkali Chemicals	8095	8094	8160	8075	8075	8214	8422
2. Inorganic Chemicals	1015	1155	1235	1238	1228	1259	1316
3. Organic Chemicals	2468	2511	2538	2409	2463	2537	2580
4. Pesticides (Tech.)	198	236	288	269	283	288	292
5. Dyes & Pigments	344	375	408	418	430	457	452
TOTAL MAJOR CHEMICALS	12120	12371	12629	12410	12479	12754	13063

Note: Product coverage under each group is given at page v.

Table-5 : Consumption of Selected Major Chemicals (Product-Wise) during 2008-09 to ('000' (MT))

PRODUCTS	CONSUMPTION \$							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
ALKALI CHEMICALS								
SODA ASH	2261.40	2357.07	2588.95	2598.56	3048.51	2877.33	3159.80	3197.66
CAUSTIC SODA	2209.31	2472.04	2329.14	2539.17	2619.10	2620.25	2808.67	2905.94
LIQUID CHLORINE	1437.32	1526.67	1636.27	1653.69	1669.61	1693.52	1717.03	1709.31
INORGANIC CHEMICALS								
ALUMINIUM FLUORIDE	29.90	27.56	16.72	32.39	29.19	26.28	34.02	34.98
CALCIUM CARBIDE	137.16	72.65	100.22	121.62	127.09	142.75	165.10	145.04
CARBON BLACK	353.03	133.51	161.87	294.31	436.79	428.67	469.70	478.95
POTASSIUM CHLORATE	3.18	8.25	6.40	5.80	7.27	6.99	5.96	2.81
SODIUM CHLORATE	19.02	21.79	24.76	25.01	25.04	28.08	21.79	17.29
TITANIUM DIOXIDE	60.53	70.56	74.82	69.77	64.50	60.60	60.30	70.52
RED PHOSPHORUS	0.39	0.53	0.55	0.57	0.52	0.61	0.56	0.35
HYDROGEN PEROXIDE	114.89	124.74	164.87	125.97	157.13	190.35	175.78	196.82
CALCIUM CARBONATE	271.31	330.10	409.97	370.68	570.31	728.40	759.32	907.92
ORGANIC CHEMICALS								
ACETIC ACID	486.49	523.07	614.21	704.88	800.68	814.63	865.50	942.30
ACETIC ANHYDRIDE	43.11	56.56	51.78	52.17	85.46	76.21	76.43	77.30
ACETONE	113.25	123.83	125.97	142.24	130.33	144.66	149.63	152.58
PHENOL	165.47	171.94	202.01	211.54	232.24	258.34	240.37	282.35

Table-5 : Consumption of Selected Major Chemicals (Product-Wise) during 2008-09 to ('000' (MT))

PRODUCTS	CONSUMPTION \$							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
METHANOL	1292.72	1107.18	1144.39	1439.15	1469.22	1535.78	1801.99	1830.49
FORMALDEHYDE	229.13	258.01	262.94	259.94	270.66	262.35	248.90	233.68
NITROBENZENE	56.38	63.27	72.30	74.36	83.53	76.36	70.78	74.16
CITRIC ACID	34.04	39.10	42.31	50.40	54.33	62.09	65.63	74.49
MALEIC ANHYDRIDE	35.71	30.13	40.66	37.18	39.33	39.64	41.56	50.86
PENTAERYTHRITOL	19.35	21.80	24.15	25.11	24.76	26.37	25.58	31.82
ANILINE	52.50	58.20	63.91	54.45	63.48	72.27	70.48	77.61
CHLORO METHANES	129.02	134.99	161.82	188.67	197.85	214.14	220.68	220.75
ISOBUTYLBENZENE	-4.18	-6.70	-9.19	-11.98	-6.68	-8.05	-9.64	-5.33
ONCB	20.80	18.56	19.86	15.75	17.12	14.94	14.29	18.66
PNCB	24.92	25.36	25.02	21.22	22.30	25.09	29.96	38.01
MEK	20.36	24.45	21.33	31.98	33.68	30.50	30.89	46.45
ACETALDEHYDE	117.44	59.89	32.23	65.21	76.08	79.72	67.80	59.03
ETHANOLAMINES	13.67	11.38	8.90	13.47	16.65	19.98	24.02	22.19
ETHYL ACETATE	104.07	115.01	75.83	113.77	137.50	192.44	213.04	255.88
MENTHOL	6.77	2.49	7.52	6.46	7.85	3.80	4.82	6.83
ORTHO NITRO TOLUENE	8.81	13.46	13.80	10.87	9.74	11.73	11.67	10.47

Table-5A :Consumption of Selected Pesticides (Tech. Grade) (State -wise) during 2007-08 to 2015-16

(In MT)

S. No.	States/UTs	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	Andhra Pradesh	1,381	1,015	8,869	9,289	2,803	4,253	4,050	2138.23
2	Bihar	915	828	675	655	687	765	787	831
3	Chhattisgarh	270	205	570	600	812	1,016	1,589	1510
4	Goa	9	10	9	8	9	9	12	13.5
5	Gujarat	2,650	2,750	2,600	2,190	1,210	2,330	1,730	1980
6	Haryana	4,288	4,070	4,060	4,050	4,050	4,080	4,070	4100
7	Himachal Pradesh	322	328	328	310	325	344	379	449
8	Jammu & Kashmir	2,679	1,640	1,818	1,711	1,789	1,723	1,921	NR
9	Jharkhand	85	89	84	151	151	430	650	492.784
10	Karnataka	1,675	1,647	1,858	1,412	1,615	1,735	1,793	1283
11	Kerala	273	631	657	807	712	1,276	910	1209.924
12	Madhya Pradesh	663	645	633	850	846	987	696	1127
13	Maharashtra	2,400	4,639	8,317	6,723	6,618	10,969	8,663	11665
14	Orissa	1,156	1,588	871	555	606	1,219	1,075	653
15	Punjab	5,760	5,810	5,730	5,625	5,730	5,723	5,689	5721
16	Rajasthan	3,333	3,527	3,623	2,802	2,559	2,736	2,694	1403
17	Tamil Nadu	2,317	2,335	2,361	1,968	1,766	2,142	2,096	2048
18	Telangana						3,812	2,862	2950
19	Uttar Pradesh	8,968	9,563	8,460	8,839	9,057	10,164	9,736	10079
20	Uttarakhand	221	222	199	206	247	174	172	147.096
21	West Bengal	4,100		3,515	3,670	3,465	3,190	3,060	3307
Sub Total		43,465	41,542	55,236	52,421	45,057	59,077	54,633	53,108
North-Eastern									
22	Arunachal Pradesh	10	10	10	17	NR	18	18	18
23	Assam	150	19	150	160	183	190	190	185
24	Manipur	30	30	30	33	31	31	31	NR

Table-5A :Consumption of Selected Pesticides (Tech. Grade) (State -wise) during 2007-08 to 2015-16

(In MT)

S. No.	States/UTs	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
25	Meghalaya	NA	6	10	9	24	44	28	NR
26	Mizoram	44	39	4	4	4	508	805	795.77636
27	Nagaland	18	14	NR	15	NR	16	20	20
28	Sikkim	3	4	NR	NR	NR	NR	NR	NR
29	Tripura	38	55	12	266	272	310	346	359.35
Sub Total		293	177	216	504	514	1,117	1,437	1,378
Union Territories									
30	Andaman & Nicobar	6	14	NR	15	7	NR	8	4.44395
31	Chandigarh	NA	NA	NR	NR	NR	NR	NR	NR
32	Dadra & Nagar Haveli	NA	NA	NR	NR	NR	NR	NR	NR
33	Daman & Diu	NA	NA	NR	NR	NR	NR	NR	NR
34	Delhi	57	49	48	NR	NR	48	NR	NR
35	Lakshadweep	NA	NA	NR	NR	NR	NR	NR	NR
36	Pondicherry	39	39	39	38	41	41	42	42.02
Sub Total		102	102	87	54	48	89	50	46
Grand Total		43,860	41,821	55,540	52,979	45,619	60,282	56,121	54,532

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

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

Section – III

Petrochemical Sector

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Table- 6: Performance of Selected Basic Major Petrochemicals (Group Wise) during 2008-09 to 2015-16 At a Glance

(Figures In thousand MT)

Group	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	CARG (%) (14-15/07-08)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. SYNTHETIC FIBRES / YARN									
Capacity	3240	3336	3527	3743	3892	3854	4298	4307	4.15
Production	2479	2835	3123	3105	3124	3144	3527	3554	5.28
Capacity Utilisation (%)	76.5	85.0	88.5	83.0	80.3	81.6	82.1	82.5	
Imports	132	98	121	142	147	155	224	248	9.45
Exports	350	404	576	734	776	906	886	878	14.02
2. POLYMERS									
Capacity	5680	7030	8306	8351	8761	8905	8905	9768	8.05
Production	5060	5695	6343	7250	7509	7876	7558	8839	8.29
Capacity Utilisation (%)	89.1	81.0	76.4	86.8	85.7	88.4	84.9	90.5	
Imports	1275	2160	2500	2435	3180	3125	3737	4214	18.63
Exports	357	658	822	1163	1113	1188	903	998	15.80
3. SYNTHETIC RUBBER									
Capacity	128	128	128	128	124	244	425	425	18.71
Production	96	106	105	100	96	105	172	242	14.07
Capacity Utilisation (%)	75.1	82.9	82.3	78.4	77.4	42.8	40	57	
Imports	290	376	446	493	520	580	578	596	10.82
Exports	16	15	15	22	11	13	26	43	15.06
4. SYNTHETIC DETERGENT INTERMEDIATES									
Capacity	587	637	637	672	687	687	687	687	2.27
Production	552	618	638	623	627	597	596	566	0.35
Capacity Utilisation (%)	93.9	97.0	100.1	92.6	91.2	86.8	86.7	82.3	
Imports	76	91	79	107	127	124	134	218	16.18
Exports	90	95	134	75	50	33	28	10	-27.38
5 : PERFORMANCE PLASTICS									
Capacity	1901	1901	2070	2201	2452	2454	2479	2514	4.08
Production	1324	1641	1740	1677	1691	1685	1591	1700	3.63
Capacity Utilisation (%)	69.7	86.3	84.0	76.2	69.0	68.6	64.2	67.6	
Imports	131	112	192	175	250	311	395	389	16.75
Exports	290	294	366	310	348	475	409	814	15.90
Total Basic Major Petrochemicals (1 to 5)									
Capacity	11535	13032	14669	15095	15916	16144	16794	17702	6.31
Production	9511	10895	11950	12755	13047	13406	13443	14900	6.62
Capacity Utilisation (%)	82.5	83.6	81.5	84.5	82.0	83.0	80.0	84.2	
Imports	1904	2837	3338	3353	4223	4295	5068	5665	16.85
Exports	1104	1466	1913	2304	2298	2614	2253	2742	13.88

Note: Product coverage under each group is given at page vi.

Table -7 : Production, Installed Capacity & Growth of Selected Basic Major Petrochemicals (Group-wise) during 2008-09 to 2015-16

(Figures in thousand MT)

Group	Installed Capacity			Production / Growth Rate	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
	2013-14	2014-15	2015-16									
1	2	3	4	5	6	7	8	9	10	11	12	13
Synthetic Fibers	3854	4298	4307	Production	2479	2835	3123	3105	3124	3144	3527	3554
				Growth Rate (%)	-6.8	14.4	10.2	-0.6	0.6	0.6	12.2	0.8
Polymers	8905	8905	9768	Production	5060	5695	6343	7250	7509	7876	7558	8839
				Growth Rate (%)	-4.6	12.5	11.4	14.3	3.6	4.9	-4.0	17.0
Elastomers (S.Rubber)	244	425	425	Production	96	106	105	100	96	105	172	242
				Growth Rate (%)	-8.5	10.4	-0.7	-4.7	-4.2	8.7	64.1	40.8
Synth. Detergent Intermediates	687	687	687	Production	552	618	638	623	627	597	596	566
				Growth Rate (%)	-5.7	12.0	3.3	-2.4	0.7	-4.8	-0.1	-5.1
Performance Plastics	2454	2479	2514	Production	1324	1641	1740	1677	1691	1685	1591	1700
				Growth Rate (%)	8.0	23.9	6.0	-3.6	0.8	-0.4	-5.5	6.9
Total Basic Major Petrochemicals	16144	16794	17702	Production	9511	10895	11950	12755	13047	13406	13443	14900
				Growth Rate (%)	-3.7	14.5	9.7	6.7	2.3	2.7	0.3	10.8

Note: Product coverage under each group is given at page vi.

Table-8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2008-09 to 2015-16

(In thousand MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15- 16/08-09)	Capacity Utilisation in 2015-16 (Col.12/Col. 4)
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A : BASIC MAJOR PETROCHEMICALS													
I : SYNTHETIC FIBRES / YARN													
1. Polyester Filament Yarn (PFY) (\$)	2354	2791	2820	1387	1562	1804	1874	1878	1811	2179	2179	6.66	77.26
2. Nylon Filament Yarn (NFY) (\$\$)	20	20	23	28	30	33	30	22	24	32	37	4.03	164.71
3. Nylon Industrial Yarn (NIY) (\$\$)	61	61	61	77	99	97	97	95	104	101	95	3.08	155.52
4. Polypropylene Filament Yarn (PPFY)(\$\$)	8	8	4	9	9	6	7	6	6	5	3	-12.93	96.31
Sub Total Yarn (1+2+3+4)	2443	2880	2908	1501	1700	1941	2008	2001	1945	2317	2315	6.38	79.61
5. Acrylic Fibre (Inc. Dry Spun) (AF)	107	107	107	78	91	76	76	75	94	90	106	4.48	98.95
6. Polyester Staple Fibre (PSF)	1170	1170	1170	843	980	1037	953	974	1010	1021	1040	3.04	88.85
7. Polypropylene Staple Fibre (PPSF)	31	32	32	3	3	4	4	8	23	25	27	34.25	84.17
8. Polyester Staple Fibrefil (PSFF)	81	87	69	51	54	53	49	51	56	57	51	-0.09	73.99
9. Polyester Industrial Yarn (PIY)	22	22	22	2	5	13	14	15	15	17	15	34.40	71.52
Total Synth. Fibre / Yarn	3854	4298	4307	2479	2835	3123	3105	3124	3144	3527	3554	5.28	82.50
II : POLYMERS													
1. Linear Low Density Polyethylene (LLDPE)	No separate Capacity			817	683	897	1033	1012	1037	910	1205	5.34	
2. High Density Polyethylene (HDPE)	No separate Capacity			942	856	887	1119	1177	1195	1156	1317	4.41	
LLDPE/HDPE (Combined) (\$\$\$)	2735	2735	3135	1758	1539	1784	2152	2189	2232	2066	2522	4.85	80.44
3. Low Density Polyethylene (LDPE)	160	160	160	191	193	179	194	187	190	184	200	0.65	125.02
4. Polystyrene(PS)	462	462	472	240	270	296	288	290	270	281	309	3.66	65.38

Table-8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2008-09 to 2015-16

(In thousand MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%) (15-16/08-09)	Capacity Utilisation in 2015-16 (Col.12/Col. 4)
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
5. Polypropylene(PP)	4016	4016	4456	1771	2521	2736	3248	3507	3740	3615	4284	13.45	96.15
6. Poly Vinyl Chloride(PVC)	1423	1423	1423	1051	1110	1278	1296	1257	1367	1330	1438	4.58	101.05
7. Expandable Polystyrene (EX-PS)	108	109	122	49	63	71	72	81	77	81	86	8.32	70.77
Total Polymers	8905	8905	9768	5060	5695	6343	7250	7509	7876	7558	8839	8.29	90.49
III : SYNTHETIC RUBBER													
1. Styrene Butadiene Rubber (SBR)	130	271	271	13	19	12	9	8	12	57	125	37.40	46.05
2. Poly Butadiene Rubber (PBR)	74	114	114	72	73	76	79	77	81	108	114	6.78	99.94
3. Nitrile Butadiene Rubber (NBR)	25	25	25	11	13	6	0	0	1	0	0	-37.54	1.56
4. Ethyl Vinyl Acetate (EVA)	15	15	15	0	0	11	12	11	11	6	2		16.07
Total Synthetic Rubber	244	425	425	96	106	105	100	96	105	172	242	14.07	56.79
IV : SYNTHETIC DETERGENT INTERMEDIATES													
1. Linear Alkyl Benzene (LAB)	547	547	547	434	464	475	454	455	406	411	377	-2.00	68.91
2. Ethylene Oxide (EO)	140	140	140	117	154	164	169	172	191	185	188	6.99	134.51
Total Synth. Detergent Intermediates	687	687	687	552	618	638	623	627	597	596	566	0.35	82.27

Table-8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2008-09 to 2015-16

(In thousand MT)													
Major Groups / Products	Installed Capacity			Production								CAGR (%) (15-16/08-09)	Capacity Utilisation in 2015-16 (Col.12/Col. 4)
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
V : PERFORMANCE PLASTICS													
1. ABS Resin	128	128	128	68	84	90	89	91	102	107	117	7.96	91.41
2. Nylon-6 & Nylon 66	23	23	28	16	18	21	18	19	20	21	21	4.52	76.03
3. Polymethyl Methacrylate (PMMA)	4	4	4	2	3	3	3	3	2	1	1	-6.91	41.94
4. Styrene Acrylonitrile (SAN)	96	136	136	58	72	82	77	80	88	89	99	7.84	72.56
5. PET Chips/Polyester Chips	2184	2169	2199	1177	1462	1533	1473	1487	1460	1362	1453	3.06	66.08
6. PTFE (TEFLON)	20	20	20	3	3	11	16	11	12	11	9	18.51	44.38
Total Performance Plastics	2454	2479	2514	1324	1641	1740	1677	1691	1685	1591	1700	3.63	67.62
TOTAL BASIC MAJOR PETROCHEMICALS													
(I+II+III+IV+V)	16144	16794	17702	9511	10895	11950	12755	13047	13406	13443	14900	6.05	84.17
B : INTERMEDIATES													
I : FIBRE INTERMEDIATES													
1. Acrylonitrile (ACN)	41	41	41	30	39	38	38	33	37	34	2	-32.54	4.72
2. Caprolactum	120	120	120	84	123	123	118	99	85	87	86	0.31	71.91
3. Mono Ethylene Glycol (MEG)	1153	1153	1153	783	738	746	997	1061	1069	1001	1159	5.76	100.48
4. Purified Terephthalic Acid (PTA)	3753	3753	3753	2154	2985	3191	3308	3494	3477	3755	3432	6.88	91.44
Total Fibre Intermediates	5067	5067	5067	3052	3886	4097	4461	4687	4668	4877	4679	6.29	92.33

Table-8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2008-09 to 2015-16

(In thousand MT)													
Major Groups / Products	Installed Capacity			Production								CAGR (%) (15-16/08-09)	Capacity Utilisation in 2015-16 (Col.12/Col. 4)
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
II : BUILDING BLOCKS													
OLEFINS													
1. Ethylene	3783	3783	4283	2639	2515	2665	3320	3315	3346	3192	3727	5.06	87.02
2. Propylene	4268	4268	4746	1887	2763	2981	3567	3741	3988	3869	4457	13.06	93.91
3. Butadiene	433	433	433	214	205	242	250	235	236	239	343	7.01	79.32
Total Olefins	8484	8484	9462	4740	5484	5888	7136	7290	7570	7301	8528	8.75	90.12
AROMATICS													
1. Benzene	1283	1566	1566	880	823	945	1002	1048	1031	1094	1333	6.11	85.09
2. Toluene	258	258	288	139	137	128	132	108	120	108	116	-2.56	40.19
3. Mixed Xylene	898	898	898	135	176	125	207	200	248	215	269	10.37	29.98
4. Ortho-xylene	420	420	420	224	358	400	390	444	412	462	500	12.12	118.93
5. Paraxylene	2218	3132	3132	2155	2223	2137	2394	2360	2264	2758	3266	6.12	104.30
Total Aromatics	5077	6274	6304	3533	3716	3736	4125	4161	4075	4638	5484	6.48	86.98
TOTAL INTERMEDIATES													
(I+II)	18629	19826	20834	11325	13086	13722	15722	16138	16313	16816	18690	6.66	89.71
C : OTHER PETRO-BASED CHEMICALS													
1. Butanol	26	26	26	11	8	18	22	14	5	4	11	-0.48	42.62
2. C4-Raffinate	262	292	292	55	65	71	209	395	393	365	429	34.21	147.00
3. Di-Ethylene Glycol	85	85	85	58	69	73	99	103	107	101	114	10.08	135.19

Table-8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2008-09 to 2015-16

(In thousand MT)													
Major Groups / Products	Installed Capacity			Production								CAGR (%) (15-16/08-09)	Capacity Utilisation in 2015-16 (Col.12/Col. 4)
	2013-14	2014-15	2015-16	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
4. Diacetone Alcohol	9	10	10	8	9	4	5	3	0	0	0	-100.00	0.00
5. Ethylene Dichloride (By Product)	593	593	593	277	445	454	435	316	278	285	277	0.02	46.75
6. 2-Ethyl Hexanol**	55	55	55	23	16	29	49	50	20	14	44	10.16	80.45
7. Epichlorohydrine	0	0	0	8	7	8	9	11	0	0	0	-100.00	
8. Iso-Butanol	3	3	3	3	3	3	2	2	1	1	2	-5.33	66.32
9. Isopropanol (IPA)	70	70	70	51	62	67	71	70	76	75	71	4.81	101.68
10. Methyl Methacrylate (MMA)	4	4	4	3	5	5	4	3	3	3	2	-5.81	52.14
11. Phthalic Anhydride (PAN)	362	349	349	207	232	253	250	254	264	292	306	5.76	87.60
12. Propylene Oxide (PO)	27	36	36	29	32	32	35	30	33	37	26	-1.59	71.08
13. Propylene Glycol (PG)	15	20	20	16	19	17	19	15	14	16	14	-2.30	68.25
14. Polyvinyl Acetate Resin	17	17	17	10	4	2	0	0	0	0	0	-100.00	
15. Vinyl Acetate Monomer (VAM)	30	30	30	24	0	0	0	0	0	0	0	-100.00	
16. Vinyl Chloride Monomer (VCM) (By Product)	541	541	541	303	674	672	689	669	735	718	791	14.67	146.08
17. Polyol	70	114	142	22	31	31	41	42	40	52	72	18.10	50.69
18. PBT	0	*	*	0	0	0	0	0	0	1	1		
19. Polycarbonate	0	*	*	0	0	0	0	0	0	0	0		
Total Other Petro-based Chemicals	2169	2244	2272	1108	1679	1739	1940	1979	1970	1963	2159	10.00	95.02
(\$) : Includes capacity of all the units producing PFY, NFY, NIY and PPFY under broadbanding as Synthetic Filament Yarn : * Inclues capacity with Nylon 6, 66													
(\$\$) : 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)													

Table -9 : Installed Capacities of Selected Major Petrochemicals (Group Wise) from 2008-09 to 2015-16

(Figures in 000'MT)

GROUP / PRODUCT	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
A : BASIC PETROCHEMICALS								
I : SYNTHETIC FIBRES	3240	3336	3527	3743	3892	3854	4298	4307
II : POLYMERS	5680	7030	8306	8351	8761	8905	8905	9768
III : SYNTHETIC RUBBER (ELASTOMERS)	128	128	128	128	124	244	425	425
IV : SYNTH. DETERGENT INTERMEDIATE	587	637	637	672	687	687	687	687
V : PERFORMANCE PLASTICS	1901	1901	2070	2201	2452	2454	2479	2514
MAJOR PETROCHEMICALS (I TO V)	11535	13032	14669	15095	15916	16144	16794	17702
B : INTERMEDIATES								
VI : FIBRE INTERMEDIATES	4054	4854	5034	5034	5034	5067	5067	5067
VII : OLEFINS	5343	6559	7864	7864	8304	8484	8484	9462
VIII : AROMATICS	4892	4939	5066	5069	5070	5077	6274	6304
C : OTHER PETRO-BASED CHEMICALS	1783	1955	2028	2062	2121	2169	2244	2272

Table- 10: Consumption of Selected Major Petrochemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT NAME	CONSUMPTION $\underline{\text{₹}}$							
	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
I. SYNTHETIC FIBRE								
ACRYLIC FIBRE	85	95	75	70	85	96	89	97
POLYESTER STAPLE FIBREFILL	51	54	53	49	51	56	57	51
NYLON FILAMENT YARN	32	35	49	51	44	47	58	65
NYLON INDUSTRIAL YARN/TYRE CORD	78	107	105	102	103	108	103	98
POLYESTER FILAMENT YARN	1276	1385	1446	1394	1351	1210	1603	1617
POLYESTER STAPLE FIBRE	723	834	916	822	833	847	920	958
POLYPROPYLENE FILAMENT YARN	10	9	6	8	6	5	4	1
POLYPROPYLENE STAPLE FIBRE	3	3	3	4	6	9	15	21
POLYSTER INDUSTRIAL YARN	2	5	13	14	15	15	17	15
Total	2260	2528	2668	2513	2496	2393	2864	2923
II. POLYMERS								
LOW DENSITY POLYETHYLENE	273	348	363	379	434	428	489	551
HIGH DENSITY POLYTHYLENE	1115	1303	1268	1302	1657	1657	1947	2123
POLYESTYRENE	194	232	262	257	252	224	247	265
POLYPROPYLENE (INC. CO-POLYMER)	1901	2382	2579	2830	3176	3276	3500	4250
EXPANDABLE POLYESTYRENE	53	66	78	77	82	78	79	85
POLY VINYL CHLORIDE	1388	1738	1939	2144	2389	2574	2622	2936
LINEAR LOW DENSITY POLYTHYLENE	1013	1059	1467	1474	1529	1523	1450	1779
PVC COMPOUND	41	70	65	59	59	54	58	66
Total	5977	7197	8021	8522	9576	9813	10391	12055
III. SYNTHETIC RUBBER								
STYRENE BUTADIENE RUBBER	104	157	195	214	207	244	263	267
POLY BUTADIENE RUBBER	94	122	123	145	147	167	176	183
ETHYL PROPYLENE DIMERS	13	19	26	26	27	28	30	37
ETHYL VINYL ACETATE	88	78	100	95	118	125	145	166
NITRILE BUTADIENE RUBBER	17	25	22	9	26	30	27	52
BUTYL RUBBER	53	66	70	82	78	79	83	91
Total	371	467	537	571	604	672	724	795
IV. SYNTHETIC DETERGENT INTERMEDIATES								
LINEAR ALKYL BENZENE	420	461	420	486	532	497	517	586
ETHYLENE OXIDE	117	154	163	169	171	190	185	188
Total	538	615	583	655	704	687	702	774
V. PERFOR MANCE PLASTICS								
ABS RESIN	88	114	131	134	147	165	177	207

Table- 10: Consumption of Selected Major Petrochemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT NAME	CONSUMPTION ₹							
	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
NYLON-6	47	58	77	86	97	119	137	150
POLYMETHYL METHACRYLATE	3	4	15	10	11	12	7	13
STYRENE ACRYLONITRILE	64	74	87	82	86	93	95	108
NYLON 6,6	1	1	1	1	1	1	1	1
POLYESTER CHIPS/PET CHIPS	960	1203	1247	1218	1243	1123	1154	792
POLYTETRAFLUOROETHYLENE(PTFE)	3	4	8	12	8	9	6	5
Total	1166	1459	1565	1542	1593	1521	1577	1275
TOTAL BASIC MAJOR PETROCHEMICALS								
(I+II+III+IV+V)	10312	12265	13375	13804	14972	15086	16258	17822
FIBRE INTERMEDIATE								
ACRYLONITRILE	109	104	110	110	113	138	131	160
CAPROLACTUM	94	122	115	110	111	108	119	131
DIMETHYL TEREPHTHALATE	4	4	4	3	2	2	2	2
MONO EHYLENE GLYCOL	1173	1415	1482	1565	1644	1823	1931	2198
PURIFIED TEREPHTHALIC ACID	2295	3460	3934	3888	4138	4455	4800	3956
Total	3675	5105	5646	5675	6009	6525	6984	6447
OLEFINS								
BUTADIENE	98	95	111	133	127	117	170	215
ETHYLENE	2659	2550	2780	3334	3338	3371	3236	3743
PROPYLENE	1888	2739	2957	3558	3736	3988	3872	4446
Total	4644	5384	5848	7026	7201	7477	7278	8404
AROMATICS								
BENZENE	522	546	426	544	446	400	518	418
MIXED XYLENE	25	120	53	58	59	66	206	269
ORTHO-XYLENE	207	221	98	238	279	228	271	300
TOLUENE	282	334	312	372	410	369	386	454
PARAXYLENE	1899	2054	2175	2228	2345	2220	2392	3214
Total	2935	3274	3064	3440	3538	3284	3773	4655
OTHER PETRO-BASED CHEMICALS								
DIETHYLENE GLYCOL	58	69	73	99	103	107	101	114
DIACETONE ALCOHOL	8	9	4	5	3	0	0	0
ETHYLENE DICHLORIDE	487	637	739	699	672	718	751	862
BUTANOL	33	42	37	50	46	48	60	73
OXO ALCOHOL	0	1	0	0	1	1	0	1
2-ETHYL HEXANOL	44	54	63	78	108	120	142	153
VINYL CHLORIDE MONOMER	424	829	1057	992	965	1039	1036	1140

