



CHEMICALS

BASIC INDUSTRY INFORMATION

The Chemicals Industry is considered as one of the pillar industries in any economy considering that it supports all sectors of the economy, namely: agriculture, services, and manufacturing. The local Philippine Chemical Industry is primarily engaged in the production of the following products: industrial gases, inorganic chemicals, oleochemicals and surfactants, petrochemicals, plastic products, specialty chemicals, coatings, petroleum, agrochemicals and fertilizers, chemical traders, chemical storage, and the chemical disposal and recycling subsector.

PRODUCT/SERVICE COVERAGE

- **Basic Chemicals** (Resins, Gases, Organics, Inorganics, Alcohols)
- **Chemical Products** (Pharmaceutical, Soap & Detergents, Paints, Cosmetics, Fertilizers, Pesticides, Adhesives, Inks)
- **Plastic Products** (Plastic articles, Plastic products, Pipes and tubings, Industrial products, Films, sheets)
- **Petrochemicals** (PE, PP, PVC, PS resins, monomers)

MAJOR PLAYERS

- Petron
- JG Summit
- Boysen
- RI Chemical Corp.
- Chemrez Technologies, Inc.
- Atlas
- Phil. Phosphate Fertilizer Corp.
- Republic Chemicals Inc.
- Charter Chemical and Coating Corp.

INDUSTRY ASSOCIATION/S

Samahan sa Pilipinas ng mga Industriyang Kimika (SPIK)
 Association of Petrochemical Manufacturers of the Philippines (APMP)
 Philippine Plastics Industry Association (PPIA)
 Philippine Oleochemical Manufacturers Association (POMA)
 Philippine Association of Paint Manufacturers (PAPM)
 Progressive Association of Printing Ink Manufacturers (PAPIM)

LINKAGES

- Farmers, distributors, dealers, households, institutions, retailers
- Chemical processing, healthcare, metals and glass, electronics, environment, heat treatment and food industry
- Transport and energy generators
- Businesses using packaging materials, furniture, electrical wires, cables, etc.

PERFORMANCE

| | | 2015 | 2016 | 2017 |
|-----------------------------|---------|--------------|--------------|--------------|
| % share in Mfg. GVA* | | 12.5% | 12.9% | 12.8% |
| Trade** | Exports | US\$ 1.878 B | US\$ 1.722 B | US\$ 1.621 B |
| | Imports | US\$ 6.868 B | US\$ 8.495 B | US\$ 9.159 B |
| Employment*** | | 166,000 | 178,000 | - |
| GVA* | | Php 222.9 B | Php 242.81 B | Php 262.02 B |

Source: *PSA (in constant 2000 prices)

**PSA Processed by DTI-EMB

***PSA DOLE-BLES

TOP EXPORTS

- | | |
|------------------------|------------------------------|
| 1. Plastics | 2. Oleochemicals |
| 3. Organic Chemicals | 4. Surfactants |
| 5. Inorganic Chemicals | 6. Activated Carbon |
| 7. Adhesives/Glues | 8. Miscellaneous Chemicals |
| 9. Coloring Materials | 10. Manufactured Fertilizers |

TOP EXPORT MARKETS (2016)

- | | |
|------------------------------|---------------------------|
| 1. Japan (US\$ 282 M) | 2. China (US\$ 267 M) |
| 3. Indonesia (US\$ 131 M) | 4. Taiwan (US\$ 96 M) |
| 5. United States (US\$ 83 M) | 6. Malaysia (US\$ 77 M) |
| 7. Vietnam (US\$ 65.3 M) | 8. Thailand (US\$ 65.2M) |
| 9. Netherlands (US\$ 55 M) | 10. Australia (US\$ 46 M) |

TOP IMPORTS

- | | |
|--|----------------------------|
| 1. Plastic | 2. Organic Chemicals |
| 3. Manufactured Fertilizers | 4. Miscellaneous Chemicals |
| 5. Inorganic Chemicals | 6. Coloring Materials |
| 7. Pest-Control / Bio-Security Chemicals | 8. Ethyl Alcohol |
| 9. Alkyd Resins | 10. Surfactants |

TOP IMPORT SUPPLIERS (2016)

- | | |
|-------------------------------|-----------------------------|
| 1. China (US\$ 1,326 M) | 2. Japan (US\$ 842 M) |
| 3. Thailand (US\$ 784 M) | 4. Singapore (US\$ 736 M) |
| 5. United States (US\$ 659 M) | 6. Indonesia (US\$ 528 M) |
| 7. Malaysia (US\$ 457 M) | 8. South Korea (US\$ 454 M) |
| 9. Taiwan (US\$ 320 M) | 10. India (US\$ 296 M) |

