GLOBAL DEMAND, CAPACITY AND PRICES FOR POLYPROPYLENE - END-USE SECTORS IN ASIA-PACIFIC TO DRIVE GROWTH
Executive Summary

**Demand from Key End-Use Applications**

Accelerating Polypropylene Industry Growth

Polypropylene’s qualities make it ideal for use in a range of sectors, such as packaging, electrical, household appliances, and automotive. The packaging sector accounts for XX% of global polypropylene demand and is driven in turn by demand from developing Chinese and Indian markets. China is the second-largest packaging market in the world and has huge growth potential due to its low per-capita plastic consumption. India is also a lucrative market due to a growing population, low per-capita plastic consumption and industrializing economy.

The electrical sector also accounts for a significant share of demand with XX%, followed by equipment and facilities, household appliances, automotive, and construction. Together, they account for XX% of global polypropylene demand. Other sectors account for the remaining XX%.

**China and Russia to Add the Most Capacity in the Next Five Years**

China and Russia will be the leading contributors to polypropylene capacity in the future and will account for XX% of global capacity addition over the next five years. A demand-side push is driving capacity addition in China, forcing it to produce more domestic polypropylene, whereas in Russia, the main driver is the desire to diversify export revenue by investing in the petrochemicals sector. Most of Russia’s export revenue currently comes from the petroleum sector.

Venezuela and India will be the third and fourth-largest contributors to capacity over the next five years, and both are investing in the polypropylene sector to cater to the domestic market and replace imports.
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2 Introduction

2.1 Overview

GlobalData’s report: “Global Demand, Capacity, and Prices for Polypropylene – End-Use Sectors in Asia-Pacific to Drive Growth” provides in-depth coverage of the global polypropylene industry, looking at historic and forecast global and regional polypropylene demand and capacity, end-use market shares and pricing trends. It also covers the companies that dominate this market, specifically the three largest producers in the world. They are LyondellBasell Industries N.V. (LyondellBasell), Braskem S.A. (Braskem) and China Petroleum & Chemical Corporation (Sinopec).

Polypropylene capacity coverage takes a “bottoms-up approach” based on the sum of all global polypropylene plant capacities. Polypropylene market coverage, consisting of demand value, demand volume and production volume, is based on data from XX major countries, which account for more than XX% of global polypropylene demand. These countries are China, India, Japan, Malaysia, South Korea, Singapore, Taiwan, Thailand, Belgium, France, Germany, Italy, Poland, Russia, Spain, the UK, Saudi Arabia, Iran, Canada, Mexico, the US, Argentina and Brazil.

The company profile section provides a business overview of the three largest polypropylene companies based on installed polypropylene capacity. The section covers historic and forecast polypropylene capacity and provides information about petrochemical plants, equity partnership details and production capacity.

2.2 GlobalData Report Guidance

- The report begins with the executive summary
- Chapter three highlights the main features of the global polypropylene industry, providing historical and forecast capacity by region, details of planned facilities and major company capacity shares.
- Chapter four provides historical and forecast supply and demand scenarios. It covers the size of the polypropylene market, demand and production volume, and price trends by geographical region from 2003 to 2018. Additionally, it provides demand by major end-use sectors in 2013.
Introduction

- Chapter five profiles the major companies active in the global polypropylene industry, namely LyondellBasell, Braskem and Sinopec.
- Chapter six concludes the report with an industry overview.
3.1 Global Polypropylene Industry, Supply Scenario, 2003–2018

Global polypropylene capacity increased from XX mnty in 2003 to XX mnty in 2013 at a CAGR of XX%. It is expected to reach XX mnty by 2018 at a slightly higher CAGR of XX%. The following figure and tables show global polypropylene capacity over the 2003–2018 period.

**Figure 1: Polypropylene Industry, Global, Capacity by Region (mnty), 2003–2018**

Source: GlobalData, Petrochemicals eTrack [Accessed on April 21, 2014]
Growth in the Packaging Sector to Trigger Expansion

Table 1: Polypropylene Industry, Global, Capacity by Region (mmt/y), 2003–2018

<table>
<thead>
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<th>Year</th>
<th>Asia-Pacific</th>
<th>Europe</th>
<th>Middle East and Africa</th>
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Source: GlobalData, Petrochemicals eTrack [Accessed on April 21, 2014]

Table 2: Polypropylene Industry, Global, Capacity CAGR by Region (%), 2003–2018

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<th>Year</th>
<th>Asia-Pacific</th>
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Source: GlobalData, Petrochemicals eTrack [Accessed on April 21, 2014]
5.2.2 Braskem, Global Polypropylene Capacity, 2003–2018

Braskem’s polypropylene capacity increased from XX mmt in 2003 to XX mmt in 2013 at a CAGR of XX%. The company has a planned plant in a joint venture with Pequiven in Paraguaná, Venezuela, which will increase its total capacity to XX mmt by 2017.