Table- 10: Consumption of Selected Major Petrochemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT NAME	CONSUMPTION [§]							
	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
EPICHLHYDRINE	22	24	28	28	30	23	34	43
ISO BUTYLENE	33	40	43	23	9	21	13	16
METAXYLENE	-6	0	-108	-83	-37	3	1	3
METHYL ISOBUTYL KETONE	15	17	16	19	18	18	23	27
PBT	0	0	0	0	0	0	1	1
PIB	0	0	0	1	6	4	6	8
POLYCARBONATE	41	53	102	114	120	121	122	134
PROPYLENE OXIDE	33	42	45	44	43	45	60	51
PROPYLENE GLYCOL	41	47	50	54	53	57	64	67
POLYVINYL ACETATE RESIN	8	4	-1	-6	-10	-11	-11	-8
UNSATURATED POLYSTER RESIN	25	35	28	25	25	20	16	18
METHYL METHACRYLATE	3	5	5	4	3	3	3	2
ISO-BUTANOL	3	3	3	2	2	1	1	2
C4-RAFFINATE	55	65	71	209	395	393	365	429
CELLULOSE ACETATE SHEET	0	0	0	0	1	1	1	1
MELAMINE MOULDING POWDER	2	4	5	7	8	8	4	4
POLYACETAL RESIN	11	15	18	20	26	26	32	35
PHTHALIC ANHYDRIDE	202	240	295	263	286	296	305	345
STYRENE	391	452	457	513	574	570	611	717
VINYL ACTATE MONOMER	-258	74	84	122	126	143	138	140
ISOPROPANOL	70	91	101	95	122	124	132	155
POLYOL	70	83	146	160	179	180	201	237
Total	1815	2935	3362	3540	3878	4077	4211	4770

§ Derived consumption as Production + Imports - Exports

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Section – IV

Foreign Trade

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Table- 11: Exports and Imports of Chemicals (excluding Pharmaceutical Products and Fertilizers) during 2008-09 to 2015-16

Values in Rs. Crore

HS Code	Commodity	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	CARG (%) (15-16/08-09)
	Total National Exports of which	840755	845534	1136964	1465959	1634318	1905011	1896348	1714618	10.7
28	INORGANIC CHEMICALS	5166	3971	7991	8667	7176	8258	8749	7908	6.3
29	ORGANIC CHEMICALS	34060	35241	40235	56179	65865	72860	73069	75320	12.0
32	TANNING OR DYEING	5899	6556	7720	9336	11372	15455	17206	16064	15.4
38	MISCELLANEOUS CHEMICAL PRODUCTS.	8615	8611	9409	12485	15545	18694	19432	20068	12.8
39	PLASTIC AND ARTICLES THEREOF.	11502	13012	17966	25312	28012	34154	31022	34308	16.9
4002	SYNTHETIC RUBBER AND FACTICE	138	136	175	286	181	245	379	439	18.0
54	MAN-MADE FILAMENTS.	7060	9541	10469	12467	12112	15575	14621	13658	9.9
55	MAN-MADE STAPLE FIBRES.	5664	6719	8244	10599	10565	12621	13334	13616	13.3
A: Total Chemicals and Chemical Products		78104	83788	102207	135330	150829	177862	177813	181381	12.8
	% share in total export	9.3	9.9	9.0	9.2	9.2	9.3	9.4	10.6	
	Total National Imports of which	1374436	1363736	1683467	2345463	2669162	2715434	2737087	2488007	8.8
28	INORGANIC CHEMICALS	21492	16270	17236	27792	28770	29063	31407	33163	6.4
29	ORGANIC CHEMICALS	38853	44505	57550	69144	85439	103157	108351	101941	14.8
32	TANNING OR DYEING	3824	4328	5434	7097	8004	9254	9821	10467	15.5
38	MISCELLANEOUS CHEMICAL PRODUCTS.	10688	11579	13935	17855	20650	23107	25493	27207	14.3
39	PLASTIC AND ARTICLES THEREOF.	20385	26129	34477	40578	52283	61072	71396	74556	20.4
4002	SYNTHETIC RUBBER AND FACTICE	3021	3209	5141	7731	7562	7339	6697	5205	8.1
54	MAN-MADE FILAMENTS.	2370	2638	3024	3725	4149	4597	5042	4878	10.9
55	MAN-MADE STAPLE FIBRES.	1264	1454	1935	2498	3052	3722	4539	4400	19.5
B: Total Chemicals and Chemical Products		101898	110113	138731	176419	209909	241311	262744	261817	14.4
	% share in total import	7.4	8.1	8.2	7.5	7.9	8.9	9.6	10.5	

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

Table- 12: Exports and Imports of Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers) during 2008-09 to 2015-16

Values in Rs. Crore

HS Code	Commodity	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	CARG (%) (15-16/08-09)
	Total National Exports of which	840755	845534	1136964	1465959	1634318	1905011	1896348	1714618	10.7
28,29,32,38,4002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	78104	83788	102207	135330	150829	177862	177813	181381	12.8
	% share in total exports	9.3	9.9	9.0	9.2	9.2	9.3	9.4	10.6	
30	Pharmaceutical Products	23379	24612	30383	40817	54774	67404	70815	84466	20.1
	% share in total exports	2.8	2.9	2.7	2.8	3.4	3.5	3.7	4.9	
31	Fertilisers	337	512	236	397	480	492	555	673	10.4
	% share in total exports	0.04	0.06	0.02	0.03	0.03	0.03	0.03	0.04	
A: Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		101820	108913	132827	176544	206082	245758	249183	266520	14.7
	% share in total exports	12.11	12.88	11.68	12.04	12.61	12.90	13.14	15.54	
	Total National Imports of which	1374436	1363736	1683467	2345463	2669162	2715434	2737087	2488007	8.8
28,29,32,38,4002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	101898	110113	138731	176419	209909	241311	262744	261817	14.4
	% share in total imports	7.4	8.1	8.2	7.5	7.9	8.9	9.6	10.5	
30	Pharmaceutical Products	4262	5197	5504	8131	9522	9371	9961	10742	14.1
	% share in total imports	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.4	
31	Fertilisers	54837	28480	28322	44996	40412	32639	39074	45973	-2.5
	% share in total imports	3.99	2.09	1.68	1.92	1.51	1.20	1.43	1.85	
B: Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		160998	143790	172557	229546	259844	283322	311779	318532	10.2
	% share in total imports	11.71	10.54	10.25	9.79	9.74	10.43	11.39	12.80	

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

Table- 12A: Net Imports of Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers) during 2008-09 to 2015-16

Values in Rs. Crore

HS Code	Commodity	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
	Total National Net Imports of which	533680	518202	546503	879504	1034844	810423	840738	773390
28	INORGANIC CHEMICALS	16327	12298	9246	19125	21594	20805	22658	25255
29	ORGANIC CHEMICALS	4793	9264	17315	12965	19574	30296	35282	26621
32	TANNING OR DYEING	-2075	-2228	-2286	-2240	-3368	-6201	-7385	-5597
38	MISCELLANEOUS CHEMICAL PRODUCTS.	2073	2968	4526	5370	5105	4413	6061	7140
39	PLASTIC AND ARTICLES THEREOF.	8884	13117	16511	15266	24271	26918	40373	40248
4002	SYNTHETIC RUBBER AND FACTICE	2883	3073	4966	7445	7381	7094	6318	4766
54	MAN-MADE FILAMENTS.	-4690	-6903	-7445	-8742	-7964	-10978	-9579	-8780
55	MAN-MADE STAPLE FIBRES.	-4399	-5265	-6309	-8101	-7513	-8899	-8795	-9216
Net Imports of Total Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)		23794	26325	36524	41089	59080	63449	84932	80436
% share in total national net imports		4.5	5.1	6.7	4.7	5.7	7.8	10.1	10.4
30	Pharmaceutical Products	-19117	-19416	-24879	-32686	-45252	-58032	-60854	-73724
31	Fertilisers	54500	27968	28085	44599	39933	32147	38519	45300
Net Imports of Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		59177	34877	39730	53002	53761	37564	62596	52012
% share in total national net imports		11.1	6.7	7.3	6.0	5.2	4.6	7.4	6.7

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

Table-13: Exports of Major Chemicals (Group Wise) during 2008-09 to 2015-16

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

GROUP	2008-2009		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	148176	25966	341816	36679	346968	44553	344596	51653	144954	33599	164213	35747	73639	17660	106744	29210
INORGANIC CHEMICALS	117515	54525	399143	103634	405998	132531	327280	162105	162645	99228	167449	116036	163592	100558	156683	74466
ORGANIC CHEMICALS	82862	87116	143494	99492	187390	164132	315492	264248	406944	373539	335353	343064	240545	249461	231728	216771
PESTICIDES & INSECTICIDES \$	112075	394695	127950	380807	125229	390996	153501	568869	179518	794635	206960	985161	230227	974682	266915	1126874
DYES & PIGMENTS	207047	438673	248917	483259	271612	567989	288392	661852	326035	816039	346539	1145588	353220	1285827	376046	1219795
EXPORTS OF MAJOR CHEMICALS	667675	1000975	1261320	1103871	1337197	1300201	1429261	1708727	1220096	2117040	1220514	2625596	1061223	2628188	1138116	2667116

Source: Imports & Exports data have been received from Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, and Kolkata. www.dgciskol@nic.in Dated 12.10.2015

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

Table-14: Imports of Major Chemicals (Group Wise) during 2008-09 to 2015-16

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

GROUP	2008-2009		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	511268	68431	867836	100179	630499	70565	658385	95789	995300	172682	874159	152967	1134146	206474	1117878	218199
INORGANIC CHEMICALS	314343	106899	356386	105857	454720	134307	478707	196837	689374	237352	873906	265840	911969	267873	1009821	237368
ORGANIC CHEMICALS	1638930	348150	1547520	328542	1638994	418374	2182271	627474	2486575	757437	2495989	957223	2885815	995356	3143476	865684
PESTICIDES & INSECTICIDE S \$	17836	113913	19584	154224	26868	196567	30255	231832	29789	263642	37099	335996	40674	374050	33868	390707
DYES & PIGMENTS	31513	83471	36447	104418	41349	122582	47548	148857	52236	183735	52315	208985	51935	214741	54691	219304
IMPORTS OF MAJOR CHEMICALS	2513890	720864	2827773	793220	2792430	942395	3397166	1300789	4253274	1614848	4333468	1921011	5024539	2058494	5359734	1931262

Source: Imports & Exports data have been received from Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, and Kolkata. www.dgciskol@nic.in Dated 12.10.2015

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

Table-15: Net Imports of Major Chemicals (Group Wise) during 2008-09 to 2015-16

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

GROUP	2008-2009		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	363092	42465	526020	63500	283531	26012	313789	44136	850346	139083	709946	117220	1060507	188814	1011134	188989
INORGANIC CHEMICALS	196828	52374	-42757	2223	48722	1776	151427	34732	526729	138124	706457	149804	748377	167315	853138	162902
ORGANIC CHEMICALS	1556068	261034	1404026	229050	1451604	254242	1866779	363226	2079631	383898	2160636	614159	2645270	745895	2911748	648913
PESTICIDES & INSECTICIDES \$	-94239	-280782	-108366	-226583	-98361	-194429	-123246	-337037	-149729	-530993	-169861	-649165	-189553	-600632	-233047	-736167
DYES & PIGMENTS	-175534	-355202	-212470	-378841	-230263	-445407	-240844	-512995	-273799	-632304	-294224	-936603	-301285	-1071086	-321355	-1000491
NET IMPORTS OF MAJOR CHEMICALS	1846215	-280111	1566453	-310651	1455233	-357806	1967905	-407938	3033178	-502192	3112954	-704585	3963316	-569694	4221616	-735855

Source: Imports & Exports data have been received from Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, and Kolkata. www.dgciskol@nic.in Dated 12.10.2015

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

Table 16 :- Exports of Major Chemicals during 2008-09 to 2015-16

PRODUCT	[QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	86204	10956	257219	20931	199765	18281	257622	31586	82144	12766	84254	12506	27720	5166	18613	3927
CAUSTIC SODA	56498	14356	76995	14342	143791	25699	82208	18977	59118	20166	76059	22568	42200	11973	82144	23807
LIQUID CHLORINE	5474	654	7602	1406	3412	573	4766	1090	3692	667	3900	673	3719	521	5987	1476
TOTAL	148176	25966	341816	36679	346968	44553	344596	51653	144954	33599	164213	35747	73639	17660	106744	29210
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	8417	7192	8127	4771	7068	3363	3362	2181	3755	2410	3658	2571	2831	1980	1796	1240
CALCIUM CARBIDE	250	87	971	346	961	348	1267	592	1758	853	268	148	412	230	371	206
CARBON BLACK	79603	35851	359840	87287	365478	114404	277698	142242	110697	79285	123679	88731	114119	77832	114668	55019
POTASSIUM CHLORATE	2629	1186	1811	763	1307	393	844	487	791	567	724	451	634	492	758	576
SODIUM CHLORATE	159	34	375	35	7	22	127	51	40	5	7	10	31	21	13	13
TITANIUM DIOXIDE	6835	6161	5942	5794	7491	8797	5009	7811	3470	5278	9051	12853	5158	7108	4436	5582
RED PHOSPHORUS	347	923	405	804	317	799	383	1133	471	1598	411	1557	360	1299	482	1777
HYDROGEN PEROXIDE	3470	825	2651	539	1952	454	2415	598	1789	483	544	217	244	143	351	222
CALCIUM CARBONATE	15805	2266	19021	3295	21417	3951	36175	7010	39874	8749	29107	9498	39803	11453	33808	9831
TOTAL	117515	54525	399143	103634	405998	132531	327280	162105	162645	99228	167449	116036	163592	100558	156683	74466
ORGANIC CHEMICALS																
ACETIC ACID	12589	5054	13022	4590	8368	2662	25887	8687	6617	2995	7338	3134	6489	3449	8378	5181
ACETIC ANHYDRIDE	4168	2314	1256	760	1902	880	2652	1373	3734	1855	6430	3470	20098	11565	18605	9941
ACETONE	1950	1088	501	277	2805	1250	1200	958	2660	1828	674	628	3182	2975	10778	6392
PHENOL	3195	3753	2720	3269	1293	2321	1146	2147	436	1028	2142	3230	2009	3338	6841	7379

Table 16 :- Exports of Major Chemicals during 2008-09 to 2015-16

PRODUCT	[QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
METHANOL	3264	846	45902	6426	43560	8787	120419	20481	184669	34456	81917	22584	49463	11525	44013	8196
FORMALDEHYDE	3256	380	3995	542	4275	533	4474	722	5041	961	6369	2020	7467	1213	8480	1383
NITROBENZENE	126	144	144	99	110	83	128	126	165	141	146	131	150	137	49	38
CITRIC ACID	338	235	1365	767	1795	1272	2745	1935	2411	1817	2013	1671	1737	1364	1487	1144
MALEIC ANHYDRIDE	274	232	115	80	66	57	38	32	23	27	27	36	37	47	80	67
PENTAERYTHRITOL	1325	1540	1195	1631	1539	2026	1353	1966	1385	2144	1460	2277	1557	2516	1632	2958
ANILINE	964	1191	249	291	1161	899	953	744	193	344	94	143	86	141	129	134
CHLORO METHANES	46	51	116	75	36	53	126	121	42	49	35	353	144	236	38	41
ISOBUTYLBENZENE	7516	6853	10801	9548	11459	9769	13920	14712	13314	17938	14156	21087	13944	19250	12572	14186
ONCB	267	225	636	357	428	243	323	168	378	319	2555	2428	2231	2283	843	883
PNCB	1880	1270	1075	533	1413	677	1272	693	2096	1442	2370	1763	843	564	1670	1114
MEK	304	466	111	139	56	184	428	501	408	390	460	2382	673	922	184	795
ACETALDEHYDE	244	149	19	20	84	352	241	908	239	1005	37	118	25	140	2	4
ETHANOLAMINES	1975	2017	585	1130	1149	1578	1752	3063	832	3173	1235	4665	1027	3696	1129	7119
ETHYL ACETATE	30753	13955	47114	20398	96996	46806	126601	64994	169166	88388	190187	103855	115096	67934	104814	54269
MENTHOL	6982	44793	11997	48341	8274	83459	9507	139774	12181	212575	14988	166411	13135	115160	8836	94548
ORTHO NITRO TOLUENE	1446	560	576	219	621	241	327	143	954	664	720	678	1152	1006	1168	999
TOTAL	82862	87116	143494	99492	187390	164132	315492	264248	406944	373539	335353	343064	240545	249461	231728	216771
PESTICIDES & INSECTICIDES																
D.D.T.	0	0	42	133	32	95	0	0	0	0	0	0	0	0	0	0
MALATHION	296	772	1040	1337	555	676	425	483	328	611	415	819	1260	2346	1010	1943

Table 16 :- Exports of Major Chemicals during 2008-09 to 2015-16

PRODUCT	[QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
DIMETHOATE	334	721	458	1181	359	614	4	9	69	182	184	679	369	1327	20	52
D.D.V.P.	1021	2329	837	1233	929	1288	1129	2024	543	1179	298	707	564	1449	550	1461
QUINALPHOS	202	614	344	924	673	2108	483	1490	463	1657	950	3360	996	3900	235	1036
ENDOSULPHAN	1348	2969	3916	9565	4701	9353	1612	3483	80	260	45	59	0	0	0	0
CYPERMETHRIN	10528	54444	13483	50852	10871	40665	10570	52655	10268	55107	11982	58546	10487	50407	8837	45949
FENTHION	0	0	23	16	0	0	0	0	0	0	0	0	0	0	0	0
OTHER PESTICIDES	14320	40916	12974	49719	22283	84569	27283	83613	33468	136414	48228	206246	37862	178366	41058	214054
OTHER INSECTICIDES	37110	183543	41630	159975	37925	150093	42940	259829	41853	335623	48918	372937	45483	344754	31146	276427
COPPER-OXYCHLORIDE	242	537	316	612	625	1403	434	1179	478	1231	417	1155	867	2311	810	1818
2, 4-D	3095	4348	8401	8818	8835	11013	13262	20823	15365	27427	14851	27924	10938	18095	19449	29770
ISOPROTURON	1642	3542	1811	3762	3351	6864	2239	6588	4181	13189	2114	7804	2150	7972	1087	3830
ALUMINIUM PHOSPHIDE	1592	4738	1906	6088	2158	6816	1969	7271	2341	9758	853	3703	223	562	64	226
METHYL BROMIDE	2	12	160	429	14	28	155	404	104	373	383	1333	551	1940	1274	4641
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	13125	39064	10051	27554	10535	40697	14971	68852	14452	85943	15005	130898	19150	151055	32381	266182
OTHER FUNGICIDE NES	27218	56146	30558	58609	21383	34714	36025	60166	55525	125681	62317	168991	99327	210198	128994	279485
TOTAL	112075	394695	127950	380807	125229	390996	153501	568869	179518	794635	206960	985161	230227	974682	266915	1126874
DYES & PIGMENTS																
AZO DYES	32784	63046	41323	71777	49700	88623	48638	89802	54228	111415	57392	172261	51902	194665	55327	161970
ACID DIRECT DYES(OTHER THAN AZO)	3890	9720	5144	10666	4220	8870	3264	7815	3629	9770	5637	21363	4004	20146	3559	17300
BASIC DYES	4355	6892	5062	7378	6141	9512	5655	9732	6957	14815	7148	19082	7646	21701	8173	23896

Table 16 :- Exports of Major Chemicals during 2008-09 to 2015-16

PRODUCT	[QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
DISPERSE DYES	4735	12218	5064	11716	5700	15642	6452	18596	7017	19417	9248	33190	12065	48545	13117	52818
FAST COLOUR BASES	2116	6242	2629	6391	2683	6939	2815	7442	3106	9349	2619	10191	2806	11890	2262	11868
OIL SOLUBLE (SOLVENT DYES)	2245	8340	3106	10112	4045	13960	5158	17215	4665	17828	4965	23306	6826	32614	6123	31703
OPTICAL WHITENING AGENTS	15171	21115	19045	22637	23625	25112	20346	22941	23049	29156	23381	36889	27211	44223	25203	46519
ORGANIC PIGMENT	265	769	559	999	296	648	330	1383	60	386	15	100	191	500	75	531
PIGMENT EMULSION	49707	149583	56678	160071	67539	212430	65704	253341	69919	295002	71335	353119	76407	365943	81536	374190
REACTIVE DYES	65385	103675	77024	119712	69031	113510	77313	137604	98440	200414	110018	340284	107369	392147	113224	344963
SULPHUR DYES (SULPHUR BLACK)	597	1031	934	944	1514	1277	747	838	889	1153	1141	1575	1993	2627	1472	1945
VAT DYES	1536	12160	1906	13292	2073	16295	2229	18768	1954	16816	1955	24387	2132	31855	1364	20523
SOLUBILISED VAT DYES	346	1322	337	897	481	1309	51	399	47	370	31	491	29	283	36	354
FOOD COLOURS	10103	24506	11355	26703	13211	29415	19012	42563	21786	51772	22893	65439	26034	77218	27101	79537
NAPTHOLS	667	2130	827	2466	608	1369	869	1634	1242	2754	887	2597	1139	3113	1489	3463
OTHER DYES	4348	9030	5485	9812	6991	13192	6852	13361	8050	16587	9558	23840	9612	27865	10159	22693
INORGANIC PIGMENTS	8797	6894	12439	7686	13754	9886	22957	18418	20997	19035	18316	17474	15854	10492	25826	25522
TOTAL	207047	438673	248917	483259	271612	567989	288392	661852	326035	816039	346539	1145588	353220	1285827	376046	1219795

Table17 - Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	358555	41202	555956	56283	489956	49573	445363	52829	692866	96965	569420	79817	725517	112616	633263	101707
CAUSTIC SODA	152446	27136	311417	43762	138481	20764	212642	42811	302385	75577	304653	73038	407981	93584	484133	116303
LIQUID CHLORINE	267	93	463	134	2062	228	380	149	49	140	86	112	648	274	482	189
TOTAL	511268	68431	867836	100179	630499	70565	658385	95789	995300	172682	874159	152967	1134146	206474	1117878	218199
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	23248	14241	24140	10624	13989	6597	28448	20188	26244	19086	24542	17383	30120	20259	27258	18102
CALCIUM CARBIDE	70860	25260	51598	16657	56479	19046	56500	21507	57865	24734	64239	26743	78332	31525	61935	25429
CARBON BLACK	61237	35998	73920	38260	74905	45674	124338	85053	143461	105503	145939	112823	139468	108915	124059	83401
POTASSIUM CHLORATE	22	8	7464	3693	7095	3171	6300	2991	7468	4217	7040	4357	6147	3856	3160	2026
SODIUM CHLORATE	19175	6513	22162	6635	24762	6655	25135	8251	25076	9375	28083	11570	21818	9085	17298	6400
TITANIUM DIOXIDE	14092	13794	15176	16563	18295	20938	22636	34902	17825	31788	16875	29196	17574	28243	16421	25709
RED PHOSPHORUS	280	966	353	674	384	775	388	808	298	735	266	750	36	98	0	0
HYDROGEN PEROXIDE	12334	2569	8784	1652	37074	9385	25313	6378	33129	8191	62527	16443	56276	14311	44084	11211
CALCIUM CARBONATE	113095	7550	152789	11099	221737	22066	189649	16759	378008	33723	524395	46575	562198	51581	715606	65090
TOTAL	314343	106899	356386	105857	454720	134307	478707	196837	689374	237352	873906	265840	911969	267873	1009821	237368
ORGANIC CHEMICALS																
ACETIC ACID	285037	69914	389650	82134	466097	96233	570040	152012	646738	171462	664797	197806	712384	234821	792775	206305
ACETIC ANHYDRIDE	37	19	895	498	771	401	1533	856	2042	1049	1792	985	2689	1538	2918	1780
ACETONE	68364	27260	80081	31181	78236	32100	100637	54505	95939	54615	116758	81421	126832	82658	138402	55796

Table17 - Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
PHENOL	92918	46763	103071	51907	123490	93671	146762	111194	172758	139980	214096	172402	200115	183502	248769	147715
METHANOL	1058866	125780	822248	89941	813422	103539	1199635	198749	1398982	260025	1310438	341804	1641624	319399	1711879	285259
FORMALDEHYDE	545	186	713	218	605	221	614	395	342	217	433	216	412	225	66	42
NITROBENZENE	84	39	1	2	0	0	22	36	0	0	0	4	1208	802	5838	2733
CITRIC ACID	34374	14281	40467	14750	44102	18562	53142	25921	56743	27338	64099	31694	67369	33345	75978	36119
MALEIC ANHYDRIDE	33009	18134	27693	14919	37973	24772	34584	25470	36864	35099	36751	39695	38388	35773	47399	31392
PENTAERYTHRITOL	6855	5354	11786	6659	13961	8764	15059	12162	14650	13819	15650	16423	13681	14646	19486	21468
ANILINE	18798	12312	19067	9902	24012	14563	15310	10544	15441	14410	31742	34853	36095	36876	38341	26965
CHLORO METHANES	100	159	325	364	502	435	249	268	153	356	143	296	113	289	608	364
ISOBUTYLBENZENE	2	10	36	26	0	0	0	0	0	0	26	19	0	0	0	0
ONCB	5358	4008	3760	2180	3598	1697	2336	1092	2089	1313	672	589	395	410	237	192
PNCB	1551	658	2868	1027	1564	776	347	187	0	0	398	295	3838	2301	8408	3886
MEK	20668	13121	24556	11352	21384	15286	30220	24334	31597	25151	27239	23186	27539	25599	40883	26950
ACETALDEHYDE	62	420	94	815	61	576	67	240	49	230	97	436	53	176	74	299
ETHANOLAMINES	3334	5144	4961	3701	6595	5132	6488	5706	10435	8562	10023	10652	11286	17183	10072	10321
ETHYL ACETATE	6721	3371	14929	6555	2344	1202	5008	2732	1405	1102	240	466	201	453	290	909
MENTHOL	97	401	80	329	52	369	159	1051	329	2702	457	3889	507	4307	936	7112
ORTHO NITRO TOLUENE	2150	816	239	82	225	75	59	20	19	7	138	92	1086	1053	117	77
TOTAL	1638930	348150	1547520	328542	1638994	418374	2182271	627474	2486575	757437	2495989	957223	2885815	995356	3143476	865684
PESTICIDES & INSECTICIDES																

Table17 - Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
D.D.T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MALATHION	0	0	40	58	52	50	0	0	0	0	0	0	0	0	0	0
DIMETHOATE	344	650	133	225	58	109	152	299	182	422	46	106	0	0	0	0
D.D.V.P.	20	31	20	28	45	66	24	46	0	0	70	99	20	36	64	116
QUINALPHOS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENDOSULPHAN	0	0	24	46	192	592	0	0	0	0	0	0	0	0	0	0
CYPERMETHRIN	31	527	29	455	17	282	0	4	8	20	4	11	0	0	0	0
FENTHION	0	2	0	0	0	0	0	0	0	0	35	173	50	236	0	0
OTHER PESTICIDES	528	1726	804	2127	651	1495	2340	7815	1263	6928	2255	13747	2007	12072	1318	12700
OTHER INSECTICIDES	12269	78658	11628	114036	17257	142478	18388	156952	17157	173226	19563	194422	19369	205845	15634	213829
COPPER-OXYCHLORIDE	22	53	0	0	1	7	0	2	0	1	48	122	0	0	0	0
2, 4-D	4	12	62	72	204	486	0	0	0	78	0	0	34	77	72	123
ISOPROTURON	0	0	0	0	23	64	0	0	0	0	0	0	0	0	0	0
ALUMINIUM PHOSPHIDE	362	3285	153	2102	187	2183	31	561	23	741	8	61	3	54	6	98
METHYL BROMIDE	312	528	296	581	448	955	655	1667	779	2591	460	1652	269	1150	53	250
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	2149	21738	4189	23582	3775	27693	4689	36838	7107	57625	10056	85938	12294	86257	10171	85167
OTHER FUNGICIDE NES	1795	6703	2206	10912	3958	20107	3976	27648	3270	22010	4554	39665	6628	68323	6550	78424
TOTAL	17472	113232	19391	153913	26713	196342	30079	231487	29607	263220	36983	335791	40654	374014	33804	390591
DYES & PIGMENTS																
AZO DYES	583	2101	506	1829	536	2055	769	2556	527	2844	669	3559	1114	5148	716	4016