INDUSTRY ROADMAP

VISION 2030

The Chemicals Industry envisions to achieve Inclusive growth and development through

- Active investment participation of the local and global investment community in the chemical industry supply chain map
- Greater employment opportunities in the Philippines and a haven for chemical technology experts
- Global CHOICE of chemical products utilizing indigenous Philippine resources and energy source creating active countryside development

TARGETS

| STRONG PHILIPPINES 2016 | ENTER ASEAN+4 2022 | GLOBAL CAPTURE 2030 |
|--|---|--|
| US\$ 5 Billion in Exports R&D - 0.5% of PH Revenue Petrochemical Integration | US\$ 10 Billion in Exports Diversification and expansion Domestic feedstock | US\$ 30 Billion in Exports 3 rd largest export industry in the Philippines |

GROWTH AND COMPETITIVENESS OF THE PHILIPPINE CHEMICAL INDUSTRY

The growth and competitiveness of the chemical industry depends on localized factors, such as the industry's five Ps (5Ps): people, process, pollution, policy, and profit. The 5Ps are the basic monitoring parameters needed in the day to day operation of a plant.

People – the workforce to run the hardware to ensure efficiency and safety of plant operations.

Process – the efficient utilization of plant capacity. Process safety and equipment reliability is important.

Pollution – waste management, ensuring proper treatment, and disposal of waste.

Policy – legislation or regulation that can affect the development and sustainability of the chemical process industry.

Profit – to design and run a safe and efficient chemical plant.

SECTORAL WORKING GROUP

BOI SECTORAL CHAMPION: Director Evariste M. Cagatan

INDUSTRY CHAMPION: Mr. Dennis Tirthdas, President of the Samahan sa Pilipinas ng mga Industriyang Kimika (SPIK)

MEMBERS: BOI, SPIK, APMP, PPIA, POMA, PAPM, DTI-EMB, DTI-BPS, DTI-BIS, DTI-BITR, PDEA, DENR-EMB, FPA/DA, FDA, PNP, BOC, TESDA, DEP ED, DOST-PCIEERD, UP ERDT, DOLE, CHED, NSWMC, TC, BSP, and PITC.

STRENGTHS AND OPPORTUNITIES

Strengths

- Availability of human capital and sector expertise
- Market coverage and development (e.g. after sales support, significant contract volumes)
- Manufacturing competence (in terms of facilities and processes)
- Marketing Skills
- Logistics, Product Quality, Access to good technology
- Network capability for advocacies
- Compliance with environmental regulations
- Customer responsiveness

Opportunities

- Emerging local and international markets
- Shifts in consumer preferences for natural products, health and wellness, and environmentally-friendly products (Increase in global demand for environmentally sustainable and non-toxic products)
- Strong Philippine Economy
- Collaborative environment for industry policy development

POTENTIAL UPGRADING TRAJECTORIES

1. Process upgrading and strengthening backward linkages in the coco chemicals sectors (Upgrading coconut production as a raw material for coco chemicals and activated carbon)
 - Guarantee supply for the oleochemicals and activated carbon industry by requiring closer supply chain linkages between the processors and the industry
2. Product and process upgrading for niche markets
 - Finance market research activities regarding key geographic markets, lead firms, specific sourcing requirements and procurement contacts and make information available to firms in the sector
3. Market upgrading for niche green chemicals cluster
 - Position the Philippines as a potential production and investment location for green chemicals globally
4. Product and functional upgrading in activated carbon
 - Employ the use of new technologies to increase productivity and broaden the range of products
 - Encourage direct supply linkages between oleochemicals producers, activated carbon manufacturers and coconut farmers
5. Product diversification in basic inorganic chemicals
 - Formulate pre-feasibility and feasibility studies for high potential minerals such as nickel-based chemicals
6. Entry into production of intermediate and specialty chemicals
 - Initiate human capital development for specialized production facilities (with focus on production, marketing, and sales)
 - Formulate pre-feasibility and feasibility studies for synergistic products that are anticipated to have high demand from the country's manufacturing industries
 - Create opportunities for chemical firms to interact with emerging manufacturing sectors
 - Improve IP protection framework and enforcement in the Philippines

Source: Duke University "The Philippines in the Chemical Global Value Chain" May 2016; (Bamber, Frederick, & Gereffi, 2016)