Figure 9: Braskem, Installed Polypropylene Capacity (mmt), 2003–2018

Source: GlobalData, Petrochemicals eTrack [accessed April 21, 2014]
Major Companies Active in the Global Polypropylene Industry

<table>
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Source: GlobalData, Petrochemicals eTrack [accessed April 21, 2014]
Appendix

7 Appendix

7.1 Definitions

7.1.1 Installed Capacity

Installed capacity refers to the maximum rated output of a plant under specific conditions designated by the manufacturer. It is usually indicated in units of tons on a nameplate affixed to the plant.

7.1.2 Process

A process is a combination of unit operations used to change chemical composition of raw material to manufacture petrochemicals.

7.1.3 Technology

Technology is a technical process used in the petrochemical industry that has been developed by a specific business entity.

7.2 Abbreviations

<table>
<thead>
<tr>
<th>Table 20: Abbreviations</th>
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<tbody>
<tr>
<td>Abbreviation</td>
<td>Expanded form</td>
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<tr>
<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
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<tr>
<td>ExxonMobil</td>
<td>Exxon Mobil Chemical Company</td>
</tr>
<tr>
<td>Formosa</td>
<td>Formosa Plastics Corporation</td>
</tr>
<tr>
<td>Ineos</td>
<td>Ineos Group Limited</td>
</tr>
<tr>
<td>LyondellBasell</td>
<td>LyondellBasell Industries N.V.</td>
</tr>
<tr>
<td>mnty</td>
<td>million metric tons per year</td>
</tr>
<tr>
<td>Reliance</td>
<td>Reliance Industries Limited</td>
</tr>
<tr>
<td>Sinopec</td>
<td>China Petroleum &amp; Chemical Corporation</td>
</tr>
</tbody>
</table>

Source: GlobalData
Appendix

7.3 Bibliography


7.4 GlobalData’s Research Methodology

GlobalData’s dedicated research and analysis teams consist of experienced professionals with advanced statistical expertise and marketing, market research and consulting backgrounds in the petrochemical industry.

GlobalData adheres to the Codes of Practice of the Market Research Society (www.mrs.org.uk) and Strategic and Competitive Intelligence Professionals (www.scip.org).

All GlobalData databases are continuously updated and revised. The following research methodology is followed for all databases and reports.

7.4.1 Coverage

The objective of updating GlobalData’s coverage is to ensure that it represents the most up-to-date vision of the industry possible.

Changes to the industry taxonomy are built on the basis of extensive research of company, association and competitor sources.

Company coverage is based on three key factors: market capitalization; revenues; and media attention and innovation and market potential.

- An exhaustive search of 56 member exchanges is conducted and companies are prioritized on the basis of their market capitalization.

- The estimated revenues of all major companies, including private and governmental, are gathered and used to prioritize coverage.

- Companies that are making news, or which are of particular interest due to their innovative approach are prioritized.
GlobalData aims to cover all major news events and deals in the petrochemical industry, updated on a daily basis.

The coverage is further streamlined and strengthened with additional inputs from GlobalData’s expert panel (see below).

7.4.2 Secondary Research

The research process begins with extensive secondary research on internal and external sources to gather qualitative and quantitative information relating to each market.

Secondary research sources that are typically referred to include, but are not limited to:

• Company websites, annual reports, financial reports, broker reports, investor presentations and SEC filings
• Industry trade journals and other literature
• Internal and external proprietary databases
• National government documents, statistical databases and market reports
• News articles, press releases and webcasts specific to the companies operating in the market

7.4.3 Primary Research

GlobalData conducts hundreds of primary interviews a year with industry participants and commentators in order to validate its data and analysis. A typical research interview fulfills the following functions:

• Provides first-hand information on the market size, market trends, growth trends, competitive landscape, and future outlook
• Helps to validate and strengthen the secondary research findings
• Further develops the analysis team’s expertise and market understanding

Primary research involves e-mail correspondence and telephone interviews as well as face-to-face interviews for each market, category, segment and sub-segment across geographies.
Appendix

The participants who typically take part in such a process include, but are not limited to:

- **Industry participants:** CEOs, VPs, business development managers, market intelligence managers and national sales managers

- **Outside experts:** investment bankers, valuation experts, research analysts and key opinion leaders specializing in the petrochemical industry

### 7.4.4 Expert Panel Validation

GlobalData uses a panel of experts to cross-verify research and forecast methodologies, and drive its analytical content.

GlobalData’s expert panel comprises marketing managers, product specialists, international sales managers from petrochemical companies; academics from research universities and consultants from professional services companies.

### 7.5 Disclaimer

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