Table17 - Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ACID DIRECT DYES(OTHER THAN AZO)	501	1101	660	958	643	1205	746	1454	678	1643	729	2136	436	2036	312	1685
BASIC DYES	814	1799	1560	4228	1275	3970	1401	4807	1189	6195	1075	6569	724	5266	475	4135
DISPERSE DYES	7205	12543	8013	14823	8378	17490	10534	22582	11118	28720	8788	33194	4671	26330	6199	28647
FAST COLOUR BASES	249	591	383	978	367	867	292	801	374	1308	499	2653	327	2864	510	3058
OIL SOLUBLE (SOLVENT DYES)	494	2657	608	3567	801	4615	1240	6292	1239	7434	1131	7329	782	6414	689	5967
OPTICAL WHITENING AGENTS	378	2264	469	2692	499	3073	392	2755	489	4302	675	4708	565	4442	664	5376
ORGANIC PIGMENT	670	968	418	619	111	537	186	817	124	561	178	694	142	575	190	889
PIGMENT EMULSION	4808	23398	4930	27269	6659	33094	8376	40159	6955	43711	7069	46089	6663	48423	6578	47122
REACTIVE DYES	2081	9235	2181	12069	2118	12646	2151	11667	2935	19312	3352	24425	3146	26556	3148	27009
SULPHUR DYES (SULPHUR BLACK)	2240	1471	2574	2018	1900	1680	2167	1888	2189	3318	1781	2498	1151	2537	1332	2636
VAT DYES	2788	8125	3599	11609	4430	13255	6379	16986	10201	27519	13801	36889	17449	43388	20580	48846
SOLUBILISED VAT DYES	90	448	26	220	54	266	193	698	107	483	91	418	82	252	473	1007
FOOD COLOURS	351	1917	387	2481	623	1825	290	1768	367	2778	391	2978	653	3872	1083	5225
NAPTHOLS	993	2159	1275	2721	1200	3492	916	2147	1040	3178	1142	4190	1024	3896	1051	3824
OTHER DYES	493	1725	434	1648	344	1737	462	1661	905	2709	291	1927	271	1868	177	1531
INORGANIC PIGMENTS	6775	10969	8424	14689	11411	20775	11054	29819	11799	27720	10653	28729	12735	30874	10514	28331
TOTAL	31513	83471	36447	104418	41349	122582	47548	148857	52236	183735	52315	208985	51935	214741	54691	219304

Table 18 Net Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	272351	30246	298737	35352	290191	31292	187741	21243	610722	84199	485166	67311	697797	107450	614650	97780
CAUSTIC SODA	95948	12780	234422	29420	-5310	-4935	130434	23834	243267	55411	228594	50470	365781	81611	401989	92496
LIQUID CHLORINE	-5207	-561	-7139	-1272	-1350	-345	-4386	-941	-3643	-527	-3814	-561	-3071	-247	-5505	-1287
TOTAL	363092	42465	526020	63500	283531	26012	313789	44136	850346	139083	709946	117220	1060507	188814	1011134	188989
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	14831	7049	16013	5853	6921	3234	25086	18007	22489	16676	20884	14812	27289	18279	25462	16862
CALCIUM CARBIDE	70610	25173	50627	16311	55518	18698	55233	20915	56107	23881	63971	26595	77920	31295	61564	25223
CARBON BLACK	-18366	147	-285920	-49027	-290573	-68730	-153360	-57189	32764	26218	22260	24092	25349	31083	9391	28382
POTASSIUM CHLORATE	-2607	-1178	5653	2930	5788	2778	5456	2504	6677	3650	6316	3906	5513	3364	2402	1450
SODIUM CHLORATE	19016	6479	21787	6600	24755	6633	25008	8200	25036	9370	28076	11560	21787	9064	17285	6387
TITANIUM DIOXIDE	7257	7633	9234	10769	10804	12141	17627	27091	14355	26510	7824	16343	12416	21135	11985	20127
RED PHOSPHORUS	-67	43	-52	-130	67	-24	5	-325	-173	-863	-145	-807	-324	-1201	-482	-1777
HYDROGEN PEROXIDE	8864	1744	6133	1113	35122	8931	22898	5780	31340	7708	61983	16226	56032	14168	43733	10989
CALCIUM CARBONATE	97290	5284	133768	7804	200320	18115	153474	9749	338134	24974	495288	37077	522395	40128	681798	55259
TOTAL	196828	52374	-42757	2223	48722	1776	151427	34732	526729	138124	706457	149804	748377	167315	853138	162902
ORGANIC CHEMICALS																
ACETIC ACID	272448	64860	376628	77544	457729	93571	544153	143325	640121	168467	657459	194672	705895	231372	784397	201124
ACETIC ANHYDRIDE	-4131	-2295	-361	-262	-1131	-479	-1119	-517	-1692	-806	-4638	-2485	-17409	-10027	-15687	-8161
ACETONE	66414	26172	79580	30904	75431	30850	99437	53547	93279	52787	116084	80793	123650	79683	127624	49404
PHENOL	89723	43010	100351	48638	122197	91350	145616	109047	172322	138952	211954	169172	198106	180164	241928	140336

Table 18 Net Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
METHANOL	1055602	124934	776346	83515	769862	94752	1079216	178268	1214313	225569	1228521	319220	1592161	307874	1667866	277063
FORMALDEHYDE	-2711	-194	-3282	-324	-3670	-312	-3860	-327	-4699	-744	-5936	-1804	-7055	-988	-8414	-1341
NITROBENZENE	-42	-105	-143	-97	-110	-83	-106	-90	-165	-141	-146	-127	1058	665	5789	2695
CITRIC ACID	34036	14046	39102	13983	42307	17290	50397	23986	54332	25521	62086	30023	65632	31981	74491	34975
MALEIC ANHYDRIDE	32735	17902	27578	14839	37907	24715	34546	25438	36841	35072	36724	39659	38351	35726	47319	31325
PENTAERYTHRITOL	5530	3814	10591	5028	12422	6738	13706	10196	13265	11675	14190	14146	12124	12130	17854	18510
ANILINE	17834	11121	18818	9611	22851	13664	14357	9800	15248	14066	31648	34710	36009	36735	38212	26831
CHLORO METHANES	54	108	209	289	466	382	123	147	111	307	108	-57	-31	53	570	323
ISOBUTYLBENZENE	-7514	-6843	-10765	-9522	-11459	-9769	-13920	-14712	-13314	-17938	-14130	-21068	-13944	-19250	-12572	-14186
ONCB	5091	3783	3124	1823	3170	1454	2013	924	1711	994	-1883	-1839	-1836	-1873	-606	-691
PNCB	-329	-612	1793	494	151	99	-925	-506	-2096	-1442	-1972	-1468	2995	1737	6738	2772
MEK	20364	12655	24445	11213	21328	15102	29792	23833	31189	24761	26779	20804	26866	24677	40699	26155
ACETALDEHYDE	-182	271	75	795	-23	224	-174	-668	-190	-775	60	318	28	36	72	295
ETHANOLAMINES	1359	3127	4376	2571	5446	3554	4736	2643	9603	5389	8788	5987	10259	13487	8943	3202
ETHYL ACETATE	-24032	-10584	-32185	-13843	-94652	-45604	-121593	-62262	-167761	-87286	-189947	-103389	-114895	-67481	-104524	-53360
MENTHOL	-6885	-44392	-11917	-48012	-8222	-83090	-9348	-138723	-11852	-209873	-14531	-162522	-12628	-110853	-7900	-87436
ORTHO NITRO TOLUENE	704	256	-337	-137	-396	-166	-268	-123	-935	-657	-582	-586	-66	47	-1051	-922
TOTAL	1556068	261034	1404026	229050	1451604	254242	1866779	363226	2079631	383898	2160636	614159	2645270	745895	2911748	648913
PESTICIDES & INSECTICIDES																
D.D.T	0	0	-42	-133	-32	-95	0	0	0	0	0	0	0	0	0	0
MALATHION	-296	-772	-1000	-1279	-503	-626	-425	-483	-328	-611	-415	-819	-1260	-2346	-1010	-1943

Table 18 Net Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
DIMETHOATE	10	-71	-325	-956	-301	-505	148	290	113	240	-138	-573	-369	-1327	-20	-52
D.D.V.P.	-1001	-2298	-817	-1205	-884	-1222	-1105	-1978	-543	-1179	-228	-608	-544	-1413	-486	-1345
QUINALPHOS	-202	-614	-344	-924	-673	-2108	-483	-1490	-463	-1657	-950	-3360	-996	-3900	-235	-1036
ENDOSULPHAN	-1348	-2969	-3892	-9519	-4509	-8761	-1612	-3483	-80	-260	-45	-59	0	0	0	0
CYPERMETHRIN	-10497	-53917	-13454	-50397	-10854	-40383	-10570	-52651	-10260	-55087	-11978	-58535	-10487	-50407	-8837	-45949
FENTHION	0	2	-23	-16	0	0	0	0	0	0	35	173	50	236	0	0
OTHER PESTICIDES	-13792	-39190	-12170	-47592	-21632	-83074	-24943	-75798	-32205	-129486	-45973	-192499	-35855	-166294	-39740	-201354
OTHER INSECTICIDES	-24841	-104885	-30002	-45939	-20668	-7615	-24552	-102877	-24696	-162397	-29355	-178515	-26114	-138909	-15512	-62598
COPPER-OXYCHLORIDE	-220	-484	-316	-612	-624	-1396	-434	-1177	-478	-1230	-369	-1033	-867	-2311	-810	-1818
2, 4-D	-3091	-4336	-8339	-8746	-8631	-10527	-13262	-20823	-15365	-27349	-14851	-27924	-10904	-18018	-19377	-29647
ISOPROTURON	-1642	-3542	-1811	-3762	-3328	-6800	-2239	-6588	-4181	-13189	-2114	-7804	-2150	-7972	-1087	-3830
ALUMINIUM PHOSPHIDE	-1230	-1453	-1753	-3986	-1971	-4633	-1938	-6710	-2318	-9017	-845	-3642	-220	-508	-58	-128
METHYL BROMIDE	310	516	136	152	434	927	500	1263	675	2218	77	319	-282	-790	-1221	-4391
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	-10976	-17326	-5862	-3972	-6760	-13004	-10282	-32014	-7345	-28318	-4949	-44960	-6856	-64798	-22210	-181015
OTHER FUNGICIDE NES	-25423	-49443	-28352	-47697	-17425	-14607	-32049	-32518	-52255	-103671	-57763	-129326	-92699	-141875	-122444	-201061
TOTAL	-94239	-280782	-108366	-226583	-98361	-194429	-123246	-337037	-149729	-530993	-169861	-649165	-189553	-600632	-233047	-736167
DYES & PIGMENTS																
AZO DYES	-32201	-60945	-40817	-69948	-49164	-86568	-47869	-87246	-53701	-108571	-56723	-168702	-50788	-189517	-54611	-157954
ACID DIRECT DYES(OTHER THAN AZO)	-3389	-8619	-4484	-9708	-3577	-7665	-2518	-6361	-2951	-8127	-4908	-19227	-3568	-18110	-3247	-15615
BASIC DYES	-3541	-5093	-3502	-3150	-4866	-5542	-4254	-4925	-5768	-8620	-6073	-12513	-6922	-16435	-7698	-19761
DISPERSE DYES	2470	325	2949	3107	2678	1848	4082	3986	4101	9303	-460	4	-7394	-22215	-6918	-24171

Table 18 Net Imports of Major Chemicals (Product-wise) during 2008-09 to 2015-16

PRODUCT	QTY in MT & VAL in Rs. Lakh]															
	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
FAST COLOUR BASES	-1867	-5651	-2246	-5413	-2316	-6072	-2523	-6641	-2732	-8041	-2120	-7538	-2479	-9026	-1752	-8810
OIL SOLUBLE (SOLVENT DYES)	-1751	-5683	-2498	-6545	-3244	-9345	-3918	-10923	-3426	-10394	-3834	-15977	-6044	-26200	-5434	-25736
OPTICAL WHITENING AGENTS	-14793	-18851	-18576	-19945	-23126	-22039	-19954	-20186	-22560	-24854	-22706	-32181	-26646	-39781	-24539	-41143
ORGANIC PIGMENT	405	199	-141	-380	-185	-111	-144	-566	64	175	163	594	-49	75	115	358
PIGMENT EMULSION	-44899	-126185	-51748	-132802	-60880	-179336	-57328	-213182	-62964	-251291	-64266	-307030	-69744	-317520	-74958	-327068
REACTIVE DYES	-63304	-94440	-74843	-107643	-66913	-100864	-75162	-125937	-95505	-181102	-106666	-315859	-104223	-365591	-110076	-317954
SULPHUR DYES (SULPHUR BLACK)	1643	440	1640	1074	386	403	1420	1050	1300	2165	640	923	-842	-90	-140	691
VAT DYES	1252	-4035	1693	-1683	2357	-3040	4150	-1782	8247	10703	11846	12502	15317	11533	19216	28323
SOLUBILISED VAT DYES	-256	-874	-311	-677	-427	-1043	142	299	60	113	60	-73	53	-31	437	653
FOOD COLOURS	-9752	-22589	-10968	-24222	-12588	-27590	-18722	-40795	-21419	-48994	-22502	-62461	-25381	-73346	-26018	-74312
NAPTHOLS	326	29	448	255	592	2123	47	513	-202	424	255	1593	-115	783	-438	361
OTHER DYES	-3855	-7305	-5051	-8164	-6647	-11455	-6390	-11700	-7145	-13878	-9267	-21913	-9341	-25997	-9982	-21162
INORGANIC PIGMENTS	-2022	4075	-4015	7003	-2343	10889	-11903	11401	-9198	8685	-7663	11255	-3119	20382	-15312	2809
TOTAL	-175534	-355202	-212470	-378841	-230263	-445407	-240844	-512995	-273799	-632304	-294224	-936603	-301285	-1071086	-321355	-1000491

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODA ASH	NEPAL	6554.357	1354.618
	BANGLADESH PR	5971.3	1050.366
	SRI LANKA DSR	4324.226	849.834
	VIETNAM SOC REP	462.105	107.084
	BAHARAIN IS	305	63.028
	Product Total	17616.988	3424.93
CAUSTIC SODA	TANZANIA REP	14790.322	4074.241
	KENYA	12058.421	3338.24
	SINGAPORE	9930.446	2363.351
	NEPAL	7653.325	2206.963
	UGANDA	7272.311	2069.474
	Product Total	51704.825	14052.269
LIQUID CHLORINE	U ARAB EMTS	3117.3	245.988
	KENYA	632.8	178.318
	SRI LANKA DSR	630	463.106
	PHILIPPINES	424.6	106.627
	MAURITIUS	405.2	31.921
	Product Total	5209.9	1025.96
ALUMINIUM FLUORIDE	U ARAB EMTS	1520	1017.857
	JAPAN	200	195.454
	NIGERIA	75	24.374
	NEPAL	0.45	1.542
	IRAN	0.3	0.318
	Product Total	1795.75	1239.545
CALCIUM CARBIDE	BANGLADESH PR	144	92.66
	OMAN	60	32.334
	U ARAB EMTS	48	24.836
	CHINA P RP	45	15.606
	NEPAL	34.016	18.543
	Product Total	331.016	183.979
CARBON BLACK	SRI LANKA DSR	21558.709	11050.381
	VIETNAM SOC REP	16941.369	7300.45
	KOREA RP	14398.3	7223.419
	JAPAN	12407.864	5677.825
	TURKEY	9918.725	4077.311
	Product Total	75224.967	35329.386
	PHILIPPINES	273	217.228

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POTASSIUM CHLORATE	TANZANIA REP	108	68.5
	KENYA	75	63.984
	U S A	73	58.418
	INDONESIA	51	30.333
	Product Total	580	438.463
SODIUM CHLORATE	NEPAL	9.585	3.114
	KENYA	2	4.669
	THAILAND	1.02	4.636
	NIGERIA	0.25	0.509
	GERMANY	0.05	0.019
	Product Total	12.905	12.947
TITANIUM DIOXIDE	U S A	1257.505	1493.646
	ITALY	977	1322.731
	JAPAN	496.12	558.308
	THAILAND	320.151	324.949
	SRI LANKA DSR	204.386	255.996
	Product Total	3255.162	3955.63
RED PHOSPHORUS	U S A	104.864	347.871
	INDONESIA	52	211.301
	SOUTH AFRICA	42.03	174.915
	CANADA	42	139.263
	PHILIPPINES	39.501	147.12
	Product Total	280.395	1020.47
HYDROGEN PEROXIDE	KENYA	130.2	57.895
	U ARAB EMTS	47.23	25.769
	TANZANIA REP	22.19	11.33
	SRI LANKA DSR	22.181	6.504
	UGANDA	21.2	8.744
	Product Total	243.001	110.242
CALCIUM CARBONATE	NEPAL	10287.82	2460.384
	BANGLADESH PR	6691.944	1432.204
	NIGERIA	3353.96	667.78
	SAUDI ARAB	2309.804	1195.963
	KENYA	1437.065	349.127
	Product Total	24080.593	6105.458
	BANGLADESH PR	2500.57	1021.248
	U ARAB EMTS	959.367	380.047

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACETIC ACID	EGYPT A RP	667.3	248.608
	OMAN	500.2	250.038
	SAUDI ARAB	496.795	198.754
	Product Total	5124.232	2098.695
ACETIC ANHYDRIDE	BELGIUM	16889	8796.203
	BANGLADESH PR	818.2	583.051
	THAILAND	371	233.819
	SPAIN	239.41	142.173
	ITALY	168	92.376
	Product Total	18485.61	9847.622
ACETONE	IRAN	7069.215	4435.018
	U ARAB EMTS	869.37	429.131
	KENYA	640.84	332.864
	NIGERIA	359	165.942
	EGYPT A RP	328.4	188.811
	Product Total	9266.825	5551.766
PHENOL	IRAN	2688	2087.925
	CHINA P RP	2103.2	945.276
	EGYPT A RP	720	505.475
	SAUDI ARAB	715	522.253
	NETHERLAND	142.2	712.541
	Product Total	6368.4	4773.47
METHANOL	ROMANIA	15570	2524.658
	U ARAB EMTS	7046.27	1088.369
	SRI LANKA DSR	6794.1	1228.007
	TURKEY	3600	693.936
	PHILIPPINES	3158	481.74
	Product Total	36168.37	6016.71
FORMALDEHYDE	NEPAL	5717.272	826.798
	U ARAB EMTS	1683.501	244.572
	BHUTAN	382.16	71.303
	SRI LANKA DSR	211.8	88.605
	KENYA	142.52	38.526
	Product Total	8137.253	1269.804
NITROBENZENE	PAKISTAN IR	20	12.096
	THAILAND	20	16.258
	PERU	6	5.015

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	ITALY	3	2.622
	BELGIUM	0.14	0.198
	Product Total	49.14	36.189
CITRIC ACID	U S A	1181.425	829.024
	PUERTO RICO	110	88.421
	BANGLADESH PR	74.062	66.131
	SRI LANKA DSR	27.147	36.876
	NIGERIA	12.007	16.111
	Product Total	1404.641	1036.563
MALEIC ANHYDRIDE	U ARAB EMTS	43.6	27.489
	BANGLADESH PR	13	12.095
	KENYA	11	15.63
	NEPAL	6	6.333
	SRI LANKA DSR	6	4.559
	Product Total	79.6	66.106
PENTAERYTHRITOL	U S A	1083.421	2027.58
	COLOMBIA	144	174.046
	NETHERLAND	144	166.908
	KOREA RP	50.475	138.239
	JAPAN	50.001	111.925
	Product Total	1471.897	2618.698
ANILINE	PAKISTAN IR	48.8	54.119
	THAILAND	40.6	42.987
	TAIWAN	32	26.278
	BANGLADESH PR	5.008	6.893
	TURKEY	1.23	1.232
	Product Total	127.638	131.509
CHLORO METHANES	SAUDI ARAB	19.07	20.199
	IRAN	16	17.2
	NEPAL	3.16	3.281
	GERMANY	0.005	0.018
	IRAQ	0.005	0.03
	Product Total	38.24	40.728
ISOBUTYLBENZENE	U S A	6268.31	7129.03
	CHINA P RP	6119	6792.544
	JAPAN	181	251.994
	SWITZERLAND	3.4	11.582

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	TAIWAN	0.17	0.517
	Product Total	12571.88	14185.667
ONCB	BRAZIL	506	524.576
	GERMANY	264	263.305
	U S A	25	31.168
	SWITZERLAND	23.01	29.059
	NETHERLAND	21	26.255
	Product Total	839.01	874.363
PNCB	GERMANY	1473	871.147
	JAPAN	126.2	70.279
	CHINA P RP	42.982	29.399
	BRAZIL	23	23.426
	ITALY	4.4	116.195
	Product Total	1669.582	1110.446
MEK	PAKISTAN IR	123	26.53
	BELGIUM	60.09	767.126
	NEPAL	0.3	0.6
	KENYA	0.1	0.102
	SAUDI ARAB	0.05	0.173
	Product Total	183.54	794.531
ACETALDEHYDE	BRUNEI	0.8	0.564
	MAURITIUS	0.134	0.854
	U ARAB EMTS	0.12	0.128
	BANGLADESH PR	0.1	0.186
	EGYPT A RP	0.1	0.209
	Product Total	1.254	1.941
ETHANOLAMINES	U S A	591.825	3599.239
	ISRAEL	99.878	140.811
	U ARAB EMTS	95.7	120.208
	SAUDI ARAB	80.1	122.4
	QATAR	35	41.166
	Product Total	902.503	4023.824
ETHYL ACETATE	NETHERLAND	14118.22	6748.424
	ITALY	12395.862	5712.359
	U ARAB EMTS	10048.61	5035.972
	BELGIUM	9242.29	4450.559
	NIGERIA	7555	4241.198

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	Product Total	53359.982	26188.512
MENTHOL	CHINA P RP	6230.939	62808.434
	SINGAPORE	761.38	8066.628
	U S A	393.496	5091.739
	NETHERLAND	338.31	5249.477
	JAPAN	292.625	3885.378
	Product Total	8016.75	85101.656
ORTHO NITRO TOLUENE	JAPAN	868	746.974
	NETHERLAND	300	251.976
	Product Total	1168	998.95
MALATHION	EGYPT A RP	278	504.714
	MEXICO	196	373.506
	MALAYSIA	160	298.271
	SAUDI ARAB	150.6	309.87
	SPAIN	75.75	143.76
	Product Total	860.35	1630.121
DIMETHOATE	BANGLADESH PR	16	41.584
	NEPAL	3.26	7.111
	MALDIVES	0.461	2.84
	NIGERIA	0.013	0.008
	Product Total	19.734	51.543
D.D.V.P.	UGANDA	131.72	506.757
	ARGENTINA	112.5	197.188
	NIGERIA	103.96	233.832
	NETHERLAND	37.5	52.011
	JAPAN	32	119.528
	Product Total	417.68	1109.316
QUINALPHOS	VIETNAM SOC REP	114.975	572.058
	BANGLADESH PR	56.4	166.155
	SINGAPORE	36.45	184.2
	TANZANIA REP	23.5	99.959
	NEPAL	3.165	8.083
	Product Total	234.49	1030.455
CYPERMETHRIN	CHINA P RP	866.327	4195.599
	THAILAND	850	4388.536
	BRAZIL	798.485	4630.67
	VIETNAM SOC REP	658.66	3327.81

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	BELGIUM	510.2	3057.602
	Product Total	3683.672	19600.217
OTHER PESTICIDES	BRAZIL	7230.171	43948.91
	U S A	4140.826	33230.029
	NIGERIA	1973.364	4474.083
	NEPAL	1624.892	3354.661
	VIETNAM SOC REP	1603.412	9057.155
	Product Total	16572.665	94064.838
OTHER INSECTICIDES	BRAZIL	6757.147	47431.938
	BANGLADESH PR	2220.549	13014.893
	U S A	2152.562	40467.699
	SRI LANKA DSR	1124.443	2811.275
	IRAN	853.95	3373.168
	Product Total	13108.651	107098.973
COPPER-OXYCHLORIDE	IRAN	379.49	801.641
	EGYPT A RP	190	422.584
	VIETNAM SOC REP	70	171.665
	PAKISTAN IR	26	42.692
	BANGLADESH PR	24	62.081
	Product Total	689.49	1500.663
2, 4-D	BRAZIL	4212.34	7049.117
	U S A	2860.8	5032.619
	ARGENTINA	2421.6	3596.016
	THAILAND	2173.342	2924.664
	AUSTRALIA	1169.21	1831.955
	Product Total	12837.292	20434.371
ISOPROTURON	NETHERLAND	1086.8	3829.951
	Product Total	1086.8	3829.951
ALUMINIUM PHOSPHIDE	BANGLADESH PR	22.298	58.687
	MYANMAR	11.002	42.231
	AFGHANISTAN	9.72	27.876
	UGANDA	7.288	36.003
	NEPAL	6.507	25.06
	Product Total	56.815	189.857
METHYL BROMIDE	VIETNAM SOC REP	416.703	1563.539
	NEW ZEALAND	252	973.248
	LIBYA	192	657.803

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	AUSTRALIA	144	485.648
	EGYPT A RP	102.5	359.613
	Product Total	1107.203	4039.851
OTHER HERBICIDES- ANTI SPROUTING PRODUCTS	U S A	11602.494	83787.988
	ISRAEL	1839.4	10778.806
	FRANCE	1654.482	13914.666
	AUSTRALIA	1317.84	22609.109
	SOUTH AFRICA	1297.504	9222.602
	Product Total	17711.72	140313.171
OTHER FUNGICIDE NES	BRAZIL	19811.435	41768.114
	BANGLADESH PR	9741.708	11022.376
	FRANCE	8401.604	19016.424
	U S A	7475.339	15455.937
	NETHERLAND	5988.3	8060.603
	Product Total	51418.386	95323.454
AZO DYES	ITALY	8971.9	30305.093
	GERMANY	4591.265	11189.842
	SPAIN	3703.06	12158.889
	NETHERLAND	3458.601	6883.483
	U S A	2594.211	11839.82
	Product Total	23319.037	72377.127
ACID DIRECT DYES(OTHER THAN AZO)	SPAIN	458.269	1600.057
	ITALY	290.06	1489.98
	PAKISTAN IR	266.35	721.347
	U S A	250.371	1773.538
	TAIWAN	241.905	952.884
	Product Total	1506.955	6537.806
BASIC DYES	U S A	842.462	2835.501
	INDONESIA	630.23	1174.842
	CHINA P RP	484.421	1343.515
	ITALY	478.852	1254.67
	SPAIN	472.054	773.27
	Product Total	2908.019	7381.798
DISPERSE DYES	PAKISTAN IR	1702.428	5136.496
	HONDURAS	1513.58	6145.699
	BANGLADESH PR	1089.832	2076.53
	KOREA RP	866.48	3586.599

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	TURKEY	856.045	3278.912
	Product Total	6028.365	20224.236
FAST COLOUR BASES	NETHERLAND	506.1	1870.482
	CHINA P RP	282.963	1527.074
	INDONESIA	280.75	968.477
	U S A	199.672	862.702
	GERMANY	179.8	619.152
	Product Total	1449.285	5847.887
OIL SOLUBLE (SOLVENT DYES)	NETHERLAND	757.67	3215.808
	ITALY	692.585	2778.716
	U S A	691.757	5190.152
	BRAZIL	671.23	2162.471
	SINGAPORE	522.046	2256.74
	Product Total	3335.288	15603.887
OPTICAL WHITENING AGENTS	U S A	3406.72	7477.217
	AUSTRALIA	2338.32	1904.665
	FINLAND	1803.85	922.75
	GERMANY	1599.713	4158.624
	SINGAPORE	1451.46	876.525
	Product Total	10600.063	15339.781
ORGANIC PIGMENT	BANGLADESH PR	56.944	478.192
	NEPAL	16.966	41.064
	INDONESIA	0.4	3.4
	CHINA P RP	0.3	2.502
	MAURITIUS	0.21	0.434
	Product Total	74.82	525.592
PIGMENT EMULSION	U S A	14850.411	59570.339
	JAPAN	4588.39	19858.859
	BELGIUM	4535.652	19971.539
	KOREA RP	4313.682	17213.439
	NETHERLAND	4263.484	22384.737
	Product Total	32551.619	138998.913
REACTIVE DYES	TURKEY	25562.512	66402.584
	BANGLADESH PR	21842.399	48541.01
	HONDURAS	7394.135	26504.188
	PAKISTAN IR	6212.599	17393.239
	SINGAPORE	5206.735	19628.703

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	Product Total	66218.38	178469.724
SULPHUR DYES (SULPHUR BLACK)	BANGLADESH PR	502.08	585.918
	U S A	329.95	423.13
	EGYPT A RP	198.49	194.453
	TURKEY	103.31	216.588
	MYANMAR	52.9	58.293
	Product Total	1186.73	1478.382
VAT DYES	BANGLADESH PR	264.048	3817.317
	MAURITANIA	112.435	1146.419
	INDONESIA	86.334	1211.127
	U S A	78.101	2329.106
	GERMANY	74.149	1767.234
	Product Total	615.067	10271.203
SOLUBILISED VAT DYES	PAKISTAN IR	18.75	145.482
	INDONESIA	15.043	192.072
	BANGLADESH PR	1.374	3.833
	BULGARIA	0.75	5.406
	NETHERLAND	0.2	4.076
	Product Total	36.117	350.869
FOOD COLOURS	U S A	2345.144	10830.812
	INDONESIA	1505.98	5466.739
	U ARAB EMTS	1309.147	2344.229
	BRAZIL	1171.337	4504.132
	PHILIPPINES	1092.712	4073.86
	Product Total	7424.32	27219.772
NAPTHOLS	U ARAB EMTS	252.18	337.828
	SOUTH AFRICA	193.65	319.471
	KENYA	169.152	283.681
	JAPAN	95.925	541.491
	CANADA	92.245	99.513
	Product Total	803.152	1581.984
OTHER DYES	GERMANY	1608.925	2456.609
	SPAIN	1115.712	2275.396
	TAIWAN	1101.575	1369.249
	ITALY	978.15	2348.219
	U S A	529.191	2287.144
	Product Total	5333.553	10736.617

Table-19 Top Five Export Destinations of Selected Chemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
INORGANIC PIGMENTS	RUSSIA	2287.45	1419.088
	U ARAB EMTS	1961.437	1888.262
	ECUADOR	1534.7	662.916
	TANZANIA REP	1221.606	476.843
	KENYA	1045.355	801.82
	Product Total	8050.548	5248.929

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODA ASH	ROMANIA	125765.368	20555.873
	BULGARIA	112392	19354.825
	KENYA	101149.287	15299.046
	CHINA P RP	89906.568	13760.662
	U S A	80153.161	11717.069
	Product Total	509366.384	80687.475
CAUSTIC SODA	IRAN	191464	44963.913
	JAPAN	104057.032	24770.926
	CHINA P RP	70313.34	17509.218
	QATAR	57466	13693.383
	SAUDI ARAB	25090	5783.448
	Product Total	448390.372	106720.888
LIQUID CHLORINE	BANGLADESH PR	447.72	38.913
	FRANCE	25.633	39.28
	KOREA RP	6.19	80.243
	U S A	2.007	9.616
	GERMANY	0.125	20.742
	Product Total	481.675	188.794
ALUMINIUM FLUORIDE	U ARAB EMTS	9314	5955.645
	CHINA P RP	8798.101	6125.836
	ITALY	8046	5317.245
	INDONESIA	1000	665.322
	U S A	99.992	38.129
	Product Total	27258.093	18102.177
CALCIUM CARBIDE	CHINA P RP	36251.5	14092.693
	BHUTAN	20054.544	8695.779
	SOUTH AFRICA	4687.2	2079.826
	RUSSIA	672	451.612
	MALAYSIA	205	93.236
	Product Total	61870.244	25413.146
CARBON BLACK	CHINA P RP	66232.888	31490.318
	KOREA RP	27903.834	17985.398

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	RUSSIA	6701.983	3361.696
	U S A	6109.743	13439.163
	INDONESIA	3803.005	2152.122
	Product Total	110751.453	68428.697
POTASSIUM CHLORATE	CHINA P RP	3140	2010.165
	RUSSIA	17.25	7.117
	U K	2.151	7.753
	GERMANY	0.526	0.29
	BELGIUM	0.5	0.421
	Product Total	3160.427	2025.746
SODIUM CHLORATE	SWEDEN	7075	2462.063
	FRANCE	4049.8	1592.013
	FINLAND	3913.002	1513.121
	U S A	1018	330.081
	CANADA	784	277.946
	Product Total	16839.802	6175.224
TITANIUM DIOXIDE	CHINA P RP	6491.441	8567.212
	KOREA RP	2540.005	4047.582
	GERMANY	2381.767	5008.269
	CZECH REPUBLIC	1700	2007.239
	U S A	1157.425	2039.767
	Product Total	14270.638	21670.069
RED PHOSPHORUS	BELGIUM	0.002	0.154
	GERMANY	0.001	0.04
	U K	0	0.166
	Product Total	0.003	0.36
HYDROGEN PEROXIDE	THAILAND	18060.989	4672.418
	BANGLADESH PR	16572	3864.614
	PAKISTAN IR	4509	923.827
	INDONESIA	1947	523.173
	SWITZERLAND	1573.49	687.929
	Product Total	42662.479	10671.961

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
CALCIUM CARBONATE	MALAYSIA	424540.997	39512.894
	VIETNAM SOC REP	189152.263	13360.231
	EGYPT A RP	45032.975	3467.289
	GREECE	21900.006	1901.285
	TAIWAN	9545.225	1731.3
	Product Total	690171.466	59972.999
ACETIC ACID	CHINA P RP	231068.698	61871.945
	MALAYSIA	189558.709	47702.052
	SINGAPORE	159855.244	42108.652
	TAIWAN	71710.32	19028.521
	IRAN	55352	15045.501
	Product Total	707544.971	185756.671
ACETIC ANHYDRIDE	U S A	2876.09	1753.362
	SINGAPORE	41.6	26.498
	CANADA	0.05	0.018
	Product Total	2917.74	1779.878
ACETONE	TAIWAN	51708.27	20643.589
	KOREA RP	42479.9	17083.725
	THAILAND	15129	6129.199
	BELGIUM	9358	3704.764
	SINGAPORE	9093.11	3076.932
	Product Total	127768.28	50638.209
PHENOL	KOREA RP	53039	31583.824
	THAILAND	36871	23081.116
	U S A	32334.809	18845.219
	BRAZIL	22388	13644.657
	TAIWAN	20404.714	12475.658
	Product Total	165037.523	99630.474
METHANOL	IRAN	1310577	215937.796
	SAUDI ARAB	377936.143	64607.736
	BRUNEI	10041	1800.624
	UNSPECIFIED	8398	1113.742

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	QATAR	2700	505.782
	Product Total	1709652.143	283965.68
FORMALDEHYDE	SINGAPORE	52.8	24.198
	ISRAEL	12.56	15.677
	U S A	0.071	0.847
	GERMANY	0.057	0.476
	BELGIUM	0.043	0.391
	Product Total	65.531	41.589
NITROBENZENE	KOREA RP	5837.5	2732.922
	BELGIUM	0.04	0.053
	GERMANY	0.02	0.081
	CANADA	0.015	0.022
	Product Total	5837.575	2733.078
CITRIC ACID	CHINA P RP	75458.587	35317.331
	SPAIN	162.084	203.195
	SINGAPORE	100	46.062
	BELGIUM	81.199	118.414
	ARGENTINA	52	54.089
	Product Total	75853.87	35739.091
MALEIC ANHYDRIDE	TAIWAN	20369.608	12952.651
	MALAYSIA	14802.404	9756.284
	CHINA P RP	8550.122	6087.068
	INDONESIA	1466	970.591
	JAPAN	1238.644	820.439
	Product Total	46426.778	30587.033
PENTAERYTHRITOL	SAUDI ARAB	10243	11354.831
	SWEDEN	2551.5	2828.244
	CHINA P RP	2055.91	2242.748
	JAPAN	1615.218	1807.219
	TAIWAN	1167	1216.027
	Product Total	17632.628	19449.069
	CHINA P RP	36134.191	25191.267

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ANILINE	U S A	1242	956.755
	PORTUGAL	928.04	792.411
	BELGIUM	22	17.356
	GERMANY	15	7.105
	Product Total	38341.231	26964.894
CHLORO METHANES	CHINA P RP	588.96	276.878
	U S A	19.338	86.49
	FRANCE	0.017	0.428
	Product Total	608.315	363.796
ONCB	CHINA P RP	237.28	192.065
	Product Total	237.28	192.065
PNCB	CHINA P RP	8408.28	3886.031
	Product Total	8408.28	3886.031
MEK	TAIWAN	16888.832	11388.405
	JAPAN	11015.326	6851.668
	SOUTH AFRICA	8518.6	5580.908
	CHINA P RP	3506.45	2517.736
	KOREA RP	949.38	592.864
	Product Total	40878.588	26931.581
ACETALDEHYDE	CHINA P RP	38.8	196.082
	SWITZERLAND	32	63.123
	GERMANY	2.519	28.155
	U K	0.26	7.29
	U S A	0.141	3.767
	Product Total	73.72	298.417
ETHANOLAMINES	THAILAND	3059.921	2213.759
	GERMANY	1435.935	1136.999
	TAIWAN	1400.85	1029.738
	MALAYSIA	1217.516	935.645
	SAUDI ARAB	1118.705	795.028
	Product Total	8232.927	6111.169
	CHINA P RP	262.44	822.091

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYL ACETATE	U S A	21.7	18.326
	BELGIUM	2.206	15.363
	GERMANY	1.505	38.13
	NETHERLAND	0.9	4.038
	Product Total	288.751	897.948
MENTHOL	GERMANY	872.834	6554.869
	U S A	34.205	298.805
	SPAIN	15.51	107.997
	JAPAN	4.274	42.928
	SINGAPORE	3.78	31.9
	Product Total	930.603	7036.499
ORTHO NITRO TOLUENE	GERMANY	117.126	76.832
	Product Total	117.126	76.832
D.D.V.P.	CHINA P RP	64	113.946
	SWITZERLAND	0.126	1.581
	GERMANY	0.068	0.853
	Product Total	64.194	116.38
CYPERMETHRIN	U K	0	0.149
	Product Total	0	0.149
OTHER PESTICIDES	CHINA P RP	906.839	10958.603
	RUSSIA	195	697.389
	U S A	131.27	403.726
	TAIWAN	52.8	130.324
	GERMANY	19.024	50.832
	Product Total	1304.933	12240.874
OTHER INSECTICIDES	CHINA P RP	7061.113	97580.235
	U S A	3804.316	24837.927
	TAIWAN	1158.4	2606.816
	ISRAEL	1152.4	16047.96
	GERMANY	866.948	31934.755
	Product Total	14043.177	173007.693
COPPER- OXYCHLORIDE	GERMANY	0.009	0.318
	Product Total	0.009	0.318

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
2, 4-D	UNSPECIFIED	72	123.338
	Product Total	72	123.338
ALUMINIUM PHOSPHIDE	FRANCE	6.128	97.419
	CHINA P RP	0.031	0.081
	U K	0.016	0.25
	Product Total	6.175	97.75
METHYL BROMIDE	U S A	19.191	106.831
	CHINA P RP	17	67.483
	BELGIUM	16.32	75.349
	Product Total	52.511	249.663
OTHER HERBICIDES- ANTI SPROUTING PRODUCTS	CHINA P RP	3285.166	18050.797
	ISRAEL	3187.9	18822.702
	JAPAN	2017.983	23013.145
	U S A	687.65	13075.668
	U K	557.167	2625.198
	Product Total	9735.866	75587.51
OTHER FUNGICIDE NES	GERMANY	1420.161	21128.285
	CHINA P RP	1375.504	6189.115
	U S A	1112.053	12550.674
	U K	581.881	5127.669
	ISRAEL	541	2971.884
	Product Total	5030.599	47967.627
AZO DYES	CHINA P RP	416.979	1634.061
	ITALY	122.018	431.446
	THAILAND	65.624	569.472
	SPAIN	37.242	655.013
	GERMANY	31.952	323.532
	Product Total	673.815	3613.524
ACID DIRECT DYES(OTHER THAN AZO)	CHINA P RP	186.841	722.681
	ITALY	40.234	208.932
	SPAIN	12.675	65.406
	THAILAND	11.824	124.272

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	KOREA RP	10.5	43.534
	Product Total	262.074	1164.825
BASIC DYES	CHINA P RP	387.755	3750.259
	TURKEY	32	115.932
	SPAIN	31.185	65.464
	AUSTRALIA	9.032	12.897
	GERMANY	6.581	68.616
	Product Total	466.553	4013.168
DISPERSE DYES	CHINA P RP	3684.076	19188.579
	INDONESIA	2112.44	6816.716
	U S A	126.354	538.315
	TAIWAN	76.87	509.433
	ITALY	42.775	164.011
	Product Total	6042.515	27217.054
FAST COLOUR BASES	CHINA P RP	489.378	2047.437
	HUNGARY	9.6	323.491
	GERMANY	5.023	124.722
	U S A	3.311	196.83
	JAPAN	1.362	139.44
	Product Total	508.674	2831.92
OIL SOLUBLE (SOLVENT DYES)	CHINA P RP	411.597	4353.765
	KOREA RP	154.44	574.822
	TAIWAN	36.955	293.453
	ITALY	24.178	65.368
	MALAYSIA	16.612	38.231
	Product Total	643.782	5325.639
OPTICAL WHITENING AGENTS	CHINA P RP	324.989	1971.352
	SWITZERLAND	308.045	3083.108
	INDONESIA	16.74	43.775
	SINGAPORE	4.54	178.085
	GERMANY	4.08	36.012
	Product Total	658.394	5312.332

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ORGANIC PIGMENT	U S A	94.208	400.833
	CHINA P RP	35.148	74.482
	ITALY	21.42	72.527
	GERMANY	15.486	120.225
	SPAIN	14.4	3.799
	Product Total	180.662	671.866
PIGMENT EMULSION	CHINA P RP	3852.474	20316.624
	GERMANY	630.769	9446.813
	KOREA RP	417.94	2435.732
	ITALY	278.382	745.321
	U S A	278.137	2955.204
	Product Total	5457.702	35899.694
REACTIVE DYES	THAILAND	1394.674	12132.775
	CHINA P RP	863.261	9189.126
	KOREA RP	414.724	2050.099
	ITALY	149.718	819.161
	GERMANY	77.43	1034.003
	Product Total	2899.807	25225.164
SULPHUR DYES (SULPHUR BLACK)	CHINA P RP	1061.25	2205.831
	SPAIN	254.557	355.04
	HONG KONG	7	22.463
	GERMANY	5.08	9.645
	JAPAN	2.22	12.051
	Product Total	1330.107	2605.03
VAT DYES	CHINA P RP	10411.773	30657.194
	SINGAPORE	9318.679	15831.274
	GERMANY	748.993	1811.074
	PAKISTAN IR	43.215	71.764
	U S A	23.982	151.275
	Product Total	20546.642	48522.581
SOLUBILISED VAT DYES	SINGAPORE	408.725	731.469
	CHINA P RP	52.784	130.442

Table-20 Top Five Import Destinations of Selected Chemicals during 2015-16

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	JAPAN	4.55	85.375
	ITALY	4.29	21.145
	AUSTRALIA	1.751	2.082
	Product Total	472.1	970.513
FOOD COLOURS	TAIWAN	564.605	1572.716
	KOREA RP	190.285	658.307
	GREECE	85	127.686
	CHINA P RP	78.462	501.219
	SPAIN	42.251	160.419
	Product Total	960.603	3020.347
NAPTHOLS	CHINA P RP	1021.78	3601.176
	KOREA RP	17.821	29.702
	JAPAN	4.133	106.896
	GERMANY	2.964	39.825
	BELGIUM	1.06	7.984
	Product Total	1047.758	3785.583
OTHER DYES	U S A	87.711	860.262
	TURKEY	35.56	151.197
	U K	20.469	321.425
	CHINA P RP	11.365	73.155
	TAIWAN	6.596	24.887
	Product Total	161.701	1430.926
INORGANIC PIGMENTS	U ARAB EMTS	2163.495	2804.366
	THAILAND	2014.761	4413.915
	CHINA P RP	1486.644	4471.97
	ISRAEL	651.253	1498.347
	GERMANY	634.912	3352.881
	Product Total	6951.065	16541.479

Table -21: Exports of Major Petrochemicals (Group-wise) during 2008-09 to 2015-16

GROUP	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	350295	252969	404281	283129	576219	492991	733938	717078	775729	777335	906309	1010936	886211	913437	877659	831009
FIBRE INTERMEDIATES	85323	32896	18105	13838	50626	37046	100735	78701	80823	61926	67873	53980	73270	57347	247540	121394
POLYMERS	357445	227052	657572	360065	822208	500436	1163483	815325	1112662	853586	1187634	1078251	903266	793550	998339	732497
SYNTHETIC RUBBER (ELASTOMERS)	15985	13129	15479	11986	14786	14883	22128	25460	11489	15082	12834	21597	26040	34492	42688	42428
SYNTHETIC DETERGENT INTERMEDIATES	90453	74968	94623	61415	133709	93904	74864	87518	50478	50928	32971	35845	27992	29004	9634	7768
PERFORMANCE PLASTICS	289733	164086	294485	164547	366377	255601	309593	287212	347916	307451	474528	440224	409365	353492	813967	527737
OLEFINS	119965	81935	134471	77807	158503	131755	130472	181191	123827	138968	119411	88308	72479	45302	149389	76055
AROMATICS	1117732	474224	1104618	511971	1351789	612929	1445312	985016	1590660	1188161	1789251	1344539	1888275	1163302	2033143	942807
OTHER PETRO-BASED CHEMICALS	435144	68369	64773	47093	184395	133682	184342	145504	137082	129315	96237	107611	124125	143644	128670	101261
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	2862075	1389628	2788407	1531851	3658612	2273227	4164867	3323005	4230666	3522752	4687048	4181291	4411023	3533570	5301029	3382956

Note: 1. Product coverage under each group is given at page vi.

2. The data from 2008-09 to 2012-13 is based on ITCCHS 2007 and the data for 2013-14 is based on ITCCHS 2012

Table -22: Imports of Major Petrochemicals (Group-wise) during 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

GROUP	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	131575	111563	97860	97625	120870	144087	142496	181735	146950	211748	154848	232303	223529	289562	247527	277618
FIBRE INTERMEDIATES	708552	301849	1236826	484547	1598939	777720	1315056	800960	1402774	878497	1925258	1304669	2179870	1273665	2015419	1026126
POLYMERS	1274604	731229	2159886	1188440	2500130	1495239	2435473	1598868	3179593	2254904	3124986	2531008	3736798	3177068	4214022	3132488
SYNTHETIC RUBBER (ELASTOMERS)	290430	343409	375884	352710	446242	540793	492633	794847	519670	797499	580333	793037	578400	758949	596101	612690
SYNTHETIC DETERGENT INTERMEDIATES	76357	47343	91334	56129	78859	60774	106852	96832	127493	131685	123846	139467	134035	138461	218097	177489
PERFORMANCE PLASTICS	131463	119273	112247	117855	192024	208769	175173	254490	249709	336062	310899	438390	394766	496367	388796	445847
OLEFINS	23726	10880	34608	16822	117791	53667	19855	13371	34187	29316	26109	21482	49255	43981	25398	20177
AROMATICS	520259	232590	661910	290174	679025	325942	760164	504683	967941	764603	998399	850360	1023472	712564	1204325	633048
OTHER PETRO-BASED CHEMICALS	1141416	605997	1320950	688941	1807833	1046288	1784500	1219192	2037034	1495971	2203984	1817179	2372654	1897349	2739780	1775978
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	4298382	2504133	6091505	3293243	7541713	4653279	7232202	5464978	8665351	6900285	9448662	8127895	10692779	8787966	11649465	8101461

Note: 1. Product coverage under each group is given at page vi.

2. The data from 2008-09 to 2012-13 is based on ITCHS 2007 and the data for 2013-14 is based on ITCHS 2012

Table -23: Net Imports of Major Petrochemicals (Group-wise) during 2007-08 to 2014-15

GROUP	2007-2008		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	-218720	-141406	-306421	-185504	-455349	-348904	-591442	-535343	-628779	-565587	-751461	-778633	-662682	-623875	-630132	-553391
FIBRE INTERMEDIATE S	623229	268953	1218721	470709	1548313	740674	1214321	722259	1321951	816571	1857385	1250689	2106600	1216318	1767879	904732
POLYMERS	917159	504177	1502314	828375	1677922	994803	1271990	783543	2066931	1401318	1937352	1452757	2833532	2383518	3215683	2399991
SYNTHETIC RUBBER (ELASTOMERS)	274445	330280	360405	340724	431456	525910	470505	769387	508181	782417	567499	771440	552360	724457	553413	570262
DETERGENT INTERMEDIATE S	-14096	-27625	-3289	-5286	-54850	-33130	31988	9314	77015	80757	90875	103622	106043	109457	208463	169721
PERFORMANCE PLASTICS	-158270	-44813	-182238	-46692	-174353	-46832	-134420	-32722	-98207	28611	-163629	-1834	-14599	142875	-425171	-81890
OLEFINS	-96239	-71055	-99863	-60985	-40712	-78088	-110617	-167820	-89640	-109652	-93302	-66826	-23224	-1321	-123991	-55878
AROMATICS	-597473	-241634	-442708	-221797	-672764	-286987	-685148	-480333	-622719	-423558	-790852	-494179	-864803	-450738	-828818	-309759
OTHER PETRO-BASED CHEMICALS	706272	537628	1256177	641848	1623438	912606	1600158	1073688	1899952	1366656	2107747	1709568	2248529	1753705	2611110	1674717
TOTAL NET IMPORT OF MAJOR PETRO-CHEMICALS	1436307	1114505	3303098	1761392	3883101	2380052	3067335	2141973	4434685	3377533	4761614	3946604	6281756	5254396	6348436	4718505

Note: 1. Product coverage under each group is given at page vi.

2. The data from 2008-09 to 2012-13 is based on ITCHS 2007 and the data for 2013-14 is based on ITCHS 2012

Table -24: Exports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	6439	9027	10579	12600	24522	44634	26383	37398	19258	26183	31562	47385	37420	59176	47911	58966
NYLON FILAMENT YARN	2644	4936	2102	4733	2110	4925	1923	5412	1865	5728	2023	7402	1848	6939	1639	6236
NYLON INDUSTRIAL YARN/TYRE CORD	1570	1855	2208	2783	3976	5739	3733	6979	3756	6810	2896	5696	1752	2937	1122	1471
POLYESTER FILAMENT YARN	201807	157533	227292	171651	391220	330277	524093	510458	576224	588908	647732	743768	648773	677742	634799	624444
POLYESTER STAPLE FIBRE	136370	78080	160828	89940	152487	105285	176000	154451	170318	144355	205341	187652	183575	151547	181813	129129
POLYPROPYLENE FILAMENT YARN	571	688	767	1009	1259	1476	1235	1582	2008	2694	1863	2813	2232	3234	2844	3878
POLYPROPYLENE STAPLE FIBRE	894	850	505	413	645	655	571	798	2300	2657	14892	16220	10611	11862	7531	6885
TOTAL	350295	252969	404281	283129	576219	492991	733938	717078	775729	777335	906309	1010936	886211	913437	877659	831009
FIBRE INTERMEDIATES																
ACRYLONITRILE	2877	1184	1	3	1	2	5598	6048	2103	2747	2	5	4	85	2323	2132
CAPROLACTUM	7773	5986	12404	11892	13777	21658	13448	20052	3343	4853	514	902	0	1	0	8
DIMETHYL TEREPHTHALATE	0	0	1	1	5	15	3	11	0	0	1	2	0	0	1	1
MONO EHYLENE GLYCOL	34570	11194	5577	1710	35959	15116	66483	45720	71796	52515	67032	53008	73216	57216	72239	52081
PURIFIED TEREPHTHALIC ACID	40103	14532	122	232	884	255	15203	6870	3581	1811	324	63	50	45	172977	67172
TOTAL	85323	32896	18105	13838	50626	37046	100735	78701	80823	61926	67873	53980	73270	57347	247540	121394
POLYMERS																
LOW DENSITY POLYETHYLENE	7536	4466	5739	3363	11919	9167	12670	10470	16892	15296	18369	20153	21519	23853	24007	26531

Table -24: Exports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
HIGH DENSITY POLYTHYLENE	101525	58931	21488	12626	133485	81358	239546	159380	159341	123866	113344	103538	51663	51095	116114	97840
POLYESTYRENE	60678	39922	56109	35285	62670	43175	60982	48710	74137	68035	83962	91765	73695	69174	86290	72301
POLYPROPYLENE (INC. CO-POLYMER)	154992	101826	564444	302365	582285	347506	816005	571653	828236	616817	943284	832814	726906	620745	735410	503124
EXPANDABLE POLYESTYRENE	937	540	2719	1455	178	127	377	280	3830	3689	3646	4413	4810	5489	3762	3735
POLY VINYL CHLORIDE	1419	850	798	555	10850	5185	3632	2990	1267	1462	1332	2754	1988	2085	3054	3272
DENSITY POLYTHYLENE	26434	18067	2502	2323	14809	10428	23007	16734	21821	18582	13451	13366	10854	10267	15825	14160
PVC COMPOUND	3924	2450	3773	2093	6012	3490	7264	5108	7138	5839	10246	9448	11831	10842	13877	11534
TOTAL	357445	227052	657572	360065	822208	500436	1163483	815325	1112662	853586	1187634	1078251	903266	793550	998339	732497
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	7431	5180	7309	4552	7388	5985	7516	9142	7646	8461	7483	8024	18007	17961	31053	23969
POLY BUTADIENE RUBBER	1279	511	911	870	1874	1772	185	408	1173	1947	267	388	1919	1978	5988	4008
ETHYL PROPYLENE DIMERS	2339	2198	2074	2262	2577	3258	3063	4830	1182	1916	2075	7096	2915	8114	2725	8882
ETHYL VINYL ACETATE	1350	1320	662	644	1072	986	374	453	804	848	1215	1494	1141	1734	1274	1510
NITRILE BUTADIENE RUBBER	3180	3637	3430	3088	1404	2286	10778	10059	431	1297	446	1557	444	1124	400	970
BUTYL RUBBER	406	283	1093	570	471	596	212	568	253	613	1348	3038	1614	3581	1248	3089
TOTAL	15985	13129	15479	11986	14786	14883	22128	25460	11489	15082	12834	21597	26040	34492	42688	42428
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	90199	74552	93920	60415	133368	93397	74555	86732	50068	50134	32493	34657	27199	27204	9256	7034
ETHYLENE OXIDE	254	416	703	1000	341	507	309	786	410	794	478	1188	793	1800	378	734
TOTAL	90453	74968	94623	61415	133709	93904	74864	87518	50478	50928	32971	35845	27992	29004	9634	7768

Table -24: Exports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
PERFORMANCE PLASTICS																
ABS RESIN	1539	959	60	40	5272	4925	807	915	666	780	303	424	225	281	465	682
NYLON-6	2621	3456	3656	4705	4108	5937	5912	9804	9915	16353	15308	25961	16715	28775	14577	25321
POLYMETHYL METHACRYLATE	4439	3311	5391	4323	5497	5631	5545	5747	7849	8626	9775	12115	9306	11215	9158	10541
STYRENE ACRYLONITRILE	8	6	8	9	11	21	33	66	43	69	275	249	120	158	579	459
POLYESTER CHIPS/PET CHIPS	279168	153360	284200	152464	346071	220251	290894	229867	324307	256947	443104	372102	375421	274943	783106	460787
POLYTETRAFLUORO ETHYLENE(PTFE)	1958	2994	1170	3006	5418	18836	6402	40813	5136	24676	5763	29373	7578	38120	6082	29947
TOTAL	289733	164086	294485	164547	366377	255601	309593	287212	347916	307451	474528	440224	409365	353492	813967	527737
OLEFINS																
BUTADIENE	119951	81927	110897	66190	134087	121198	121393	176675	117626	135098	119410	88301	72479	45301	129808	66961
ETHYLENE	11	3	14	35	44	31	7	6	1	4	1	7	0	1	5119	3789
PROPYLENE	3	5	23560	11582	24372	10526	9072	4510	6200	3866	0	0	0	0	14462	5305
TOTAL	119965	81935	134471	77807	158503	131755	130472	181191	123827	138968	119411	88308	72479	45302	149389	76055
AROMATICS																
BENZENE	409757	148391	399836	173123	567717	225586	501894	279998	652963	445735	635749	437813	576741	348900	914875	371288
MIXED XYLENE	110056	47770	59158	20126	72334	29652	148512	87950	141564	104472	187239	139394	10464	6923	8	49
ORTHO-XYLENE	104360	46791	181348	78509	341918	160600	187083	121039	210822	163337	229010	172190	227007	138341	234386	107621
TOLUENE	2026	1171	1993	834	4119	2209	5465	3535	5412	4167	14798	11449	9994	6409	5268	3314
PARAXYLENE	491533	230101	462283	239379	365701	194882	602358	492494	579899	470450	722455	583693	1064069	662729	878606	460535
TOTAL	1117732	474224	1104618	511971	1351789	612929	1445312	985016	1590660	1188161	1789251	1344539	1888275	1163302	2033143	942807

Table -24: Exports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	531	1109	17	5	0	0	0	3	3200	554	9	5	21	14	15839	3103
BUTANOL	2640	2443	3358	2402	5454	4463	3591	4458	4762	5986	2186	3583	759	993	195	162
OXO ALCOHOL	448	663	396	925	339	1415	383	740	812	983	1188	1133	1191	907	582	565
2-ETHYL HEXANOL	8	20	110	410	20	530	78	808	47	1001	321	654	6391	6405	746	654
VINYL CHLORIDE MONOMER	24	14	0	0	26	39	0	0	0	0	1	8	0	0	0	0
EPICHLHYDRINE	8	8	10	9	8	13	19	24	13	10	4	7	14	19	28	33
ISO BUTYLENE	31	6	100	48	1	1	0	1	0	0	1815	1382	1	2	28	249
METAXYLENE	10862	2255	37	22	109406	71083	92344	61389	41061	32749	4	13	23	146	46	140
METHYL ISOBUTYL KETONE	82	72	3	11	107	91	539	519	5	71	24	53	206	364	287	266
PIB	5215	3502	5169	3168	6167	4020	6623	5529	4285	4739	5896	7554	4993	5925	6128	7200
POLYCARBONATE	963	1860	1433	3556	3368	6650	2355	3671	2509	4332	3022	6103	2459	2772	4790	4597
PROPYLENE OXIDE	66	62	0	0	0	4	0	0	0	0	0	0	0	0	0	0
PROPYLENE GLYCOL	894	737	1151	758	1178	971	908	879	2593	1953	818	986	773	1043	531	724
POLYVINYL ACETATE RESIN	4442	2528	3583	1923	6877	4415	10077	8188	14064	11563	15509	13643	15456	15384	11259	11415
UNSATURATED POLYSTER RESIN	14197	11367	9919	6653	9131	7849	9455	9479	10709	12477	10750	14533	12660	17074	12112	15025
ETHYL BENZENE	551	725	16	24	0	0	3	1	4	4	0	0	0	0	0	2
CELLULOSE ACETATE BUTYRATE	17	28	5	39	25	31	10	15	53	78	93	163	44	93	6	81
CELLULOSE ACETATE SHEET	137	195	18	42	147	164	17	36	159	166	63	152	33	84	34	116

Table -24: Exports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
CELLULOSE NITRATE SHEET	48	81	6	6	112	96	8	14	46	19	3	14	12	16	3	5
MELAMINE MOULDING POWDER	765	627	377	304	1079	743	1051	914	1160	940	2168	1431	6339	2284	7993	2541
POLYACETAL RESIN	311	376	527	517	1252	933	710	703	279	403	540	654	537	598	312	383
PHTHALIC ANHYDRIDE	41744	20662	19581	9513	18480	10012	24993	17036	12812	11478	23182	20259	38634	26744	40448	22378
STYRENE	4294	2914	801	520	1810	1207	7521	4847	17327	16323	2242	2392	6940	6623	793	669
VINYL ACTATE MONOMER	332230	630	2413	977	1062	500	2227	1240	1342	822	4096	2635	1562	1392	1695	1388
ISOPROPANOL	7224	4382	4451	3733	7330	6099	9598	12753	3846	4149	3334	4053	6139	6508	3716	2805
POLYOL	7412	11103	11292	11528	11016	12353	11832	12257	15994	18515	18969	26201	18938	48254	21099	26760
TOTAL	435144	68369	64773	47093	184395	133682	184342	145504	137082	129315	96237	107611	124125	143644	128670	101261
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	2862075	1389628	2788407	1531851	3658612	2273227	4164867	3323005	4230666	3522752	4687048	4181291	4411023	3533570	5301029	3382956

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	14015	15659	14568	16723	23611	33365	20200	27538	29359	42077	32990	53051	36339	60959	39238	53809
NYLON FILAMENT YARN	6023	8712	6624	10886	18138	31224	22907	45227	24067	52783	24295	54650	27813	59448	28972	54485
NYLON INDUSTRIAL YARN/TYRE CORD	2763	3957	10789	14581	12269	18388	9068	16629	11912	21275	7022	13749	3750	7035	4411	6803
POLYESTER FILAMENT YARN	90458	69956	50095	43944	33692	36053	43409	52693	50013	64792	46713	67653	72718	89105	72605	86166
POLYESTER STAPLE FIBRE	16483	11412	14417	10040	31549	23070	44677	36811	29670	27653	42635	41577	81864	71552	99719	73357
POLYPROPYLENE FILAMENT YARN	1711	1704	1214	1283	1489	1827	1899	2396	1598	2673	792	1056	716	1002	697	1001
POLYPROPYLENE STAPLE FIBRE	122	163	153	168	122	160	336	441	331	495	401	567	329	461	1885	1997
TOTAL	131575	111563	97860	97625	120870	144087	142496	181735	146950	211748	154848	232303	223529	289562	247527	277618
FIBRE INTERMEDIATES																
ACRYLONITRILE	81568	57315	64693	42104	72618	73592	77357	77714	81964	83719	100862	111632	97388	118956	160202	121692
CAPROLACTUM	16981	19745	11292	8933	6334	8158	5381	9121	15917	21673	23494	34307	32276	43571	44577	45299
DIMETHYL TEREPHTHALATE	4088	2760	4171	1906	4428	2554	2815	2021	2104	1592	1786	1466	2094	1594	2216	1400
MONO EHYLENE GLYCOL	424427	145042	682182	225455	771189	318756	634589	356418	654831	374593	820724	512134	1003540	550364	1111582	539689
PURIFIED TEREPHTHALIC ACID	181488	76987	474488	206149	744370	374660	594914	355686	647958	396920	978392	645130	1044572	559180	696842	318046
TOTAL	708552	301849	1236826	484547	1598939	777720	1315056	800960	1402774	878497	1925258	1304669	2179870	1273665	2015419	1026126
POLYMERS																
LOW DENSITY POLYETHYLENE	88875	55719	161628	98082	196418	129714	197507	143289	264483	204752	256147	239302	325901	295717	374761	313547

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
HIGH DENSITY POLYTHYLENE	274868	176619	468120	279273	514445	306105	422712	298381	639062	464130	575117	545552	842892	811233	921743	798927
POLYESTYRENE	14699	11796	18221	17790	29461	26062	29218	30824	35949	45289	37772	49378	39647	50104	42514	47364
POLYPROPYLENE (INC. CO-POLYMER)	285074	162450	425307	256504	425286	285760	398100	317819	497691	427654	479176	472948	611673	589950	700914	574265
EXPANDABLE POLYESTYRENE	4703	3585	5369	3595	7454	5257	5722	4740	4560	4436	3978	4682	3113	3441	2981	2723
POLY VINYL CHLORIDE	338650	152028	629102	270822	671309	329720	851336	443759	1133124	647857	1208529	755732	1293338	854467	1501311	878823
LINEAR LOW DENSITY POLYTHYLENE	223250	146465	378338	228495	584888	374061	464211	316607	538849	414080	499817	413556	550109	515931	590015	459471
PVC COMPOUND	44485	22567	73801	33879	70869	38560	66667	43449	65875	46706	64450	49858	70125	56225	79783	57368
TOTAL	1274604	731229	2159886	1188440	2500130	1495239	2435473	1598868	3179593	2254904	3124986	2531008	3736798	3177068	4214022	3132488
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	98297	96105	144393	103912	190300	186607	212549	329092	206663	292471	239544	287779	223549	264399	172802	155614
POLY BUTADIENE RUBBER	23312	27877	50385	39186	49000	62256	65935	111555	71052	115107	86200	109762	70471	79518	74646	63210
ETHYL PROPYLENE DIMERS	15837	18996	21187	23819	28391	37231	29231	54698	28373	60006	30347	50127	33348	54653	39370	60759
ETHYL VINYL ACETATE	89773	76757	77807	67380	90773	87925	83186	92285	108324	109280	114764	125169	139414	155970	165264	162033
NITRILE BUTADIENE RUBBER	9924	14113	14916	14811	16887	23822	19615	34667	26733	47496	29596	45051	26719	44760	51937	44391
BUTYL RUBBER	53287	109561	67196	103602	70891	142952	82117	172550	78525	173139	79882	175149	84899	159649	92082	126683
TOTAL	290430	343409	375884	352710	446242	540793	492633	794847	519670	797499	580333	793037	578400	758949	596101	612690
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	76115	46829	91248	55862	78759	60557	106813	96564	127440	131486	123825	139218	133994	137918	217997	176537
ETHYLENE OXIDE	242	514	86	267	100	217	39	268	53	199	21	249	41	543	100	952

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
TOTAL	76357	47343	91334	56129	78859	60774	106852	96832	127493	131685	123846	139467	134035	138461	218097	177489
PERFORMANCE PLASTICS																
ABS RESIN	21073	19409	30368	26744	46224	50870	45470	53929	56897	72383	63020	86113	69910	94132	90081	100935
NYLON-6	34919	50607	44865	60807	60739	93809	74662	135583	88264	159031	114365	214028	133891	237580	144545	218291
POLYMETHYL METHACRYLATE	5247	6029	7141	7816	17748	12576	12444	17024	16488	21487	18924	25935	15367	21697	20309	30401
STYRENE ACRYLONITRILE	6061	3377	2899	2088	4910	4507	4480	4494	6248	7062	5973	7523	6411	7884	9569	9061
POLYESTER CHIPS/PET CHIPS	62150	32009	25064	13376	60290	37519	35978	27152	79743	60854	106283	90135	167015	123074	122206	74948
POLYTETRAFLUOROETH YLENE(PTFE)	2013	7842	1910	7024	2113	9488	2139	16308	2069	15245	2334	14656	2172	12000	2086	12211
TOTAL	131463	119273	112247	117855	192024	208769	175173	254490	249709	336062	310899	438390	394766	496367	388796	445847
OLEFINS																
BUTADIENE	3776	1443	15	39	3077	1761	5035	4539	9187	10430	1071	820	3223	2823	994	706
ETHYLENE	19881	9163	34549	16505	114550	51549	14667	8223	23784	17219	24791	19461	43905	38467	21050	14753
PROPYLENE	69	274	44	278	164	357	153	609	1216	1667	247	1201	2127	2691	3354	4718
TOTAL	23726	10880	34608	16822	117791	53667	19855	13371	34187	29316	26109	21482	49255	43981	25398	20177
AROMATICS																
BENZENE	51859	15208	123011	46067	48410	22786	43465	23677	50660	32106	5250	3146	47	35	0	5
MIXED XYLENE	1	1	2802	1149	11	21	24	75	169	197	5567	4339	1647	1155	108	96
ORTHO-XYLENE	87240	44327	44246	19829	39866	20455	35499	23839	45134	37444	44879	41678	35697	23547	34502	16871

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
TOLUENE	145719	57228	198906	78644	187442	77449	245391	139206	307145	215447	263759	193333	287877	183823	343662	163765
PARAXYLENE	235440	115826	292945	144485	403296	205231	435785	317886	564833	479409	678944	607864	698204	504004	826053	452311
TOTAL	520259	232590	661910	290174	679025	325942	760164	504683	967941	764603	998399	850360	1023472	712564	1204325	633048
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	210965	30979	191648	35963	284997	65400	263401	46737	359009	53578	439537	98004	465292	117028	600033	104976
BUTANOL	24623	15158	37647	18804	25381	17294	31564	23498	36290	27372	44683	37454	56954	42657	62512	31380
OXO ALCOHOL	669	967	1193	1438	528	1036	842	1842	1329	2102	1698	3182	1285	3866	1270	4347
2-ETHYL HEXANOL	21205	11748	38597	21344	34155	27996	29184	27396	58418	54709	100495	88209	134894	117375	109095	66012
VINYL CHLORIDE MONOMER	120303	43350	154636	62300	385101	163983	302327	147439	296171	145623	303042	167918	317925	178829	349371	167169
EPICHLORHYDRINE	13693	10764	16927	10787	19786	19868	19068	19743	19109	18276	22986	22594	33588	33629	43383	37643
ISO BUTYLENE	32713	29472	40105	22883	42939	32730	23351	20485	9260	7938	23254	21809	13010	12222	15853	10526
METAXYLENE	5263	4448	468	304	1541	981	9564	5960	4371	3851	3029	3223	946	902	3064	2755
METHYL ISOBUTYL KETONE	14919	10690	16698	10474	16399	12388	19209	17173	17668	20184	18318	21987	23243	26643	27576	22104
PIB	5113	5323	5238	4294	6091	4825	7536	7281	10754	11817	9456	13554	11290	16394	14367	17322
POLYCARBONATE	41638	52817	54315	62610	105264	140607	116029	162876	122742	175907	123434	183633	124555	189828	138535	207756
PROPYLENE OXIDE	4432	3530	10006	7393	12561	10340	9392	9595	13141	13052	11676	13076	22914	25917	25552	25697
PROPYLENE GLYCOL	26070	18275	29374	17958	35120	24035	35736	29641	40036	34340	43547	40750	48749	50720	54045	46881
POLYVINYL ACETATE RESIN	2147	2639	3481	3969	3623	4983	4254	6302	4388	7094	4246	8824	4003	8300	3209	5941
UNSATURATED POLYESTER RESIN	38920	28801	44833	30742	36633	36032	34237	39319	36013	43468	31157	40025	28855	33910	30303	36568

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ETHYL BENZENE	63	51	76	53	54	47	75	82	407	360	172	228	128	182	150	146
CELLULOSE ACETATE BUTYRATE	17	52	4	16	110	203	228	450	8	151	0	1	1	5	2	12
CELLULOSE ACETATE SHEET	342	103	375	129	318	123	459	216	692	312	980	569	1260	749	1295	775
CELLULOSE NITRATE SHEET	22	88	75	137	99	217	81	236	178	248	502	843	263	467	88	260
MELAMINE MOULDING POWDER	2803	2910	3896	3902	6019	5928	8006	8500	8668	9858	10210	12619	10081	12356	11872	13961
POLYACETAL RESIN	10909	8118	15437	11934	19191	14005	21082	17748	25933	23667	26266	25418	32605	29992	35212	34173
PHTHALIC ANHYDRIDE	37465	19365	28098	13684	61241	31601	38894	25948	44321	36815	54934	48521	52350	39837	79803	44118
STYRENE	395725	207567	453007	236847	458595	252983	520758	348850	591646	492433	572654	602695	617800	543696	717696	516539
VINYL ACTATE MONOMER	50377	25881	76658	30906	85369	34884	124726	67921	127536	69804	147364	87273	139553	114477	141649	88260
ISOPROPANOL	25737	16132	34107	16488	40556	23598	33441	22148	55724	42087	51271	42756	63194	51016	87606	47646
POLYOL	55283	56769	64051	63582	126162	120201	131056	161806	153222	200925	159073	232014	167916	246352	186239	243011
TOTAL	1141416	605997	1320950	688941	1807833	1046288	1784500	1219192	2037034	1495971	2203984	1817179	2372654	1897349	2739780	1775978
TOTAL IMPORT OF MAJOR PETRO-	4298382	2504133	6091505	3293243	7541713	4653279	7232202	5464978	8665351	6900285	9448662	8127895	10692779	8787966	11649465	8101461

Table -26: Net Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	7576	6632	3989	4123	-911	-11269	-6183	-9860	10101	15894	1428	5666	-1081	1783	-8673	-5157
NYLON FILAMENT YARN	3379	3776	4522	6153	16028	26299	20984	39815	22202	47055	22272	47248	25965	52509	27333	48249
NYLON INDUSTRIAL YARN/TYRE CORD	1193	2102	8581	11798	8293	12649	5335	9650	8156	14465	4126	8053	1998	4098	3289	5332
POLYESTER FILAMENT YARN	-111349	-87577	-177197	-127707	-357528	-294224	-480684	-457765	-526211	-524116	-601019	-676115	-576055	-588637	-562194	-538278
POLYESTER STAPLE FIBRE	-119887	-66668	-146411	-79900	-120938	-82215	-131323	-117640	-140648	-116702	-162706	-146075	-101711	-79995	-82094	-55772
POLYPROPYLENE FILAMENT YARN	1140	1016	447	274	230	351	664	814	-410	-21	-1071	-1757	-1516	-2232	-2147	-2877
POLYPROPYLENE STAPLE FIBRE	-772	-687	-352	-245	-523	-495	-235	-357	-1969	-2162	-14491	-15653	-10282	-11401	-5646	-4888
TOTAL	-218720	-141406	-306421	-185504	-455349	-348904	-591442	-535343	-628779	-565587	-751461	-778633	-662682	-623875	-630132	-553391
FIBRE INTERMEDIATES																
ACRYLONITRILE	78691	56131	64692	42101	72617	73590	71759	71666	79861	80972	100860	111627	97384	118871	157879	119560
CAPROLACTUM	9208	13759	-1112	-2959	-7443	-13500	-8067	-10931	12574	16820	22980	33405	32276	43570	44577	45291
DIMETHYL TEREPHTHALATE	4088	2760	4170	1905	4423	2539	2812	2010	2104	1592	1785	1464	2094	1594	2215	1399
MONO EHYLENE GLYCOL	389857	133848	676605	223745	735230	303640	568106	310698	583035	322078	753692	459126	930324	493148	1039343	487608
PURIFIED TEREPHTHALIC ACID	141385	62455	474366	205917	743486	374405	579711	348816	644377	395109	978068	645067	1044522	559135	523865	250874
TOTAL	623229	268953	1218721	470709	1548313	740674	1214321	722259	1321951	816571	1857385	1250689	2106600	1216318	1767879	904732

Table -26: Net Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
POLYMERS																
LOW DENSITY POLYETHYLENE	81339	51253	155889	94719	184499	120547	184837	132819	247591	189456	237778	219149	304382	271864	350754	287016
HIGH DENSITY POLYTHYLENE	173343	117688	446632	266647	380960	224747	183166	139001	479721	340264	461773	442014	791229	760138	805629	701087
POLYESTYRENE	-45979	-28126	-37888	-17495	-33209	-17113	-31764	-17886	-38188	-22746	-46190	-42387	-34048	-19070	-43776	-24937
POLYPROPYLENE (INC. CO-POLYMER)	130082	60624	-139137	-45861	-156999	-61746	-417905	-253834	-330545	-189163	-464108	-359866	-115233	-30795	-34496	71141
EXPANDABLE POLYESTYRENE	3766	3045	2650	2140	7276	5130	5345	4460	730	747	332	269	-1697	-2048	-781	-1012
POLY VINYL CHLORIDE	337231	151178	628304	270267	660459	324535	847704	440769	1131857	646395	1207197	752978	1291350	852382	1498257	875551
LINEAR LOW DENSITY POLYTHYLENE	196816	128398	375836	226172	570079	363633	441204	299873	517028	395498	486366	400190	539255	505664	574190	445311
PVC COMPOUND	40561	20117	70028	31786	64857	35070	59403	38341	58737	40867	54204	40410	58294	45383	65906	45834
TOTAL	917159	504177	1502314	828375	1677922	994803	1271990	783543	2066931	1401318	1937352	1452757	2833532	2383518	3215683	2399991
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	90866	90925	137084	99360	182912	180622	205033	319950	199017	284010	232061	279755	205542	246438	141749	131645
POLY BUTADIENE RUBBER	22033	27366	49474	38316	47126	60484	65750	111147	69879	113160	85933	109374	68552	77540	68658	59202
ETHYL PROPYLENE DIMERS	13498	16798	19113	21557	25814	33973	26168	49868	27191	58090	28272	43031	30433	46539	36645	51877
ETHYL VINYL ACETATE	88423	75437	77145	66736	89701	86939	82812	91832	107520	108432	113549	123675	138273	154236	163990	160523
NITRILE BUTADIENE RUBBER	6744	10476	11486	11723	15483	21536	8837	24608	26302	46199	29150	43494	26275	43636	51537	43421

Table -26: Net Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
BUTYL RUBBER	52881	109278	66103	103032	70420	142356	81905	171982	78272	172526	78534	172111	83285	156068	90834	123594
TOTAL	274445	330280	360405	340724	431456	525910	470505	769387	508181	782417	567499	771440	552360	724457	553413	570262
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	-14084	-27723	-2672	-4553	-54609	-32840	32258	9832	77372	81352	91332	104561	106795	110714	208741	169503
ETHYLENE OXIDE	-12	98	-617	-733	-241	-290	-270	-518	-357	-595	-457	-939	-752	-1257	-278	218
TOTAL	-14096	-27625	-3289	-5286	-54850	-33130	31988	9314	77015	80757	90875	103622	106043	109457	208463	169721
PERFORMANCE PLASTICS																
ABS RESIN	19534	18450	30308	26704	40952	45945	44663	53014	56231	71603	62717	85689	69685	93851	89616	100253
NYLON-6	32298	47151	41209	56102	56631	87872	68750	125779	78349	142678	99057	188067	117176	208805	129968	192970
POLYMETHYL METHACRYLATE	808	2718	1750	3493	12251	6945	6899	11277	8639	12861	9149	13820	6061	10482	11151	19860
STYRENE ACRYLONITRILE	6053	3371	2891	2079	4899	4486	4447	4428	6205	6993	5698	7274	6291	7726	8990	8602
POLYESTER CHIPS/PET CHIPS	-217018	-121351	-259136	-139088	-285781	-182732	-254916	-202715	-244564	-196093	-336821	-281967	-208406	-151869	-660900	-385839
POLYTETRAFLUOROET HYLENE(PTFE)	55	4848	740	4018	-3305	-9348	-4263	-24505	-3067	-9431	-3429	-14717	-5406	-26120	-3996	-17736
TOTAL	-158270	-44813	-182238	-46692	-174353	-46832	-134420	-32722	-98207	28611	-163629	-1834	-14599	142875	-425171	-81890
OLEFINS																
BUTADIENE	-116175	-80484	-110882	-66151	-131010	-119437	-116358	-172136	-108439	-124668	-118339	-87481	-69256	-42478	-128814	-66255

Table -26: Net Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ETHYLENE	19870	9160	34535	16470	114506	51518	14660	8217	23783	17215	24790	19454	43905	38466	15931	10964
PROPYLENE	66	269	-23516	-11304	-24208	-10169	-8919	-3901	-4984	-2199	247	1201	2127	2691	-11108	-587
TOTAL	-96239	-71055	-99863	-60985	-40712	-78088	-110617	-167820	-89640	-109652	-93302	-66826	-23224	-1321	-123991	-55878
AROMATICS																
BENZENE	-357898	-133183	-276825	-127056	-519307	-202800	-458429	-256321	-602303	-413629	-630499	-434667	-576694	-348865	-914875	-371283
MIXED XYLENE	-110055	-47769	-56356	-18977	-72323	-29631	-148488	-87875	-141395	-104275	-181672	-135055	-8817	-5768	100	47
ORTHO-XYLENE	-17120	-2464	-137102	-58680	-302052	-140145	-151584	-97200	-165688	-125893	-184131	-130512	-191310	-114794	-199884	-90750
TOLUENE	143693	56057	196913	77810	183323	75240	239926	135671	301733	211280	248961	181884	277883	177414	338394	160451
PARAXYLENE	-256093	-114275	-169338	-94894	37595	10349	-166573	-174608	-15066	8959	-43511	24171	-365865	-158725	-52553	-8224
TOTAL	-597473	-241634	-442708	-221797	-672764	-286987	-685148	-480333	-622719	-423558	-790852	-494179	-864803	-450738	-828818	-309759
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	210434	29870	191631	35958	284997	65400	263401	46734	355809	53024	439528	97999	465271	117014	584194	101873
BUTANOL	21983	12715	34289	16402	19927	12831	27973	19040	31528	21386	42497	33871	56195	41664	62317	31218
OXO ALCOHOL	221	304	797	513	189	-379	459	1102	517	1119	510	2049	94	2959	688	3782
2-ETHYL HEXANOL	21197	11728	38487	20934	34135	27466	29106	26588	58371	53708	100174	87555	128503	110970	108349	65358
VINYL CHLORIDE MONOMER	120279	43336	154636	62300	385075	163944	302327	147439	296171	145623	303041	167910	317925	178829	349371	167169

Table -26: Net Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
EPICHLHYDRINE	13685	10756	16917	10778	19778	19855	19049	19719	19096	18266	22982	22587	33574	33610	43355	37610
ISO BUTYLENE	32682	29466	40005	22835	42938	32729	23351	20484	9260	7938	21439	20427	13009	12220	15825	10277
METAXYLENE	-5599	2193	431	282	-107865	-70102	-82780	-55429	-36690	-28898	3025	3210	923	756	3018	2615
METHYL ISOBUTYL KETONE	14837	10618	16695	10463	16292	12297	18670	16654	17663	20113	18294	21934	23037	26279	27289	21838
PIB	-102	1821	69	1126	-76	805	913	1752	6469	7078	3560	6000	6297	10469	8239	10122
POLYCARBONATE	40675	50957	52882	59054	101896	133957	113674	159205	120233	171575	120412	177530	122096	187056	133745	203159
PROPYLENE OXIDE	4366	3468	10006	7393	12561	10336	9392	9595	13141	13052	11676	13076	22914	25917	25552	25697
PROPYLENE GLYCOL	25176	17538	28223	17200	33942	23064	34828	28762	37443	32387	42729	39764	47976	49677	53514	46157
POLYVINYL ACETATE RESIN	-2295	111	-102	2046	-3254	568	-5823	-1886	-9676	-4469	-11263	-4819	-11453	-7084	-8050	-5474
UNSATURATED POLYSTER RESIN	24723	17434	34914	24089	27502	28183	24782	29840	25304	30991	20407	25492	16195	16836	18191	21543
ETHYL BENZENE	-488	-674	60	29	54	47	72	81	403	356	172	228	128	182	150	144
CELLULOSE ACETATE BUTYRATE	0	24	-1	-23	85	172	218	435	-45	73	-93	-162	-43	-88	-4	-69
CELLULOSE ACETATE SHEET	205	-92	357	87	171	-41	442	180	533	146	917	417	1227	665	1261	659
CELLULOSE NITRATE SHEET	-26	7	69	131	-13	121	73	222	132	229	499	829	251	451	85	255
MELAMINE MOULDING POWDER	2038	2283	3519	3598	4940	5185	6955	7586	7508	8918	8042	11188	3742	10072	3879	11420
POLYACETAL RESIN	10598	7742	14910	11417	17939	13072	20372	17045	25654	23264	25726	24764	32068	29394	34900	33790

Table -26: Net Imports of Major Petrochemicals (Product-wise) 2008-09 to 2015-16

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
PHTHALIC ANHYDRIDE	-4279	-1297	8517	4171	42761	21589	13901	8912	31509	25337	31752	28262	13716	13093	39355	21740
STYRENE	391431	204653	452206	236327	456785	251776	513237	344003	574319	476110	570412	600303	610860	537073	716903	515870
VINYL ACTATE MONOMER	-281853	25251	74245	29929	84307	34384	122499	66681	126194	68982	143268	84638	137991	113085	139954	86872
ISOPROPANOL	18513	11750	29656	12755	33226	17499	23843	9395	51878	37938	47937	38703	57055	44508	83890	44841
POLYOL	47871	45666	52759	52054	115146	107848	119224	149549	137228	182410	140104	205813	148978	198098	165140	216251
TOTAL	706272	537628	1256177	641848	1623438	912606	1600158	1073688	1899952	1366656	2107747	1709568	2248529	1753705	2611110	1674717
TOTAL NET IMPORT OF MAJOR PETRO-CHEMICALS	1436307	1114505	3303098	1761392	3883101	2380052	3067335	2141973	4434685	3377533	4761614	3946604	6281756	5254396	6348436	4718505

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLIC FIBRE	IRAN	22263.10	25124.94
	CHINA P RP	7001.99	7692.63
	KENYA	6099.31	5158.72
	ETHIOPIA	3587.82	3320.63
	BANGLADESH PR	931.22	1770.16
	Product Total	39883.44	43067.06
NYLON FILAMENT YARN	U S A	207.79	1022.75
	SPAIN	203.27	599.23
	PORTUGAL	146.19	461.10
	SRI LANKA DSR	144.29	504.98
	VIETNAM SOC REP	123.88	461.32
	Product Total	825.42	3049.38
NYLON INDUSTRIAL YARN/TYRE CORD	THAILAND	319.49	449.66
	GERMANY	137.11	162.47
	MEXICO	113.85	142.19
	BANGLADESH PR	87.60	109.17
	U S A	84.46	112.70
	Product Total	742.51	976.19
POLYESTER FILAMENT YARN	TURKEY	172866.00	157530.72
	BRAZIL	96992.74	80012.06
	BANGLADESH PR	37899.29	39131.20
	EGYPT A RP	34023.05	28160.99
	KOREA RP	33948.32	30117.93
	Product Total	375729.40	334952.90
POLYESTER STAPLE FIBRE	U S A	37197.47	29940.97
	BELGIUM	17641.84	11849.83
	NEPAL	17102.86	11261.75
	BANGLADESH PR	12270.30	7644.18
	INDONESIA	10372.86	6773.12
	Product Total	94585.34	67469.85
POLYPROPYLENE FILAMENT YARN	MEXICO	407.22	557.77
	BANGLADESH PR	343.83	424.04
	ETHIOPIA	256.49	379.76
	U S A	167.04	242.94
	KENYA	133.76	155.65
	Product Total	1308.33	1760.16
POLYPROPYLENE STAPLE FIBRE	U S A	5932.64	4873.95
	NEPAL	785.78	967.40
	AUSTRALIA	537.34	645.18
	U ARAB EMTS	250.24	346.98
	TURKEY	11.00	30.65
	Product Total	7516.99	6864.16

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLONITRILE	IRAN	2292.00	2071.66
	UKRAINE	17.76	47.17
	COLOMBIA	13.00	11.91
	SOUTH AFRICA	0.02	0.19
	SAUDI ARAB	0.00	0.01
	Product Total	2322.78	2130.93
CAPROLACTUM	U S A	0.13	7.63
	GERMANY	0.02	0.05
	Product Total	0.14	7.67
DIMETHYL TEREPHTHALATE	KAZAKHSTAN	0.90	1.43
	SRI LANKA DSR	0.00	0.04
	Product Total	0.90	1.47
MONO EHYLENE GLYCOL	U S A	30261.00	22195.77
	QATAR	7488.00	4934.55
	MEXICO	6600.00	4972.04
	NETHERLAND	6512.00	4841.63
	CHINA P RP	6326.00	4446.75
	Product Total	57187.00	41390.74
PURIFIED TEREPHTHALIC ACID	U ARAB EMTS	92316.00	36214.18
	TURKEY	17046.71	6344.40
	OMAN	14646.00	5660.90
	MALAYSIA	12012.00	4498.91
	SOUTH AFRICA	11800.00	4553.94
	Product Total	147820.71	57272.32
LOW DENSITY POLYETHYLENE	TURKEY	3798.19	4338.63
	IRAN	2466.93	2956.18
	SAUDI ARAB	2311.94	2657.62
	BANGLADESH PR	1880.21	2033.03
	U ARAB EMTS	1661.25	1194.44
	Product Total	12118.52	13179.90
HIGH DENSITY POLYTHYLENE	CHINA P RP	49451.54	37590.97
	VIETNAM SOC REP	15597.12	12183.66
	NEPAL	12373.01	10956.68
	TURKEY	6449.00	4988.50
	PAKISTAN IR	5777.30	4955.33
	Product Total	89647.98	70675.12
POLYESTYRENE	EGYPT A RP	14017.47	10698.83
	ITALY	13250.29	10674.30
	TURKEY	8420.10	6456.58
	BANGLADESH PR	5203.85	3666.09
	U ARAB EMTS	5142.61	7139.78
	Product Total	46034.32	38635.57
	CHINA P RP	157339.24	104544.28

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYPROPYLENE (INC. CO-POLYMER)	TURKEY	143154.37	99333.16
	PAKISTAN IR	81391.55	55328.84
	VIETNAM SOC REP	46762.20	31102.52
	ITALY	43357.24	32458.71
	Product Total	472004.60	322767.51
EXPANDABLE POLYESTYRENE	INDONESIA	1320.00	1359.85
	U ARAB EMTS	678.01	720.28
	BANGLADESH PR	549.05	468.62
	TAIWAN	286.00	292.39
	PAKISTAN IR	162.00	160.74
	Product Total	2995.06	3001.87
POLY VINYL CHLORIDE	U ARAB EMTS	2097.63	2024.89
	NEPAL	194.08	234.96
	SPAIN	182.20	244.33
	U S A	131.78	225.35
	SINGAPORE	60.20	69.60
	Product Total	2665.87	2799.13
LINEAR LOW DENSITY POLYTHYLENE	NEPAL	4222.40	3520.87
	PAKISTAN IR	2280.44	1941.97
	BANGLADESH PR	2020.30	1730.69
	KENYA	1673.85	1484.56
	CHINA P RP	904.89	694.90
	Product Total	11101.88	9373.00
PVC COMPOUND	ETHIOPIA	1850.00	1380.84
	NEPAL	1589.26	1013.03
	U ARAB EMTS	1538.61	1372.11
	SRI LANKA DSR	1503.33	1500.71
	TANZANIA REP	1413.66	1024.13
	Product Total	7894.85	6290.83
STYRENE BUTADIENE RUBBER	CHINA P RP	7308.67	4621.71
	PAKISTAN IR	4811.42	3577.37
	BANGLADESH PR	2804.57	3065.90
	TURKEY	2283.01	1587.85
	THAILAND	1730.85	1268.27
	Product Total	18938.52	14121.10
POLY BUTADIENE RUBBER	CHINA P RP	2871.00	1502.51
	SRI LANKA DSR	1262.69	939.10
	PAKISTAN IR	625.00	494.82
	BANGLADESH PR	297.97	230.09
	U S A	291.00	345.35
	Product Total	5347.66	3511.88
	TURKEY	1935.06	7414.74
	U ARAB EMTS	406.10	561.89

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYL PROPYLENE DIMERS	IRAN	86.30	151.34
	U S A	53.82	280.01
	U K	47.98	87.39
	Product Total	2529.25	8495.37
ETHYL VINYL ACETATE	U S A	671.00	646.66
	IRAN	340.10	398.31
	U ARAB EMTS	80.25	129.02
	NEPAL	52.02	60.97
	CHINA P RP	50.51	98.21
	Product Total	1193.88	1333.17
NITRILE BUTADIENE RUBBER	U S A	146.97	341.82
	VIETNAM SOC REP	37.00	31.16
	JAPAN	36.00	151.98
	MEXICO	34.40	89.15
	THAILAND	24.16	70.21
	Product Total	278.53	684.32
BUTYL RUBBER	BANGLADESH PR	990.54	2536.36
	SRI LANKA DSR	172.80	444.77
	U ARAB EMTS	43.02	56.74
	THAILAND	16.00	19.02
	VIETNAM SOC REP	10.00	7.68
	Product Total	1232.36	3064.57
LINEAR ALKYL BENZENE	BANGLADESH PR	5303.05	3617.87
	U ARAB EMTS	2523.17	2240.32
	TANZANIA REP	560.00	409.16
	NEPAL	533.99	355.78
	INDONESIA	159.24	228.31
	Product Total	9079.45	6851.43
ETHYLENE OXIDE	MALAYSIA	76.83	112.20
	SPAIN	71.54	241.80
	THAILAND	69.50	172.90
	VIETNAM SOC REP	37.88	52.75
	INDONESIA	32.00	25.54
	Product Total	287.75	605.20
ABS RESIN	THAILAND	205.25	204.95
	RUSSIA	62.00	98.00
	INDONESIA	42.75	142.85
	MYANMAR	29.00	43.97
	GERMANY	26.78	29.63
	Product Total	365.78	519.40
NYLON-6	JAPAN	2457.01	3888.54
	HONG KONG	2003.80	3582.24
	THAILAND	997.97	1837.22

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	U S A	869.08	1234.79
	SAUDI ARAB	806.05	1527.19
	Product Total	7133.91	12069.97
POLYMETHYL METHACRYLATE	NIGERIA	2253.81	1448.42
	NEPAL	938.34	748.59
	MAURITIUS	711.49	472.46
	PHILIPPINES	620.31	441.84
	U ARAB EMTS	614.36	478.45
	Product Total	5138.30	3589.75
STYRENE ACRYLONITRILE	NIGERIA	450.46	285.54
	SRI LANKA DSR	57.00	67.90
	IRAN	30.00	29.21
	MOZAMBIQUE	18.00	15.73
	U ARAB EMTS	16.00	45.80
	Product Total	571.46	444.19
POLYESTER CHIPS/PET CHIPS	U ARAB EMTS	66783.11	40066.07
	ITALY	65051.00	37190.55
	BANGLADESH PR	48664.85	28265.44
	BAHARAIN IS	48314.00	29359.77
	SAUDI ARAB	46309.00	26089.24
	Product Total	275121.95	160971.06
POLYTETRAFLUORO ETHYLENE(PTFE)	GERMANY	1971.11	9341.77
	ITALY	1396.79	5317.56
	U S A	1207.25	6297.31
	CHINA P RP	208.73	1483.20
	U K	201.19	1203.02
	Product Total	4985.06	23642.87
BUTADIENE	KOREA RP	76524.00	41201.81
	CHINA P RP	19712.00	8301.39
	MALAYSIA	15750.00	8135.50
	INDONESIA	14147.00	6851.10
	THAILAND	2100.00	1440.01
	Product Total	128233.00	65929.82
ETHYLENE	INDONESIA	5099.00	3759.10
	GERMANY	18.00	24.87
	SRI LANKA DSR	0.70	0.53
	NEPAL	0.69	0.46
	KUWAIT	0.12	3.83
	Product Total	5118.51	3788.79
PROPYLENE	INDONESIA	14462.00	5305.28
	GERMANY	0.08	0.04
	Product Total	14462.08	5305.32
	SAUDI ARAB	471982.01	187909.73

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
BENZENE	SINGAPORE	126727.00	52478.34
	SPAIN	93315.00	37017.90
	U S A	72341.11	30917.97
	BELGIUM	59750.00	26062.81
	Product Total	824115.12	334386.73
MIXED XYLENE	SAUDI ARAB	2.03	9.28
	OMAN	1.18	4.36
	JORDAN	0.80	4.21
	NEPAL	0.65	0.85
	MAURITIUS	0.62	20.35
	Product Total	5.28	39.05
ORTHO-XYLENE	CHINA P RP	160560.00	74486.53
	INDONESIA	33075.00	14631.51
	PAKISTAN IR	20475.00	9483.14
	TAIWAN	19950.00	8784.71
	MALAYSIA	303.00	195.27
	Product Total	234363.00	107581.16
TOLUENE	U ARAB EMTS	1419.87	725.19
	KENYA	980.06	582.81
	SRI LANKA DSR	622.40	340.20
	SAUDI ARAB	283.00	162.80
	BANGLADESH PR	266.00	155.62
	Product Total	3571.33	1966.62
PARAXYLENE	INDONESIA	310097.00	156886.83
	CHINA P RP	166844.00	85538.80
	MALAYSIA	125337.00	63678.60
	THAILAND	81818.00	41430.17
	TAIWAN	62508.00	31052.59
	Product Total	746604.00	378586.99
ETHYLENE DICHLORIDE	THAILAND	8780.00	1753.57
	U ARAB EMTS	7057.00	1347.79
	BANGLADESH PR	1.20	0.69
	MALAYSIA	0.20	0.06
	NEPAL	0.11	0.39
	Product Total	15838.51	3102.49
BUTANOL	NEPAL	55.14	36.98
	SRI LANKA DSR	55.01	34.85
	U ARAB EMTS	24.11	18.77
	BANGLADESH PR	22.81	18.63
	KENYA	13.01	9.06
	Product Total	170.07	118.30
OXO ALCOHOL	NETHERLAND	182.00	202.17
	U S A	172.73	164.47

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	CHINA P RP	164.00	102.93
	BANGLADESH PR	29.18	21.86
	POLAND	14.04	31.10
	Product Total	561.94	522.52
2-ETHYL HEXANOL	IRAN	497.00	380.80
	U ARAB EMTS	139.60	96.44
	BANGLADESH PR	67.90	47.71
	BAHARAIN IS	28.00	21.32
	NEPAL	8.47	7.97
	Product Total	740.97	554.24
EPICHLHYDRINE	SOUTH AFRICA	19.20	19.13
	BANGLADESH PR	8.68	13.97
	TURKEY	0.00	0.09
	Product Total	27.88	33.19
ISO BUTYLENE	U S A	23.00	227.38
	BANGLADESH PR	4.03	18.86
	THAILAND	0.66	2.25
	GERMANY	0.29	0.82
	Product Total	27.97	249.30
METAXYLENE	IRAN	34.56	29.36
	BELGIUM	5.00	17.71
	SAUDI ARAB	5.00	6.32
	DENMARK	1.00	86.34
	KENYA	0.14	0.36
	Product Total	45.70	140.08
METHYL ISOBUTYL KETONE	U ARAB EMTS	176.00	148.51
	KENYA	32.02	22.56
	SRI LANKA DSR	20.00	18.13
	PAKISTAN IR	15.00	10.60
	AUSTRALIA	13.00	8.79
	Product Total	256.02	208.59
PIB	CHINA P RP	1133.00	974.23
	SINGAPORE	1082.00	832.57
	U S A	790.00	582.38
	INDONESIA	752.00	657.50
	SAUDI ARAB	339.81	417.59
	Product Total	4096.81	3464.26
POLYCARBONATE	ITALY	1818.15	1521.40
	KOREA RP	1049.32	774.14
	NETHERLAND	587.72	503.38
	CHINA P RP	280.17	335.97
	GERMANY	276.63	226.09
	Product Total	4011.98	3360.98

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
PROPYLENE GLYCOL	SRI LANKA DSR	97.34	110.08
	SINGAPORE	80.10	63.66
	IRAN	71.63	89.73
	BANGLADESH PR	54.61	123.21
	TANZANIA REP	44.62	49.66
	Product Total	348.29	436.35
POLYVINYL ACETATE RESIN	U S A	3356.94	4448.17
	BELGIUM	978.36	1101.34
	NIGERIA	948.21	551.22
	SRI LANKA DSR	723.76	496.93
	TURKEY	607.50	674.49
	Product Total	6614.76	7272.14
UNSATURATED POLYESTER RESIN	SPAIN	1923.01	1854.96
	NIGERIA	1226.67	1078.10
	AUSTRALIA	1040.64	1263.83
	BANGLADESH PR	1009.98	1700.69
	NEPAL	952.32	877.19
	Product Total	6152.61	6774.76
ETHYL BENZENE	NEPAL	0.10	1.50
	GERMANY	0.00	0.49
	Product Total	0.10	1.99
CELLULOSE ACETATE BUTYRATE	GERMANY	3.45	71.48
	U ARAB EMTS	2.00	3.95
	JAPAN	0.15	3.91
	SPAIN	0.03	0.71
	TANZANIA REP	0.03	0.31
	Product Total	5.65	80.36
CELLULOSE ACETATE SHEET	THAILAND	28.77	100.74
	U S A	3.22	8.20
	NEPAL	1.34	2.88
	ITALY	0.15	0.55
	ISRAEL	0.03	0.13
	Product Total	33.51	112.50
CELLULOSE NITRATE SHEET	EGYPT A RP	2.50	4.85
	NEPAL	0.07	0.37
	Product Total	2.57	5.22
MELAMINE MOULDING POWDER	NEPAL	6814.16	1118.57
	CHINA P RP	272.00	352.38
	PAKISTAN IR	208.80	168.71
	TURKEY	157.64	206.03
	INDONESIA	123.84	164.41
	Product Total	7576.44	2010.10
	GERMANY	178.13	165.52

Table-27 Top Five Export Destinations of Selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYACETAL RESIN	BANGLADESH PR	85.00	117.78
	U S A	25.08	51.84
	ITALY	7.20	6.27
	CHINA P RP	4.72	11.43
	Product Total	300.13	352.84
PHTHALIC ANHYDRIDE	SAUDI ARAB	21736.00	12268.24
	U ARAB EMTS	13180.00	7054.67
	EGYPT A RP	1085.00	616.20
	KENYA	987.00	543.91
	U S A	630.00	337.24
	Product Total	37618.00	20820.26
STYRENE	SRI LANKA DSR	382.00	330.32
	U ARAB EMTS	304.08	246.71
	PAKISTAN IR	58.00	44.33
	SOUTH AFRICA	30.40	25.98
	EGYPT A RP	14.00	13.85
	Product Total	788.48	661.19
VINYL ACTATE MONOMER	BANGLADESH PR	536.00	586.63
	U ARAB EMTS	434.90	283.82
	ETHIOPIA	168.00	123.05
	NIGERIA	152.00	96.69
	SRI LANKA DSR	120.00	78.53
	Product Total	1410.90	1168.73
ISOPROPANOL	NIGERIA	576.40	366.05
	U ARAB EMTS	553.21	393.84
	IRAN	440.52	314.28
	SRI LANKA DSR	430.38	288.76
	EGYPT A RP	428.00	373.80
	Product Total	2428.50	1736.72
POLYOL	EGYPT A RP	2751.83	767.06
	SINGAPORE	2163.96	3507.03
	CHINA P RP	1713.29	1700.88
	INDONESIA	1350.37	1676.15
	U ARAB EMTS	1338.22	1660.39
	Product Total	9317.67	9311.50

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLIC FIBRE	THAILAND	13670.49	16872.57
	GERMANY	11866.12	14820.33
	NEPAL	4118.73	7186.27
	JAPAN	2901.30	5781.79
	CHINA P RP	2759.06	3421.08
	Product Total	35315.69	48082.04
NYLON FILAMENT YARN	VIETNAM SOC REP	9666.23	17570.83
	TAIWAN	6122.52	10985.59
	MALAYSIA	4585.79	7042.99
	CHINA P RP	3351.40	6548.07
	FRANCE	1034.46	2075.90
	Product Total	24760.40	44223.39
NYLON INDUSTRIAL YARN/TYRE CORD	CHINA P RP	2854.95	4406.52
	BELARUS	605.18	834.23
	INDONESIA	293.24	354.62
	GERMANY	284.29	590.43
	TAIWAN	194.24	316.45
	Product Total	4231.91	6502.26
POLYESTER FILAMENT YARN	CHINA P RP	34701.00	37518.15
	INDONESIA	11043.43	10969.48
	MALAYSIA	9920.86	9849.17
	KOREA RP	7809.35	10024.43
	THAILAND	2743.08	5325.34
	Product Total	66217.72	73686.57
POLYESTER STAPLE FIBRE	CHINA P RP	68262.28	46348.58
	INDONESIA	9009.25	5858.15
	KOREA RP	6730.89	6752.35
	THAILAND	5488.05	3822.96
	TAIWAN	4273.08	4183.61
	Product Total	93763.54	66965.64
POLYPROPYLENE FILAMENT YARN	TURKEY	463.93	634.45
	CHINA P RP	152.72	184.44
	SAUDI ARAB	44.27	63.30
	U ARAB EMTS	13.95	19.57
	TAIWAN	10.80	15.29
	Product Total	685.67	917.05

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYPROPYLENE STAPLE FIBRE	SAUDI ARAB	1093.65	1069.81
	VIETNAM SOC REP	262.92	272.67
	U ARAB EMTS	241.00	237.64
	CHINA P RP	160.00	203.08
	BELGIUM	35.23	42.12
	Product Total	1792.80	1825.31
ACRYLONITRILE	U S A	62736.03	48757.07
	BRAZIL	55394.42	41315.09
	KOREA RP	23129.35	18243.56
	RUSSIA	13878.00	9368.87
	GERMANY	2000.01	1789.10
	Product Total	157137.81	119473.68
CAPROLACTUM	NETHERLAND	13176.00	13104.96
	RUSSIA	10530.00	10416.48
	POLAND	10500.00	10641.42
	BELGIUM	6180.00	6158.65
	THAILAND	2208.00	2152.96
	Product Total	42594.00	42474.46
DIMETHYL TEREPHTHALATE	KOREA RP	1116.00	721.09
	JAPAN	594.00	376.32
	IRAN	280.00	155.97
	TURKEY	172.00	109.72
	KOREA DP RP	54.00	35.00
	Product Total	2216.00	1398.10
MONO EHYLENE GLYCOL	SAUDI ARAB	466834.52	227735.32
	KUWAIT	430283.41	205241.36
	IRAN	116517.50	56312.62
	SINGAPORE	80113.17	42335.77
	U ARAB EMTS	12069.60	5608.35
	Product Total	1105818.19	537233.41
PURIFIED TEREPHTHALIC ACID	CHINA P RP	279206.99	131915.74
	KOREA RP	139094.52	61732.24
	THAILAND	118292.52	51680.77
	INDONESIA	78860.00	35633.24
	MALAYSIA	36917.16	16654.36
	Product Total	652371.20	297616.36

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
LOW DENSITY POLYETHYLENE	SAUDI ARAB	117479.49	93488.73
	QATAR	53213.17	43500.72
	U ARAB EMTS	45202.84	33294.60
	KOREA RP	27386.44	27082.97
	GERMANY	22276.49	22154.40
	Product Total	265558.43	219521.41
HIGH DENSITY POLYTHYLENE	U ARAB EMTS	193058.95	155691.90
	SAUDI ARAB	175514.36	139085.81
	SINGAPORE	136982.60	124340.70
	QATAR	121189.16	100947.01
	THAILAND	81805.24	76470.32
	Product Total	708550.31	596535.73
POLYESTYRENE	KOREA RP	11731.03	15227.89
	TAIWAN	8034.65	6819.92
	SINGAPORE	7550.94	7082.98
	MALAYSIA	2642.52	3159.61
	THAILAND	2509.67	2042.89
	Product Total	32468.80	34333.29
POLYPROPYLENE (INC. CO-POLYMER)	SAUDI ARAB	165737.89	122947.73
	U ARAB EMTS	159745.33	111132.49
	SINGAPORE	148169.15	126345.77
	THAILAND	55143.18	49743.84
	KOREA RP	45938.18	43342.41
	Product Total	574733.73	453512.24
EXPANDABLE POLYESTYRENE	CHINA P RP	1923.72	1622.30
	TAIWAN	805.40	739.33
	VIETNAM SOC REP	68.00	56.61
	AUSTRIA	46.80	74.31
	GERMANY	46.48	68.23
	Product Total	2890.40	2560.78
POLY VINYL CHLORIDE	TAIWAN	402275.33	229798.73
	KOREA RP	324784.52	175674.49
	JAPAN	226391.88	133719.10
	CHINA P RP	184812.93	105146.47
	IRAN	92757.20	51603.81
	Product Total	1231021.86	695942.59

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
LINEAR LOW DENSITY POLYTHYLENE	SAUDI ARAB	152341.06	127056.84
	QATAR	116647.32	74719.02
	U ARAB EMTS	104870.63	81156.19
	SINGAPORE	57537.80	46410.45
	IRAN	24292.00	19223.75
	Product Total	455688.81	348566.25
PVC COMPOUND	KOREA RP	24542.93	15433.30
	TAIWAN	12340.67	7421.47
	CHINA P RP	6764.52	6938.64
	U S A	5726.56	3521.29
	U ARAB EMTS	5285.24	3453.22
	Product Total	54659.91	36767.92
STYRENE BUTADIENE RUBBER	KOREA RP	96783.40	84407.54
	POLAND	20557.64	15826.72
	THAILAND	10609.30	8104.74
	GERMANY	8731.38	8539.60
	INDONESIA	5252.05	3730.19
	Product Total	141933.78	120608.79
POLY BUTADIENE RUBBER	KOREA RP	24190.94	20957.76
	RUSSIA	12263.29	9561.61
	FRANCE	7925.90	6806.66
	U ARAB EMTS	5124.18	3721.20
	SINGAPORE	3714.16	3180.43
	Product Total	53218.47	44227.65
ETHYL PROPYLENE DIMERS	U S A	10605.81	15473.85
	KOREA RP	8239.57	11768.72
	JAPAN	7952.58	13440.80
	NETHERLAND	7257.51	12192.86
	GERMANY	1532.85	2148.13
	Product Total	35588.32	55024.36
ETHYL VINYL ACETATE	KOREA RP	70755.81	70766.00
	SAUDI ARAB	46615.33	39634.08
	THAILAND	14931.80	14736.87
	BELGIUM	11369.79	11276.94
	TAIWAN	4631.36	4484.31
	Product Total	148304.08	140898.20

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
NITRILE BUTADIENE RUBBER	KOREA RP	35272.85	20325.11
	FRANCE	4609.36	7351.03
	JAPAN	3781.90	6743.67
	RUSSIA	2306.02	2253.06
	TAIWAN	1613.47	1955.05
	Product Total	47583.60	38627.92
BUTYL RUBBER	RUSSIA	47436.15	55265.02
	U S A	9597.57	17645.01
	U K	8909.33	17179.17
	SINGAPORE	7756.24	10105.67
	BELGIUM	5339.32	9305.42
	Product Total	79038.60	109500.28
LINEAR ALKYL BENZENE	SAUDI ARAB	71203.00	58871.17
	IRAN	58201.75	44877.46
	QATAR	57851.00	46479.06
	CHINA P RP	20245.76	16872.90
	EGYPT A RP	5956.00	4727.27
	Product Total	213457.51	171827.85
ETHYLENE OXIDE	U S A	84.67	901.74
	NETHERLAND	12.00	16.53
	GERMANY	2.17	21.17
	ARGENTINA	1.00	11.23
	ITALY	0.32	1.43
	Product Total	100.16	952.11
ABS RESIN	KOREA RP	72517.09	79835.97
	THAILAND	6751.40	7133.22
	MALAYSIA	6203.54	7051.02
	TAIWAN	1449.05	1547.44
	CHINA P RP	724.63	1286.73
	Product Total	87645.71	96854.37
NYLON-6	TAIWAN	52351.71	62355.05
	RUSSIA	20700.30	23440.61
	U S A	19328.91	31289.77
	CHINA P RP	8832.99	19727.38
	GERMANY	7768.34	14077.17
	Product Total	108982.25	150889.97

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYMETHYL METHACRYLATE	KOREA RP	10828.32	15654.78
	SINGAPORE	3054.30	2865.98
	GERMANY	1395.97	2408.49
	THAILAND	937.69	1075.16
	CHINA P RP	853.78	927.26
	Product Total	17070.05	22931.66
STYRENE ACRYLONITRILE	KOREA RP	6192.70	5671.41
	THAILAND	1620.65	1367.74
	GERMANY	1028.08	1191.51
	JAPAN	381.25	401.00
	TAIWAN	90.95	88.18
	Product Total	9313.62	8719.83
POLYESTER CHIPS/PET CHIPS	CHINA P RP	58985.17	36823.70
	U ARAB EMTS	17047.12	10275.94
	TAIWAN	12898.96	8386.30
	IRAN	11527.59	6595.31
	MALAYSIA	7347.09	4740.78
	Product Total	107805.93	66822.03
POLYTETRAFLUOROETHYLENE(PTFE)	CHINA P RP	705.66	2877.61
	NETHERLAND	532.11	3571.27
	U S A	302.44	2600.40
	RUSSIA	187.20	608.27
	ITALY	139.73	805.77
	Product Total	1867.14	10463.33
BUTADIENE	SAUDI ARAB	954.00	501.76
	GERMANY	15.43	108.32
	TAIWAN	15.09	12.38
	CHINA P RP	9.00	32.12
	U S A	0.44	48.58
	Product Total	993.96	703.16
ETHYLENE	ITALY	11537.00	7588.47
	SINGAPORE	6464.00	4920.19
	MALAYSIA	3005.00	2171.00
	JAPAN	23.00	21.58
	GERMANY	11.55	16.14
	Product Total	21040.55	14717.37

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
PROPYLENE	U S A	1927.72	1587.23
	FRANCE	945.00	817.89
	CHINA P RP	472.16	2303.05
	ITALY	8.72	9.78
	SINGAPORE	0.30	0.50
	Product Total	3353.90	4718.44
BENZENE	FRANCE	0.06	0.75
	GERMANY	0.04	1.00
	NETHERLAND	0.01	0.48
	U S A	0.01	2.49
	U K	0.00	0.01
	Product Total	0.11	4.73
MIXED XYLENE	GERMANY	29.79	30.80
	NETHERLAND	28.00	26.60
	ISRAEL	21.00	11.11
	U ARAB EMTS	14.70	13.47
	BELGIUM	14.01	13.35
	Product Total	107.50	95.32
ORTHO-XYLENE	IRAN	16339.00	7709.86
	SINGAPORE	14022.00	7060.73
	NETHERLAND	2268.00	1156.67
	SPAIN	993.00	499.89
	RUSSIA	880.00	443.17
	Product Total	34502.00	16870.32
TOLUENE	SINGAPORE	164213.50	78524.38
	THAILAND	89647.00	43520.28
	IRAN	34603.00	15377.02
	SPAIN	22852.00	10282.99
	KOREA RP	11651.18	5611.60
	Product Total	322966.68	153316.27
PARAXYLENE	SAUDI ARAB	355406.14	194319.18
	KUWAIT	299578.12	165867.65
	SINGAPORE	123638.02	66867.91
	OMAN	37202.12	19740.06
	MALAYSIA	5246.73	2868.28
	Product Total	821071.12	449663.08

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYLENE DICHLORIDE	GERMANY	184260.19	29996.91
	U S A	142857.45	26999.41
	QATAR	119109.67	21964.45
	SAUDI ARAB	117091.00	19641.96
	IRAN	31947.00	5708.91
	Product Total	595265.30	104311.64
BUTANOL	MALAYSIA	24164.00	12094.91
	SAUDI ARAB	8899.95	3219.10
	SINGAPORE	8642.00	4600.84
	SOUTH AFRICA	8590.00	3848.02
	GERMANY	5278.48	3552.14
	Product Total	55574.43	27315.00
OXO ALCOHOL	INDONESIA	373.54	1241.37
	MALAYSIA	350.77	1102.56
	GERMANY	349.68	1141.07
	PHILIPPINES	92.98	316.36
	CHINA P RP	42.98	270.63
	Product Total	1209.95	4071.98
2-ETHYL HEXANOL	SAUDI ARAB	24642.00	14797.10
	MALAYSIA	19863.65	12455.41
	INDONESIA	14721.00	9750.81
	GERMANY	14344.00	8220.99
	SINGAPORE	13230.41	7951.92
	Product Total	86801.06	53176.22
VINYL CHLORIDE MONOMER	QATAR	210931.46	98338.84
	JAPAN	87580.16	44855.83
	TAIWAN	11215.00	5571.48
	U S A	9696.71	4121.17
	UNSPECIFIED	9430.00	4706.51
	Product Total	328853.34	157593.83
EPICHLHYDRINE	THAILAND	27838.21	24100.28
	KOREA RP	6812.84	5707.53
	TAIWAN	3960.13	3484.80
	JAPAN	3595.62	3069.47
	SAUDI ARAB	423.81	338.87
	Product Total	42630.61	36700.95

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ISO BUTYLENE	KOREA RP	10883.15	7443.39
	TAIWAN	4637.00	2630.33
	EGYPT A RP	141.00	122.65
	U S A	53.42	107.58
	ITALY	47.27	113.43
	Product Total	15761.83	10417.37
METAXYLENE	TAIWAN	2074.62	1739.86
	JAPAN	989.02	1015.38
	BELGIUM	0.00	0.14
	GERMANY	0.00	0.05
	Product Total	3063.65	2755.43
METHYL ISOBUTYL KETONE	KOREA RP	9981.19	7483.12
	SOUTH AFRICA	7367.85	5618.71
	JAPAN	4274.44	3199.67
	U S A	2703.96	2319.91
	TAIWAN	1804.00	1515.93
	Product Total	26131.43	20137.34
PIB	KOREA RP	10571.08	11493.59
	BELGIUM	1152.05	1205.30
	FRANCE	957.16	1130.70
	GERMANY	815.50	2414.23
	U S A	482.17	544.03
	Product Total	13977.97	16787.86
POLYCARBONATE	THAILAND	56870.29	79883.10
	KOREA RP	19096.11	31214.81
	SPAIN	18195.54	28203.98
	SAUDI ARAB	15059.46	21406.03
	SINGAPORE	8828.90	13842.63
	Product Total	118050.30	174550.54
PROPYLENE OXIDE	SAUDI ARAB	17333.56	17423.38
	SINGAPORE	4494.00	3934.92
	KOREA RP	3665.41	4186.68
	CHINA P RP	19.80	86.81
	JAPAN	19.01	20.60
	Product Total	25531.78	25652.39
	THAILAND	15680.12	13904.14

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
PROPYLENE GLYCOL	CHINA P RP	14689.18	11206.00
	SINGAPORE	13703.56	12328.28
	KOREA RP	5600.50	5028.93
	U S A	2116.10	1956.75
	Product Total	51789.45	44424.09
POLYVINYL ACETATE RESIN	GERMANY	2378.87	3203.80
	CHINA P RP	322.99	650.15
	U S A	132.64	1316.41
	SOUTH AFRICA	62.60	113.69
	TAIWAN	57.81	96.96
	Product Total	2954.92	5381.00
UNSATURATED POLYSTER RESIN	CHINA P RP	12745.72	10586.36
	TAIWAN	5920.33	4957.46
	U ARAB EMTS	3455.12	3784.74
	ITALY	2756.67	4435.78
	KOREA RP	1759.60	2287.74
	Product Total	26637.43	26052.09
ETHYL BENZENE	GERMANY	118.56	106.10
	KOREA RP	28.80	35.03
	CHINA P RP	2.16	3.54
	JAPAN	0.11	0.45
	U S A	0.07	0.61
	Product Total	149.69	145.73
CELLULOSE ACETATE BUTYRATE	GERMANY	1.22	5.59
	ITALY	0.23	4.90
	FRANCE	0.17	1.36
	U S A	0.03	0.16
	Product Total	1.65	12.01
CELLULOSE ACETATE SHEET	CHINA P RP	749.16	515.54
	ITALY	528.00	221.41
	HONG KONG	7.22	5.94
	TAIWAN	3.65	2.29
	UKRAINE	3.46	5.76
	Product Total	1291.49	750.94
CELLULOSE NITRATE SHEET	JAPAN	75.25	211.18
	NEW ZEALAND	9.00	34.61

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	CHINA P RP	3.35	13.58
	U S A	0.06	0.34
	GERMANY	0.05	0.11
	Product Total	87.71	259.82
MELAMINE MOULDING POWDER	THAILAND	5069.10	5602.87
	TAIWAN	2149.91	2385.82
	CHINA P RP	1631.30	1365.57
	GERMANY	682.65	1173.55
	JAPAN	593.18	932.18
	Product Total	10126.14	11459.98
POLYACETAL RESIN	MALAYSIA	11575.63	11539.52
	KOREA RP	10110.20	8622.10
	THAILAND	6741.92	5761.85
	NETHERLAND	2953.47	2504.25
	U S A	1677.03	1660.34
	Product Total	33058.25	30088.05
PHTHALIC ANHYDRIDE	KOREA RP	25252.48	13844.96
	RUSSIA	16840.86	8998.39
	THAILAND	11248.14	6182.59
	ISRAEL	7648.40	4080.05
	BELARUS	4300.00	2563.51
	Product Total	65289.88	35669.51
STYRENE	SINGAPORE	313290.92	227421.56
	SAUDI ARAB	232185.00	167102.47
	KUWAIT	117881.00	85244.42
	SPAIN	12963.00	8402.49
	IRAN	12907.00	9656.63
	Product Total	689226.92	497827.57
VINYL ACTATE MONOMER	SINGAPORE	109020.98	69505.10
	CHINA P RP	25517.40	14593.13
	SAUDI ARAB	7051.00	4073.84
	NETHERLAND	59.80	87.51
	GERMANY	0.08	0.66
	Product Total	141649.26	88260.24
ISOPROPANOL	KOREA RP	22566.78	11467.79
	TAIWAN	16001.50	9205.32

Table : 28 Top Five Sources (countries) of Import of selected Petrochemicals during 2015-16			
PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
	U S A	13350.95	8040.75
	SINGAPORE	11040.64	5894.41
	CHINA P RP	6749.36	3573.05
	Product Total	69709.24	38181.31
POLYOL	CHINA P RP	50489.78	54020.56
	SINGAPORE	29421.31	35401.72
	KOREA RP	28809.02	37652.72
	THAILAND	20711.90	26141.46
	TAIWAN	10660.42	12011.91
	Product Total	140092.43	165228.37

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

MONTH	RS./US\$
June-16	67.28
May-16	66.91
April-16	66.47
March-16	67.03
February-16	68.24
January-16	67.25
December-15	66.60
November-15	66.12
October-15	65.08
September-15	66.19
August-15	65.07
July-15	63.63
June-15	63.86
May-15	63.80
April-15	62.72
March-15	62.45
February-15	62.04
January-15	62.23
December-14	62.75
November-14	61.70
October-14	61.34
September-14	60.86
August-14	60.90
July-14	60.06
June-14	59.73
May-14	59.31
April-14	60.36
March-14	61.01
February-14	62.25
January-14	62.08
December-13	61.91
November-13	62.63
October-13	61.62
September-13	63.75
August-13	63.21
July-13	59.79
June-13	58.46
May-13	55.01
April-13	54.38

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

MONTH	RS./US\$
March-13	54.40
February-13	53.77
January-13	53.32
December-12	54.65
November-12	54.78
October-12	53.02
September-12	54.61
August-12	55.56
July-12	55.49
June-12	56.03
May-12	54.47
April-12	51.80
March-12	50.32
February-12	49.16
January-12	51.35
December-11	52.67
November-11	50.84
October-11	49.26
September-11	47.64
August-11	45.28
July-11	44.42
June-11	44.85
May-11	44.90
April-11	44.37
March-11	44.99
February-11	45.44
January-11	45.39

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

Source:<http://dbie.rbi.org.in/DBIE/dbie.rbi?site=home>

Table - 30 : World Exports of Chemicals by top 10 countries- 2015

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
Ist	USA	13501	China	42684	Germany	76508	China	10878	Germany	12004
2nd	China	13464	USA	40873	Switzerland	60596	Russian Federation	8853	USA	7922
3rd	Germany	9257	Belgium	31180	USA	49823	Canada	6222	China	6301
4th	Australia	5480	Germany	27069	Belgium	43154	USA	5197	Japan	3935
5th	Canada	4313	Ireland	25456	United Kingdom	35940	Belarus	3188	Netherlands	3590
6th	Netherlands	3951	Switzerland	18134	Ireland	31783	Germany	2767	Belgium	3428
7th	Russian Federation	3843	Japan	17915	France	30323	Netherlands	2489	United Kingdom	3324
8th	Japan	3512	Netherlands	17475	Netherlands	25618	Belgium	2225	Italy	2997
9th	France	3436	Singapore	15623	Italy	25069	Saudi Arabia	1071	France	2890
10th	Brazil	3404	United Kingdom	13941	India	12545	Lithuania	1019	Spain	2624
World Export		91598		336154		481513		52992		69809

Table - 30 : World Exports of Chemicals by top 10 countries- 2015

Rank	Value in US\$ Million									
	HS Code									
	38		39		4002		54		55	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
Ist	USA	26956	China	65836	USA	2683	China	16383	China	12902
2nd	Germany	22633	USA	63320	Japan	2161	Other Asia, nes	2947	USA	2536
3rd	China	13223	Germany	61016	Germany	1414	India	2190	India	2127
4th	France	11473	Belgium	27518	Russian Federation	1377	Germany	2147	Germany	2096
5th	Japan	9154	China,Hong Kong S	22827	Belgium	1233	Japan	2030	Japan	1851
6th	Netherlands	7836	Japan	22500	France	1009	Italy	1964	China, Hong Kong SAR	1353
7th	United Kingdom	7303	Netherlands	22332	Other Asia, nes	914	USA	1923	Turkey	1348
8th	Belgium	7179	France	19521	Singapore	725	China, Hong Kong SAR	1718	Other Asia, nes	1184
9th	Italy	5209	Italy	18802	Netherlands	581	Turkey	1564	Thailand	1172
10th	Singapore	5061	Other Asia, nes	18506	Thailand	543	Netherlands	1140	Italy	1091
World Export		158294		505564		15951		41238		33758

Table - 30 : World Exports of Chemicals by top 10 countries- 2015

Value in US\$ Million				
HS Code				
All Chemicals			All Chemicals excluding Pharmaceuticals	
Rank	Country	Trade Value	Country	Trade Value
1st	Germany	216911	China	182092
2nd	USA	214735	USA	164912
3rd	China	189034	Germany	140403
4th	Belgium	120678	Belgium	77524
5th	Switzerland	88390	Japan	63175
6th	Netherlands	85272	Netherlands	59654
7th	France	81319	France	50996
8th	United Kingdom	76747	United Kingdom	40807
9th	Japan	66586	Italy	40019
10th	Italy	65088	Other Asia, nes	38981
	World Export	1786870	World Export	1305358

@-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 : 06.06.2016

Table - 31 : World Imports of Chemicals by top 10 countries- 2015

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
Ist	USA	13147	USA	52087	USA	86074	USA	8363	Germany	6398
2nd	China	9959	China	48000	Germany	45943	India	7459	China	4131
3rd	Germany	6998	Belgium	32152	Belgium	36301	Brazil	6603	USA	3943
4th	France	6089	Germany	31734	United Kingdom	33797	China	3929	France	3589
5th	Japan	5958	India	15918	Japan	23161	France	2384	United Kingdom	2551
6th	India	5071	France	15640	France	22848	Thailand	1779	Italy	2489
7th	United Kingdom	3567	Netherlands	15531	Switzerland	21726	Germany	1606	Canada	2179
8th	Canada	3452	Italy	14356	Italy	20680	Mexico	1423	Mexico	2166
9th	Russian Federation	3264	Japan	14199	China	19232	Canada	1410	Netherlands	2116
10th	Netherlands	3219	Switzerland	11273	Netherlands	17698	Australia	1409	Turkey	1809
World Import		99707		358896		466047		58264		60928

Table - 31 : World Imports of Chemicals by top 10 countries- 2015

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
Ist	China	14642	China	67856	China	3914	China	3366	China	2817
2nd	Germany	13876	USA	50249	USA	1491	USA	2427	USA	2036
3rd	USA	13180	Germany	39568	Germany	1178	Turkey	2097	Turkey	1966
4th	France	8048	Mexico	22306	Belgium	906	Germany	1667	Germany	1712
5th	Other Asia, nes	6122	France	22053	Thailand	900	Italy	1425	Italy	1187
6th	Netherlands	5977	Italy	18343	India	842	Mexico	1156	Brazil	792
7th	Belgium	5398	United Kingdom	17902	Malaysia	768	Brazil	1155	Pakistan	792
8th	Italy	5290	Belgium	15723	France	547	China, Hong Kong SAR	892	Mexico	776
9th	Japan	5142	Canada	15030	Italy	545	United Kingdom	886	Spain	708
10th	United Kingdom	5089	Japan	13776	Turkey	524	Japan	859	China, Hong Kong SAR	706
World Import		150528		482258		18143		29386		24430

Table - 31 : World Imports of Chemicals by top 10 countries- 2015

Value in US\$ Million

Rank	HS Code			
	All Chemicals		All Chemicals excluding Pharmaceuticals	
	Country	Trade Value	Country	Trade Value
Ist	USA	232997	China	158615
2nd	China	177847	USA	146923
3rd	Germany	150680	Germany	104737
4th	Belgium	97388	Belgium	61087
5th	France	82665	France	59817
6th	United Kingdom	75730	India	47697
7th	Italy	67617	Italy	46937
8th	Japan	66251	Japan	43090
9th	Netherlands	59838	Mexico	42762
10th	India	49315	Netherlands	42140
	World Import	1748587	World Import	1282540

@-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 : 06.06.2016

Table - 32 : India's share in World Exports and Imports of Chemicals-2015

HS Code	Commodity	Value in US\$ Million							
		Export				Import			
		Trade Value		% of World	Rank in the World	Trade Value		% of World	Rank in the World
		India	World			India	World		
28	INORGANIC CHEMICALS	1252	91598	1.37	17	5071	99707	5.09	6
29	ORGANIC CHEMICALS	11299	336154	3.36	11	15918	358896	4.44	5
30	PHARMACEUTICAL PRODUCTS	12545	481513	2.61	10	1618	466047	0.35	36
31	FERTILISERS.	97	52992	0.18	37	7459	58264	12.80	2
32	TANNING OR DYEING	2471	69809	3.54	11	1590	60928	2.61	14
38	MISCELLANEOUS CHEMICAL PRODUCTS.	3032	158294	1.92	15	4029	150528	2.68	14
39	PLASTIC AND ARTICLES THEREOF.	5013	505564	0.99	22	11342	482258	2.35	13
4002	SYNTHETIC RUBBER AND FACTICE	69	15951	0.43	23	842	18143	4.64	6
54	MAN-MADE FILAMENTS.	2190	41238	5.31	3	764	29386	2.60	13
55	MAN-MADE STAPLE FIBRES.	2127	33758	6.30	3	682	24430	2.79	12
All Chemicals @		40094	1786870	2.24	13	49315	1748587	2.82	10
Chemicals (excluding Pharmaceutical products)		27550	1305358	2.11	17	47697	1282540	3.72	6
Total of all HS code commodities		264381	14902922	1.77	18	390745	14361432	2.72	12

@-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)

Section – V

*Foreign
Direct
Investment
(FDI)*

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Table -33 : Sectors Attracting Highest FDI Equity Inflows during 2013-14 to 2015-16

Ranks	Sector	Amount in Rs. crores (US\$ in million)				
		<u>2013-14</u> (April - March)	<u>2014-15</u> (April- March)	<u>2015-16</u> (April, 15 – March, 16)	<u>Cumulative Inflows</u> (April '00 - March '16)	% age to total Inflows (In terms of US\$)
1.	SERVICES SECTOR **	13,294 (2,225)	27,369 (4,443)	45,415 (6,889)	258,354 (50,792)	18 %
2.	CONSTRUCTION DEVELOPMENT: TOWNSHIPS, HOUSING, BUILT-UP INFRASTRUCTURE	7,508 (1,226)	4,652 (769)	727 (113)	113,936 (24,188)	8 %
3.	COMPUTER SOFTWARE & HARDWARE	6,896 (1,126)	14,162 (2,296)	38,351 (5,904)	112,184 (21,018)	7 %
4.	TELECOMMUNICATIONS (radio paging, cellular mobile, basic telephone services)	7,987 (1,307)	17,372 (2,895)	8,637 (1,324)	92,729 (18,382)	6 %
5.	AUTOMOBILE INDUSTRY	9,027 (1,517)	16,760 (2,726)	16,437 (2,527)	81,394 (15,065)	5 %
6.	DRUGS & PHARMACEUTICALS	7,191 (1,279)	9,052 (1,498)	4,975 (754)	70,097 (13,849)	5 %
7.	CHEMICALS (OTHER THAN FERTILIZERS)	4,738 (878)	4,658 (763)	9,664 (1,470)	59,555 (11,900)	4 %
8.	TRADING	8,191 (1,343)	16,755 (2,728)	25,244 (3,845)	68,837 (11,872)	4 %
9.	POWER	6,519 (1,066)	4,296 (707)	5,662 (869)	52,613 (10,476)	4 %
10	HOTEL & TOURISM	2,949 (486)	4,740 (777)	8,761 (1,333)	49,710 (9,227)	3 %

Note: (i)** Services sector includes Financial, Banking, Insurance, Non-Financial / Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis

(ii) Cumulative Sector- wise FDI equity inflows (from April, 2000 to March, 2016) are at - Annex-'B'.

(iii) 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.

Source : http://dipp.nic.in/English/Publications/FDI_Statistics/2016/FDI_FactSheet_JanuaryFebruaryMarch2016.pdf (02.08.2016)

Table 34: Sector-wise FDI Inflows (in US \$ million)

Industry Groups	1991-2000	2000-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Food products	707.4	1237.3	246.9	239.7	522.1	4007.5	692.0	646.0	8298.9
Fermentation Industries	24.0	770.1	57.7	69.7	107.2	814.6	225.4	202.4	2271.1
Textiles	241.8	828.6	129.8	164.7	104.0	199.4	198.8	230.1	2097.2
Wood Products	0.0	18.8	1.6	29.6	29.2	6.2	9.0	53.2	147.6
Paper	250.5	716.9	44.0	454.7	19.4	140.6	189.5	208.0	2023.6
Leather	33.5	42.6	9.3	8.3	46.7	6.1	34.2	17.1	197.8
Chemicals	1480.9	4446.1	2690.2	7534.1	1618.2	2196.2	2739.4	2442.5	25147.6
Rubber, Plastic & Petroleum Products (Including Oil exploration)	90.3	2953.6	573.6	2217.4	857.0	482.8	1363.5	399.2	8937.4
Non Metallic Minerals	261.1	2263.6	657.3	310.0	225.9	447.2	286.1	96.7	4547.9
Metals and Metal products	186.2	3143.2	1098.1	1786.1	1466.2	567.6	359.3	456.3	9063.0
Machinery & Equipments	2043.1	15670.4	1836.3	4147.5	1907.8	2759.6	4442.3	8101.7	40908.7
Transport Equipments	0.0	4603.2	1299.4	923.0	1537.3	1517.3	2725.6	2526.8	15132.6
Others Manufacturing	1761.6	5705.6	1495.6	850.5	282.1	511.3	1046.1	727.3	12380.1
Mining(including mining services)	0.0	730.9	79.5	142.7	57.9	15.7	684.4	520.7	2231.8
Power	1038.9	5220.9	1486.2	2104.6	1642.2	1480.3	1323.0	1645.3	15941.4
Telecommunication	1089.4	8915.9	1664.5	1997.2	303.9	1307.0	2894.9	1324.4	19497.2
Total (Industry)	9208.6	57267.7	13369.9	22979.7	10727.2	16459.3	19213.5	19597.7	168823.6
Services	3037.6	53021.6	8013.1	12141.1	11696.4	7840.0	11717.0	20403.3	127870.1
Others	4453.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4453.3
Total	16699.6	110289.3	21383.1	35120.8	22423.6	242299.3	30930.5	40001.0	356376.8

Source:DIPP <http://eaindustry.nic.in/> dated 03.08.2015

Section – VI

*Index of
Industrial
Production*

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Table - 35: Monthly Production Growth in 'Chemicals and Chemical Products' vis-a-vis Manufacturing Sector during April 2015 to May 2016 (Based on Index of Industrial Production)

Period	Chemicals and chemical products	Manufacturing	General
Weight	100.59	755.27	1000.00
Production Growth (%)			
Apr'15	-4.5	-10.4	-10.2
May'15	4.2	-0.6	1.0
Jun'15	0.6	1.2	-0.2
Jul'15	0.0	0.7	0.7
Aug'15	-2.2	-3.2	-2.2
Sep'15	3.9	1.1	0.9
Oct'15	-2.0	0.6	1.8
Nov'15	-4.4	-8.7	-8.3
Dec'15	7.6	12.5	10.8
Jan'16	-6.0	0.9	1.1
Feb'16	-1.1	-0.5	-0.9
Mar'16	7.6	7.3	7.7
Apr'16	-7.5	-12.7	-11.7
May'16	8.6	3.7	3.5
Index of Industrial Production (Base : 2004-05=100)			
Mar'15	145.2	210.3	198.1
Apr'15	138.6	188.5	177.9
May'15	144.4	187.3	179.7
Jun'15	145.2	189.5	179.3
Jul'15	145.2	190.9	180.5
Aug'15	142.0	184.8	176.6
Sep'15	147.5	186.9	178.2
Oct'15	144.6	188.1	181.4
Nov'15	138.3	171.7	166.3
Dec'15	148.8	193.1	184.2
Jan'16	139.8	194.8	186.2
Feb'16	138.3	193.9	184.5
Mar'16	148.8	208.1	198.7
Apr'16	137.6	181.6	175.5
May'16	149.5	188.4	181.7

Table: 36 Annual Production Growth in Chemicals and Chemical Products Vis -a-Vis Manufacturing Sector during 2005-06 to 2015-16 (Based on Index on Industrial Production)

Years	Chemicals and Chemical Products	Manufacturing	General
Weight	100.59	755.27	1000.00
Production Growth (%)			
2005-06	1.0	10.3	8.6
2006-07	9.3	15.0	12.9
2007-08	7.2	18.4	15.5
2008-09	-2.9	2.5	2.5
2009-10	5.0	4.8	5.3
2010-11	2.0	9.0	8.2
2011-12	-0.4	3.0	2.9
2012-13	3.8	1.3	1.1
2013-14	8.9	-0.8	-0.1
2014-15	-0.3	2.3	2.8
2015-16	3.8	2.0	2.4
Index of Industrial Production (Base: 2004-05=100)			
2005-06	101.0	110.3	108.6
2006-07	110.4	126.8	122.6
2007-08	118.4	150.1	141.7
2008-09	115.0	153.8	145.2
2009-10	120.7	161.3	152.9
2010-11	123.1	175.7	165.5
2011-12	122.7	181.0	170.3
2012-13	127.3	183.3	172.2
2013-14	138.6	181.9	172.0
2014-15	138.2	186.1	176.9
2015-16	143.5	189.8	181.1

Table 37: Weights of Products Covered Under Chemical and Chemical Products (Industry Division 24 of NIC-2004)

NIC Code	Description of Item	Weights	NIC Code	Description of Item	Weights
24111	Aniline	0.23382	24211	Carbendzim(Bavistin)	0.06193884
24111	Caustic soda	2.23357	24211	Chlorpyriphos	0.388127612
24111	Dissolved Acetylene Gas	0.02162	24211	Cypermethrin	0.615837081
24111	Liquid chlorine	0.4796	24211	Di ethyl easter technical(2, 4-D)	0.006173984
24111	Oxygen	0.17132	24211	Endosulphan	0.194786655
24111	Soda ash	1.45395	24211	Fenvalerate	0.03785775
24112	Phosphoric Acid	0.22259	24211	Mancozab	0.917637659
24112	Sulphuric Acid, Incl. Oleum	0.31828	24211	Monocrotophos	0.691255362
24112	Titanium dioxide	0.31976	24211	Quinalphos	0.052288375
24114	Dyes	1.39416	24211	Triazophos	0.252067369
24116	Acetic acid	0.61269	24219	Rubber Chemical	0.491621073
24116	Acetone	0.16853	24222	Paints of All Kinds	2.246458071
24116	Formaldehyde	0.17606	24223	Printing Ink	0.806970604
24116	Maleic anhydride	0.06519	24224	Phthalic anhydride	0.549416999
24116	Methanol	0.45526	24232	Antibiotics & It's Preparations	23.83924996
24116	Phenol	0.3558	24232	Vitamins	3.013092721
24116	Purified terephthalic acid	4.22792	24233	Ayurvedic Medicaments	2.696724657
24117	Sodium Hydrosulphate/Sodium Hydrosulphite	0.05596	24241	Synthetic Detergents	1.839803034
24118	Fatty Acid	0.52167	24241	Toilet Soap	1.91120726
24118	Glycerine	0.06273	24241	Washing Soap	0.666415308
24121	Ammonia	0.06339	24243	Ethylene oxide	0.329622856
24121	Ammonia Sulphate(A/S)	0.4186	24243	Linear alkyl benzene	1.72126954
24121	Calcium Ammonium Nitrate(CAN)	0.0586	24243	Whitening Agents	0.091827553
24123	Caprolactum	0.81765	24245	Tooth Powder	0.019689061
24123	Urea	6.43218	24246	Hair Shampoo	0.29245236
24124	Complex grade fertilizers	1.19926	24246	Tooth Paste	0.649917144
24124	Dia Ammonium Phosphate(DAP)	3.18576	24247	Hair Oil	0.249539303
24124	Single Super Phosphate (SSP)	1.24419	24248	Agarbattis and Dhoop	0.410645013
24131	Poly butadiene rubber	0.14087	24291	Safety Matches	0.789160881
24131	Styrene butadiene rubber	0.0375	24292	Explosives	0.720418734
24132	PVC Resins	1.2379	24295	Adhesives	1.28905474
24132	Synthetic Resins	0.95828	24295	Empty Capsules	0.488672743
24134	Benzene	0.87324	24295	Gelatin	0.495302247
24134	Ethylene	4.00187	24297	Guar Gum Splits	0.631036721
24134	High density polyethylene	1.83767	24297	Leather Finishing Chemicals & Auxiliaries	0.28626146
24134	Linear low density polyethylene	1.14883	24298	salt, processed	0.530548718
24134	Mono ethylene glycol	1.16619	24299	Acrylonitrile	0.312462845
24134	Paraxylene	1.9321	24299	Butadiene	0.873801525
24134	Poly vinyl chloride	1.38084	24301	Polyester staple fibre	0.716696378
24134	Polypropylene(incl. co-polymer)	3.0237	24301	Viscose Staple Fibre	0.327289654
24134	Polystyrene	0.6733	24303	Acrylic fibre	0.20903829
24134	Synthetic Rubber	0.22589	24304	Nylon filament yarn	0.070853646
24139	ABS Resin	0.17964	24304	Nylon industrial yarn/tyre cord	0.134848248
24211	Acephate	0.68879	24304	Polyster filament yarn	1.190026563
24211	Atrazin	0.00255			

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Section – VII

Inflation Wholesale Price Index

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Table -38 : Annual Inflation of Chemicals & Chemical products vis-à-vis other commodities during 2005-06 to 2015-16 (Based on Wholesale Price Index)

Year	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Weight	100	14.34	64.97	12.02
Inflation(%)				
2005-2006	4.47	5.38	2.42	3.79
2006-2007	6.59	9.62	5.66	4.96
2007-2008	4.74	6.97	4.78	3.57
2008-2009	8.05	9.09	6.16	4.64
2009-2010	3.80	15.27	2.22	-0.26
2010-2011	9.56	15.60	5.70	5.33
2011-2012	8.94	7.30	7.26	8.61
2012-2013	7.36	9.90	5.41	6.62
2013-2014	5.98	12.76	2.99	3.63
2014-2015	2.00	6.08	2.42	2.64
2015-2016	-2.49	3.43	-1.10	-1.48
Wholesale Price Index(Base : 2004-05=100)				
2005-2006	104.47	105.38	102.42	103.79
2006-2007	111.35	115.52	108.22	108.94
2007-2008	116.63	123.57	113.39	112.83
2008-2009	126.02	134.8	120.38	118.07
2009-2010	130.81	155.39	123.05	117.76
2010-2011	143.32	179.63	130.07	124.04
2011-2012	156.13	192.74	139.51	134.72
2012-2013	167.62	211.82	147.06	143.64
2013-2014	177.64	238.85	151.46	148.85
2014-2015	181.19	253.38	155.12	152.78
2015-2016	176.67	262.06	153.42	150.52

Table 39: Monthly Inflation of Chemicals & Chemical Products vis-a-vis Other Commodities during April 15 to March 16 (Based on Wholesale Price Index)

Month	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Apr-15	0.17	1.52	0.00	0.13
May-15	0.91	-0.71	0.26	0.13
Jun-15	0.62	2.63	-0.06	0.13
Jul-15	-0.84	-0.89	-0.39	-0.07
Aug-15	-0.62	2.74	-0.39	-0.13
Sep-15	0.00	0.69	0.20	-0.33
Oct-15	0.23	1.06	0.00	-0.07
Nov-15	0.34	1.76	-0.20	-0.33
Dec-15	-0.39	0.04	-0.39	-0.20
Jan-16	-0.79	-1.21	0.20	-0.20
Feb-16	-0.74	-3.05	0.33	0.00
Mar-16	0.69	-0.38	0.59	0.07
Whole Sale Price Index (Base: 2004-05=100)				
Mar-15	176.1	249.3	153.9	150.9
Apr-15	176.4	253.1	153.9	151.1
May-15	178.0	251.3	154.3	151.3
Jun-15	179.1	257.9	154.2	151.5
Jul-15	177.6	255.6	153.6	151.4
Aug-15	176.5	262.6	153.0	151.2
Sep-15	176.5	264.4	153.3	150.7
Oct-15	176.9	267.2	153.3	150.6
Nov-15	177.5	271.9	153.0	150.1
Dec-15	176.8	272.0	152.4	149.8
Jan-16	175.4	268.7	152.7	149.5
Feb-16	174.1	260.5	153.2	149.5
Mar-16	175.3	259.5	154.1	149.6

Table 40: WPI of Chemicals & Chemical Products (Group Wise) during 2005-06 to 2015-16

DESCRIPTION	WEIGHT	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
CHEMICALS & CHEMICAL PRODUCTS	12.0	103.8	108.9	112.8	118.1	117.8	124.0	134.7	143.6	148.9	152.8	150.5
BASIC INORGANIC CHEMICALS	1.2	106.43	109.48	117.08	126.19	125.00	126.26	138.24	147.78	150.63	156.13	155.27
BASIC ORGANIC CHEMICALS	2.0	103.62	110.98	111.96	117.98	115.68	124.39	135.04	140.27	147.46	150.86	140.16
FERTILIZERS	2.7	102.24	104.37	106.29	106.82	108.15	116.80	132.58	149.01	152.28	154.91	158.18
PESTICIDES	0.5	102.23	108.42	106.73	110.45	110.61	113.62	114.85	121.16	125.94	135.73	137.72
PAINTS, VARNISHES & LACQUERS	0.5	104.26	105.68	110.56	117.59	117.54	122.64	128.48	143.59	147.63	149.92	152.22
DYESTUFFS & INDIGO	0.6	102.29	110.62	114.97	115.51	111.86	116.34	122.47	126.92	132.59	144.78	141.94
DRUGS & MEDICINES	0.5	101.27	102.56	108.11	111.41	112.72	115.40	119.64	124.24	126.82	129.31	129.59
PERFUMES, COSMETICS, TOILETRIES ETC	1.1	104.49	111.13	119.12	129.20	134.76	138.52	145.34	151.94	157.27	160.67	163.19
TURPENTINE, PLASTIC CHEMICALS	0.6	109.55	115.23	115.31	116.88	117.38	123.43	136.06	140.02	147.59	156.40	154.10
POLYMERS INCLUDING SYNTHETIC RUBBER	1.0	103.03	108.79	115.49	119.58	116.32	123.37	130.38	135.33	142.82	152.32	146.03
PETROCHEMICAL INTERMEDIATES	0.9	105.08	116.59	121.00	133.45	127.70	137.37	156.19	164.24	170.41	161.97	150.12
MATCHES, EXPLOSIVES & OTHER CHEMICALS	0.6	102.68	107.14	114.38	121.60	123.83	128.72	135.45	142.60	149.84	153.49	153.88

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Section – VIII

Miscellaneous

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Table 41 : Selected Indicators of the Indian Economy

S.No.	Indicator	Unit/base	2011-12	2012-13	2013-14	2014-15	2015-16
1	Human Population (mid FY)	Million	1220	1235	1251	1267	1283
2	GDP						
	(i) At current prices	Rs.'000 crore	8736	9951	11273	12488	13576
	(ii) At 2011-12 prices	Rs.'000 crore	8736	9227	9839	10552	11350
	at 2011-12 prices	Growth (%)		5.6	6.6	7.2	7.6
3	GVA at basic prices						
	(i) At current prices	Rs.'000 crore	8107	9210	10381	11472	12279
	(ii) At 2011-12 prices	Rs.'000 crore	8107	8547	9084	9727	10427
4	GVA at basic prices (at 2011-12 prices)	Growth (%)		5.4	6.3	7.1	7.2
5	Per capita Net National Income						
	(i) At current prices	Rupees	63460	71050	79412	86879	93293
	(ii) At 2011-12 prices	Rupees	63460	65664	68867	72889	77435
6	Gross Saving to Gross National Disposable Income	Rates	33.8	33.0	32.3	32.3	
7	Rate of Gross Capital Formation to GDP at current prices	Rates	39.0	38.6	34.7	34.2	
8	Index of Industrial Production	Growth (%)	2.9	1.1	-0.1	2.8	2.4
9	Foreign Trade						
	(i) Exports	US \$ billion	306.0	300.4	314.4	310.34	261.14
	(ii) Imports	US \$ billion	489.3	490.7	450.2	448.03	379.6
	(iii) Trade Balance	US \$ billion	-183.4	-190.3	-135.8	-137.7	-118.5
10	Current Account Balance	US \$ million	-78155	-88163	-32296	-26859	-22151
10	Foreign Exchange Reserves(End of FY)	US \$ billion	294.4	292.0	304.2	341.6	360.2
11	Nominal Exchange Rate	Rs./US\$	47.92	54.41	60.50	61.14	65.5
12	Foreign Investment (Net FDI + net Portfolio Investment)	US \$ million	39231	46711	26386	73456	31891
13	Fiscal Deficit (Central Government)	Rs. Crore	515990	490190	502858	510725	535090
		% of GDP	5.9	4.9	4.5	4.1	3.9
14	WPI(Average of 12 months)	Inflation (%)	8.94	7.35	5.98	2.00	7.56
15	Agricultural Production (Food grain)	MMT	259.3	257.1	265.0	252.0	252.2
							(4th AE)
16	Consumer Price Index						
	Industrial Workers	2001=100	195	215	236	251	265
	Agricultural Labourers	1986-87=100	611	672	750	800	835
	Rural Labourers	1986-87=100	611	673	751	802	839
	Rural	2010=100	113.1	124.5	136.4		
	Urban	2010=100	110.4	121.8	133.3		
	Combined	2010=100	111.9	123.3	135.0		
	Rural	2012=100			112.6	119.5	126.1
	Urban	2012=100			111.8	118.1	123.0
	Combined	2012=100			112.2	118.9	124.7

Source: Central Statistics Office, Ministry of Statistics & PI, Reserve Bank of India and office of Economic Adviser, Ministry of Commerce & Industry

AE: Advanced Estimate

Table - 42: Growth Rates of Core Industries (%)

Sector	Weight	2011-12	2012-13	2013-14	2014-15	2015-16	Apr-Jul 2015-16	Apr-Jul 2016-17
Coal	4.379	1.3	4.6	1.3	8.1	4.5	5.3	5.3
Crude Oil	5.216	1.0	-0.6	-0.2	-0.9	-1.4	-0.7	-2.9
Natural Gas	1.708	-8.9	-14.5	-13.0	-4.9	-4.2	-4.3	-3.8
Refinery Products	5.939	3.1	29.0	1.5	0.3	3.8	3.9	8.7
Fertilizers	1.254	0.4	-3.4	1.5	-0.1	11.3	4.1	8.6
Steel	6.684	10.3	4.1	11.5	4.7	-1.5	1.2	2.8
Cement	2.406	6.7	7.7	3.1	5.6	4.7	1.4	4.6
Electricity	10.316	8.1	4.0	6.0	8.4	5.4	2.6	7.1
Overall Index	37.903	5.0	6.5	4.2	4.5	2.7	2.2	4.9

#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.

Table-43: Consumption of Naphtha, Natural Gas and Fuel oil

Name of Product	Description	Unit	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*
Naphtha	Production	K Tonnes	16452	18788	19196	18825	19018	18505	17391	17861
	Import	K Tonnes	5023	1734	2063	2091	1735	1026	1034	2984
	Export	K Tonnes	7601	10043	10655	10139	8647	8322	7008	7116
	Availability	K Tonnes	13874	10479	10603	10777	12107	11210	11416	13728
	Consumption	K Tonnes	13911	10134	10676	11222	12289	11305	11082	13402
Natural Gas	Production	MMSCM	32845	47496	52219	47559	40679	35407	33657	32249
	Import	MMSCM	11952	12092	13077	17465	17455	17247	17697	21836
	Availability	MMSCM	44797	59588	65296	65024	58134	52654	51354	54085
	Consumption **	MMSCM	34524	48344	52019	60684	53915	48994	46955	47850
Fuel Oil	Production	K Tonnes	17684	18346	20519	18433	15054	13405	11919	9727
	Import	K Tonnes	2760	896	1013	1203	1068	1283	902	1194
	Export	K Tonnes	6207	5186	6734	7895	5922	6159	4762	2806
	Availability	K Tonnes	14237	14056	14798	11740	10200	8529	8059	8116
	Consumption	K Tonnes	12588	11629	10789	9307	7656	6236	5961	6673
Naphtha	Fertilizers Sector	K Tonnes	1803	844	892	962	898	516	301	316
	Petrochemical Sector	K Tonnes	5889	6968	7500	8141	9412	9464	9530	10323
Natural Gas **	Fertilizer Industries	MMSCM	9082	13168	11464	14003	14733	15869	15190	16135
	Petrochemicals Industry	MMSCM	1105	1264	1309	1858	2486	2405	2890	3733
Fuel Oil ^	Chemicals & allied	K Tonnes	411	393	333	299	1388	609	607	694

*: Provisional

**: Includes of consumption of LNG in 2011-12 & onwards.

^: Revised

Note: The reasons for the variation between the consolidated availability and the consumption can be attributed to stock changes, conversion factor (volume/energy), Flaring (in case of Natural gas) and the provisional data reported by the companies.

Table 44: Persons in workforce in Industry Division 20,21 and Industry Group 222 (according to usual status) in 2011-12

Description	Unit	Rural			Urban			Rural + Urban
		Male	Female	Persons	Male	Female	Persons	Persons
Projected population	million	431.7	409.8	841.5	199.8	186.1	385.9	1227.4
Persons in the work force in all sectors	lakh	2346	1018	3364	1092	273	1365	4729
Persons in the work force in all sectors	per 10000	5434	2484	3998	5465	1467	3537	3853
Persons in work force in Industry Division 20 of NIC 2008	per 10000	16	15	15	51	54	52	25
Persons in work force in Industry Division 21 of NIC 2008	per 10000	7	2	5	53	24	47	17
Persons in work force in Industry Division 20 of NIC 2008	lakh	3.8	1.5	5.3	5.6	1.5	7.0	12.3
Persons in work force in Industry Division 21 of NIC 2008	lakh	1.6	0.2	1.8	5.8	0.7	6.4	8.3
Persons in work force in Division 20 and 21 of NIC 2008	lakh	5.4	1.7	7.1	11.4	2.1	13.5	20.6
Persons in work force in Industry Group 222 of NIC 2008	lakh	8	1	6	43	49	44	16
Persons in work force in Industry Group 222 of NIC 2008	lakh	1.9	0.1	2.0	4.7	1.3	6.0	8.0

Note: The industry division 24 of NIC 2004 is equivalent of industry division 20 (manufacture of chemical & chemical products), 21(manufacture of pharmaceuticals, medicinal chemicals and botanical products) and Industry group 222:manufacture of Plastic Products of NIC 2008.

Source:Key Indicators of Employment and Unemployment in India, NSS 68th Round (July 2011- June 2012), NSSO

Table-45 : Production of Molasses in India during 2006-07 to 2014-15**(Figure in Lakh MT)**

States/UT	Production of Molasses								
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	
Andhra Pradesh	7.76	6.61	2.69	3.2	3.56	4.97	4.32	3.23	2.82
Bihar	1.09	1.26	0.82	0.76	1.06	1.20	2.93	3.14	2.5
Gujarat	5.34	5.75	5.26	5.08	4.98	5.91	4.20	2.21	4.92
Haryana	6.00	6.32	6.78	5.11	7.17	7.40	8.65	7.55	2.69
Karnataka	9.12	12.73	10.18	9.65	13.41	14.77	14.79	17.25	17.44
Maharashtra	32.06	28.88	15.56	24.89	32.64	30.88	26.64	25.85	37.44
Punjab	1.90	1.85	1.38	0.72	1.39	2.25	2.37	3.08	7.75
Tamil Nadu	12.88	10.50	7.79	7.50	9.99	11.85	10.39	7.44	7.44
Uttar Pradesh	46.86	37.41	22.59	29.14	32.83	38.88	42.46	35.35	37.15
Uttarakhand	2.67	2.63	1.48	1.80	1.86	2.29	1.68	1.69	1.56
Telagana	New State							1.31	1.32
Total	125.68	113.94	74.53	87.85	108.89	120.40	118.43	108.10	123.03

Source: Compiled on the basis of information received from State Excise Departments of 11 major Sugarcane producing States.

Table-46 : State-wise/Year-wise Production of Alcohol from Molasses in India during 2006-07 to 2014-15

(Figure in Lakh litre)									
States/UT	Production of Alcohol								
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Andhra Pradesh	986.70	1006.29	1459.33	739.98	507.77	1324.06	1561.22	1122.00	1242.76
Bihar	137.40	161.31	352.01	183.14	279.66	428.16	539.22	666.63	539.65
Gujarat	1077.52	792.20	849.03	510.22	686.44	1084.43	839.88	629.84	999.33
Haryana	382.25	510.23	112.98	64.17	162.05	175.43	196.32	214.10	153.26
Karnataka	1804.27	2162.08	2403.14	2154.09	2823.53	3823.73	3656.99	3298.51	4071.47
Maharashtra	5136.39	5218.95	4414.18	3368.69	3762.65	3851.81	6633.86	5985.97	6851.7
Punjab	1084.43	2270.09	913.19	249.68	582.72	565.24	523.27	462.29	294.81
Tamil Nadu	1913.53	1726.44	1595.46	1700.75	2119.43	2301.72	2288.69	1765.52	1595.46
Uttar Pradesh	6710.49	9265.22	6814.79	4516.05	6546.59	7201.42	7916.45	8982.77	7116.43
Uttarakhand	1215.84	1468.75	866.99	495.48	297.72	923.41	974.20	945.30	840.26
Telagana	New State							122.65	124.62
Total	20448.82	24581.56	19781.10	13982.25	17768.56	21679.41	25130.10	24195.58	23829.75

Source: Compiled on the basis of information received from State Excise Departments of 11 major Sugarcane producing States.

Table-47 :Export and Import of Ethanol (ITC HS code no. 22072000) during 2005-06 to 2015-16

(Quantity in thousand Litres & Value in Rs. Lakh)

Year	Export			Import		
	Quantity	Value	Price (Rs./LTR)	Quantity	Value	Price (Rs./LTR)
2005-06	37288	7992	21.43	310768	61127	19.67
2006-07	10083	2516	24.95	39239	10788	27.49
2007-08	13540	4147	30.63	5042	2771	54.96
2008-09	4424	1548	35.00	71543	25660	35.87
2009-10	4270	1684	39.43	278957	67535	24.21
2010-11	18872	6049	32.05	105982	34533	32.58
2011-12	30974	12729	41.10	53936	26983	50.03
2012-13	19613	8613	43.91	4606	2650	57.53
2013-14	22520	10748	47.72	59816	36935	61.75
2014-15	12286	6843	55.69	114506	59712	52.15
2015-16	7332	4187	57.11	231530	95664	41.32

Table -48 : Employment in Chemicals and Chemicals products (Industry division 24, NIC 2004) during 2002-03 to 2013-14

S. No.	Industry	Number of Persons Engaged											
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Chemicals and Chemicals products (Industry division 24, NIC 2004)	755113	740441	784907	825435	877083	892944	961306	1005167	1100320	1223243	1165914	1326933
2	Industries Other than Chemicals and Chemicals products	7180835	7129640	7668717	8286245	9451351	9559591	10366179	10786888	11594533	12206713	11784111	12211181
3	All Industries	7935948	7870081	8453624	9111680	10328434	10452535	11327485	11792055	12694853	13429956	12950025	13538114
4	Share in Employment (%)												
	(a) Share of Chemicals and Chemicals products	9.52	9.41	9.28	9.06	8.49	8.54	8.49	8.52	8.67	9.11	9.00	9.80
	(b) Share of Other than Chemicals and Chemicals products	90.48	90.59	90.72	90.94	91.51	91.46	91.51	91.48	91.33	90.89	91.00	90.20
5	Growth Rate in Employment (%)												
	(a) Chemicals and Chemicals products	-0.81	-1.94	6.01	5.16	6.26	1.81	7.66	4.56	9.47	11.17	-4.69	13.81
	(b) Industries Other Than Chemicals and Chemicals products	2.74	-0.71	7.56	8.05	14.06	1.15	8.44	4.06	7.49	5.28	-3.46	3.62
	(c) All Industries	2.39	-0.83	7.41	7.78	13.35	1.20	8.37	4.10	7.66	5.79	-3.57	4.54

Note: 1. The description of product groups at 4-digit level under the division 24, NIC 2004 is given at page-3.

2. Figures for total person engaged for the period from 2008-09 to 2013-14 has been compiled by adding figures in respect of Industry Division 20, 21 and 268 of NIC 2008

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

Table -49 : Employment in Chemicals and Chemicals products (Industry Division 20, NIC-2008) during 2009-10 to 2013-14

S.No.	Industry	Number of Person Engaged				
		2009-10	2010-11	2011-12	2012-13	2013-14
1	Chemicals and Chemicals products (Industry Division 20, NIC 2008)	588669	630017	674018	633659	708401
2	Industries Other than Chemicals and Chemicals products	11203386	12064836	12755938	12316366	12829713
3	All Industries	11792055	12694853	13429956	12950025	13538114
4	Share in Employment (%)					
	(a) Share of Chemicals and Chemicals products	4.99	4.96	5.02	4.89	5.23
	(b) Share of Other than C&PC	95.01	95.04	94.98	95.11	94.77
5	Growth Rate in Employment (%)					
	(a) Chemicals and Chemicals products	1.31	7.02	6.98	-5.99	11.80
	(b) Industries Other Than Chemicals and Chemicals products	4.25	7.69	5.73	-3.45	4.17
	(c) All Industries	4.10	7.66	5.79	-3.57	4.54

description of product groups at 4-digit level under the division 20, NIC 2008 is given at page-4.
New Delhi.

Table-50: 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	2011-12	2012-13	2013-14	2014-15
Industry Division 20: Chemical and chemical products (Corporate)	121309	126719	124582	136287
Industry Division 20: Chemical and chemical products (Household)	995	1317	950	972
Industry Division 20: Chemical and chemical products (Corporate +Household)	122304	128036	125532	137259
Growth over previous year (%)		4.7	-2.0	9.3
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Corporate)	89780	85247	103748	113600
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Household)	764	413	708	713
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	90544	85660	104456	114313
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	212848	213696	229988	251572
Growth over previous year (%)		0.4	7.6	9.4
Manufacturing (Corporate)	1230439	1363086	1475910	1592199
Manufacturing (Household)	179546	210546	238820	253342
Manufacturing (Corporate +Household)	1409985	1573632	1714730	1845541
Growth over previous year (%)		11.6	9.0	7.6
GVA at basic prices for All Economic activities	8106656	9210023	10380813	11472409
Growth over previous year (%)		13.6	12.7	10.5
Share of Manufacturing sector in GVA	17.4	17.1	16.5	16.1
Share of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA	1.51	1.39	1.21	1.20
Share of Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA	2.63	2.32	2.22	2.19
Share of chemical and chemical products (Industry Division 20)in Manufacturing Sector	8.67	8.14	7.32	7.44
Share of chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in Manufacturing Sector	15.10	13.58	13.41	13.63

Source: National Accounts Statistics 2016, CSO, Ministry of Statistics & Programme Implementation

Table-51: 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	2011-12	2012-13	2013-14	2014-15
Industry Division 20: Chemical and chemical products (Corporate)	121309	118849	112756	120177
Industry Division 20: Chemical and chemical products (Household)	995	1236	860	857
Industry Division 20: Chemical and chemical products (Corporate +Household)	122304	120085	113616	121034
Growth over previous year (%)		-1.8	-5.4	6.5
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Corporate)	89780	82090	97875	105105
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Household)	764	398	668	660
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	90544	82488	98543	105765
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	212848	202573	212159	226799
Growth over previous year (%)		-4.8	4.7	6.9
Manufacturing (Corporate)	1230439	1295964	1360746	1441832
Manufacturing (Household)	179546	199304	218975	225236
Manufacturing (Corporate +Household)	1409985	1495268	1579721	1667068
Growth over previous year (%)		6.0	5.6	5.5
GVA at basic prices for All Economic activities	8106656	8546552	9084369	9727490
Growth over previous year (%)		5.4	6.3	7.1
Share of Manufacturing sector in GVA	17.4	17.5	17.4	17.1
Share of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA	1.51	1.41	1.25	1.24
Share of Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA	2.63	2.37	2.34	2.33
Share of chemical and chemical products (Industry Division 20) in Manufacturing Sector	8.67	8.03	7.19	7.26
Share of chemical and chemical products, including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in Manufacturing Sector	15.10	13.55	13.43	13.60

Source: National Accounts Statistics 2016, CSO, Ministry of Statistics & Programme Implementation

Table-52 : 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	2011-12	2012-13	2013-14	2014-15
Manufacturing (Corporate)	6000370	6575405	7295964	7610263
Manufacturing (Household)	543076	605579	678636	723673
Manufacturing (Corporate +Household)	6543446	7180984	7974600	8333936
Chemical and chemical products (Corporate) (Industry Division 20)	462850	509214	551001	577087
Chemical and chemical products (Household) (Industry Division 20)	4971	6578	4745	4854
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	467821	515792	555746	581941
Pharmaceutical; medicinal chemicals and botanical products -- Corporate (Industry Division 21)	190144	204148	235616	247544
Pharmaceutical; medicinal chemicals and botanical products -- Household (Industry Division 21)	3814	2063	3536	3561
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	193958	206211	239152	251105
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	661779	722003	794898	833046

Source: National Accounts Statistics 2016, CSO, Ministry of Statistics & Programme Implementation

Table-53 : 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	2011-12	2012-13	2013-14	2014-15
Manufacturing (Corporate)	6000370	6239926	6668807	6876223
Manufacturing (Household)	543076	573389	621927	644135
Manufacturing (Corporate +Household)	6543446	6813315	7290734	7520358
Chemical and chemical products (Corporate) (Industry Division 20)	462850	477592	498696	508870
Chemical and chemical products (Household) (Industry Division 20)	4971	6170	4294	4280
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	467821	483762	502990	513150
Pharmaceutical; medicinal chemicals and botanical products -- Corporate (Industry Division 21)	190144	196590	222277	229032
Pharmaceutical; medicinal chemicals and botanical products -- Household (Industry Division 21)	3814	1986	3336	3295
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	193958	198576	225613	232327
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	661779	682338	728603	745477

Source: National Accounts Statistics 2016, CSO, Ministry of Statistics & Programme Implementation

Table - 54: All India Estimate of Selected Characteristics of Factory Sector for Industry Division 24: NIC 2004: Chemicals and Chemical products

Characteristics	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
No of factories (no.)	11177	11896	11900	15863	16118	16339	16430
No of workers (no.)	611022	659519	691150	754902	830437	792303	875945
Total Output (Rs. crore)	301218	412241	501349	491382	631133	666553	729342
Total Inputs (Rs. crore)	228293	316085	333411	375418	480890	515019	563692
Gross Value Added (Rs. crore)	72925	96156	167939	115964	150243	151534	165651

Note: The description of product groups at 4-digit level under the division 24, NIC 2004 is given at page-3.

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

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Table - 55: 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)			
	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14
Andhra Pradesh	822	892	378	375	297251	400403	260128	256195	2056995	2593697	1761153	1710297
Assam	75	72	79	82	58631	110354	105575	123235	256921	315072	304291	327554
Bihar	47	35	43	45	1391	2525	4035	2759	6572	8714	32945	38559
Chhattisgarh	84	87	96	94	9936	6759	18035	13741	58414	51128	83044	99698
Goa	44	51	50	43	7402	74026	259201	111388	635274	985807	1098234	865753
Gujarat	2002	2058	1974	2160	2417220	2752199	2840257	3048975	10765309	13256514	13890876	15899266
Haryana	247	220	212	203	120222	88376	76494	109458	515904	617104	673573	829529
Himachal Pradesh	182	188	214	225	341716	230688	527844	419399	1090580	858930	1741534	1815860
Jammu & Kashmir	134	126	130	131	108621	165448	156320	145075	603313	678301	648032	629763
Jharkhand	94	87	95	92	33069	68908	14008	44009	142199	317488	198556	197773
Karnataka	484	503	467	507	237431	137609	205278	252251	997957	888872	985707	1349510
Kerala	202	145	217	141	181163	174739	106808	109558	622249	617200	632972	661040
Madhya Pradesh	259	275	250	271	87693	194443	172617	168386	539171	993733	978568	1065138
Maharashtra	1903	1809	1941	1851	1419596	1675960	1873331	2227826	5750230	7706704	7784602	9639069
Meghalya	6	5	8	4	2851	5407	3943	3839	7680	10328	6689	7968
Orissa	87	79	84	78	140600	87938	116561	231234	864061	1110286	1078033	1072839
Punjab	184	182	160	154	97023	99277	86748	97894	590584	748439	781526	804384
Rajasthan	308	325	356	326	101501	519941	387218	237822	1180427	2572578	3516023	2081775
Sikkim	5	4	4	4	12565	20074	35217	27236	51727	73691	95775	95497
Tamil Nadu	2315	2398	2432	2477	298864	511281	411248	359028	1850244	3165390	2393999	2530250
Tripura	6	7	7	11	6590	197	294	304	13445	556	605	727
Uttarkhand	195	183	217	201	192206	284943	347148	356180	807472	834599	1247479	1463263
Uttar Pradesh	688	678	636	646	431233	548065	443090	450180	1898520	2469980	2658686	2951198
West Bengal	307	322	294	297	361775	170220	49802	31444	2249716	2209018	2333733	2621475
Dadra & N Haveli	197	192	188	181	83178	91058	96072	68725	649504	676284	680746	499422
Daman & Diu	127	133	154	140	80644	65051	71943	114631	544474	636930	543772	947205
Chandigarh	-	3	4	4	-	312	304	379	-	4799	4487	6024
Delhi	77	79	88	78	9737	19264	94368	61320	116959	207993	356089	288526
Puducherry	119	137	128	134	75738	98065	60541	130624	362865	290386	230776	399319
Telagana	New State		520	512	New State		110508	118521	New State		554181	491508
All India	11202	11276	11426	11465	7213220	8603637	8935034	9321718	35229032	44900681	47296827	51390338

Note: The description of product groups at 4-digit level under the division 20, NIC 2008 is on page-4. \$ figures for 2009-10 to 2011-12 pertain to combined Andhra Pradesh

Source :Annual Survey of Industries (Factory Sector), 2008-09, 2009-2010, 2010-11, 2012-13 and 2013-14 Ministry of Statistics & Programme Implementation

Table 56 : Exports of Major Chemicals and Petrochemicals as % of Production and Imports of Major Chemicals and Petrochemicals as % of Consumption

(In Thouand Tonnes)

Group	Description	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Major Chemicals	Production	8050	8465	9121	9409	9459	9643	9660	9886
Major Petrochemicals									
A. Basic major Petrochemicals		9511	10895	11950	12755	13047	13406	13443	14900
B. Intermediates		11325	13086	13722	15722	16138	16313	16816	18690
C. Other Petro-based Chemicals		1108	1679	1739	1940	1979	1970	1963	2159
Total Major Chemicals and Petrochemicals		29993	34125	36531	39827	40624	41331	41882	45635
Major Chemicals	Exports	668	1261	1337	1429	1220	1221	1061	1138
Major Petrochemicals									
A. Basic major Petrochemicals		1104	1466	1913	2304	2298	2614	2253	2742
B. Intermediates		1323	1257	1561	1677	1795	1977	2034	2430
C. Other Petro-based Chemicals		435	65	184	184	137	96	124	129
Total Major Chemicals and Petrochemicals		3530	4050	4996	5594	5451	5908	5472	6439
Major Chemicals	Imports	2514	2828	2792	3397	4253	4333	5025	5360
Major Petrochemicals									
A. Basic major Petrochemicals		1904	2837	3338	3353	4223	4295	5068	5665
B. Intermediates		1253	1933	2396	2095	2405	2950	3253	3245
C. Other Petro-based Chemicals		1141	1321	1808	1785	2037	2204	2373	2740
Total Major Chemicals and Petrochemicals		6812	8919	10334	10629	12919	13782	15717	17009

Table 56 : Exports of Major Chemicals and Petrochemicals as % of Production and Imports of Major Chemicals and Petrochemicals as % of Consumption

(In Thouand Tonnes)

Group	Description	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Major Chemicals	Consumption\$	9896	10032	10576	11377	12493	12756	13623	14107
Major Petrochemicals									
A. Basic major Petrochemicals		10312	12265	13374	13804	14972	15086	16258	17822
B. Intermediates		11254	13763	14557	16141	16748	17286	18034	19505
C. Other Petro-based Chemicals		1814	2935	3362	3540	3879	4078	4211	4770
Total Major Chemicals and Petrochemicals		33276	38994	41870	44862	48092	49206	52127	56205
Major Chemicals	Exports as % of Production	8.3	14.9	14.7	15.2	12.9	12.7	11.0	11.5
Major Petrochemicals									
A. Basic major Petrochemicals		11.6	13.5	16.0	18.1	17.6	19.5	16.8	18.4
B. Intermediates		11.7	9.6	11.4	10.7	11.1	12.1	12.1	13.0
C. Other Petro-based Chemicals		39.3	3.9	10.6	9.5	6.9	4.9	6.3	6.0
Total Major Chemicals and Petrochemicals		11.8	11.9	13.7	14.0	13.4	14.3	13.1	14.1
Major Chemicals	Imports as % of Consumption	25.4	28.2	26.4	29.9	34.0	34.0	36.9	38.0
Major Petrochemicals									
A. Basic major Petrochemicals		18.5	23.1	25.0	24.3	28.2	28.5	31.2	31.8
B. Intermediates		11.1	14.0	16.5	13.0	14.4	17.1	18.0	16.6
C. Other Petro-based Chemicals		62.9	45.0	53.8	50.4	52.5	54.0	56.3	57.4
Total Major Chemicals and Petrochemicals		20.5	22.9	24.7	23.7	26.9	28.0	30.2	30.3

Note: Product coverage under each group is given at page v and vi. \$ Derived consumption as Production+ Imports-Exports

Table 57: Exports of all Chemicals as % of Value of output and Imports of all Chemicals as % of Consumption

(Rs. In Crore)

Item	Code	2011-12	2012-13	2013-14	2014-15
Exports of Pharmaceutical products	HS code 30	40817	54774	67404	70815
Exports of Fertilizers	HS code 31	397	480	492	555
Exports of all Chemicals (including Pharmaceutical products and Fertilizers)	HS codes 28,29,30,31,32,38,39, 4002,54 and 55	176544	206082	245758	249183
Imports of Pharmaceutical products	HS code 30	8131	9522	9371	9961
Imports of Fertilizers	HS code 31	44996	40412	32639	39074
Imports of Chemicals and Chemical products	HS codes 28,29,30,31,32,38,39, 4002,54 and 55	229546	259844	283322	311779
Value of Output of Chemicals and Chemical products at current prices	Industry Division 20 and 21: NIC 2008	661779	722003	794898	833046
Consumption of Chemicals and Chemical products	Value of Output + Imports - Exports	714781	775764	832462	895642
Exports of all Chemicals as % of Value of Output		26.7	28.5	30.9	29.9
Imports of all Chemicals as % of Derived Consumption		32.1	33.5	34.0	34.8

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 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