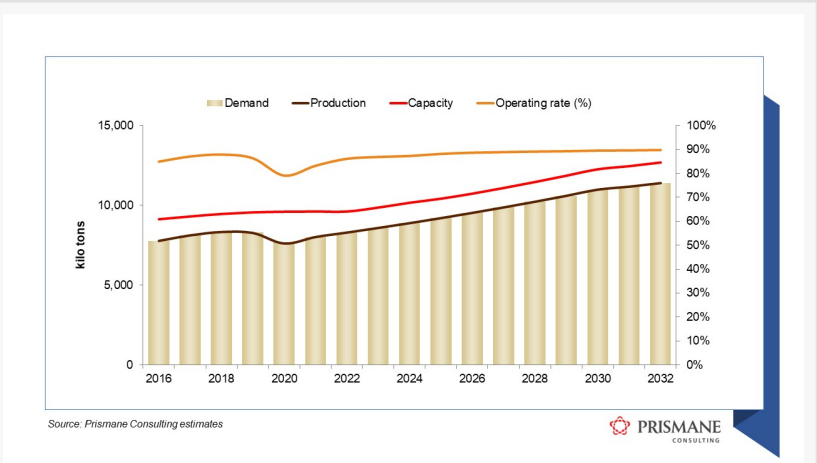
Vehicle Electrification and Light Weighting to Drive Polyamides Demand

PUNE, MAHARASHTRA, INDIA, May 3, 2023 /EINPresswire.com/ -- Prismane Consulting is pleased to publish its Global Polyamides Market Study Report. This report forms a part of the Engineering Plastics Strategy report recently published by Prismane Consulting.



Polyamides Demand-Supply, 2016-2032

The global Polyamide capacity (including Polyamide 6, Polyamide 66, and other specialty polyamides) was estimated to be over 9,600 kilo tons in 2021 of which polyamide 6 accounted for around 78%. In the past decade, there was an average annual polyamide capacity addition of over 150 kilo tons. Asia-Pacific is the largest Polyamide producer with installed capacity of more than 5,500 kilo tons, followed by North America and Western Europe. The global polyamide resins market spans a variety of end-uses such as Automotive, Electrical & Electronics, Consumer Goods & Appliances, Packaging/Film, Industrial, and Textiles.

The global Polyamide market is projected to grow above global GDP growth in the long-term to cross 11,500 kilo tons by 2032. Increasing adoption of electric vehicles, growing demand from electrical & electronics, industrial and consumer goods industries are the key demand drivers for polyamide market. Asia Pacific is the leading consumer of Polyamide, and it is projected to witness strong growth with majority of growth concentrated in China. Demand of Polyamide is highest in China accounting for more than 70% of the total regional consumption. Followed by Taiwan, Japan, and India at 11%, 4% and 4% respectively. In Asia Pacific, China and India is projected to witness highest growth in the forecast period owing to an increase in in per capita consumption on the back of increase in purchasing power and rising middle class is expected to drive the Polyamide demand.

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The global polyamide demand witnessed a decline owing to the economic downturn and COVID-19 pandemic which led to nationwide lockdowns and lower consumer buying sentiments. The petrochemical and plastics industries were severely affected as the demand halted during the first and second quarters of 2020. Polyamide 66 demand, which is heavily reliant on the automobile industry, came under immense pressure as companies saw customers cancel orders or curtail purchases due to the pandemic. The automobile industry was shut down for almost three months from March, causing a prolonged de-stocking throughout the entire industry that lasted well into 2019.

Polyamide offers unique properties such as high strength, durability, and resistance to heat and chemicals. Its properties make it an ideal material for many of the components used in these automotive. In automotive industry, polyamide is used in the production of components of electric motors such as stator, rotor, and end caps. In electric vehicles, polyamide is used in the production of battery housings, terminal covers, and cell holders of battery.
The excellent chemical and mechanical properties make it an ideal material for use in contact with battery electrolytes. As the automotive industry continues to grow, the demand for polyamide is expected to rise in the forecast period. China is one of the largest electric vehicle producers accounting for more than 50% of the global EV production. The country dominates the plug-in electric bus and light commercial vehicle (LCV) market, accounting for around 98% of the global bus stocks and 65% of the LCV market. China has sold more electric cars than the entire world in 2020. According to the China Association of Automobile Manufacturers, China has sold more than 3.3 million passenger EVs in 2021, consisting of around 2.7 million battery electric vehicles (BEVs) and plug-in hybrid electric vehicles of around 0.6 million. BYD Auto Co., Ltd, Tesla, SAIC Motor, Great Wall Motor, and GAC Group are some of the major EVs manufacturers in China. In 2019, Tesla opened one of its largest Gigafactory in Shanghai China with total production capacity of 700,00 vehicles/year. The company is further planning to increase the production capacity to 2 million in the future.

The growth in EVs market will further drive the demand of polyamides, as car production is set to rise during the forecast period. More electrical systems are being incorporated into each new generation of motor vehicle to ensure greater passenger comfort and safety. These include automatic window systems, electronic seat adjustment, climate control systems, navigation systems and in-car entertainment. New product developments with improved functions can substitute metals and other high-performance plastics are expected to prove to be an opportunity in the long-term forecast. Countries like U.S., China, Germany, Mexico, India, and South Korea are known for the robust automotive/automotive parts manufacturing industry. Majority of the companies have been coming up with hybrid versions of their cars. Most of these countries also have set-up deadlines to ensure complete penetration of these automotive, replacing their gasoline counterparts. Automotive manufacturers are also looking to shift towards electric cars as governments in developing countries are providing them with rebates on electric vehicles.

Recent developments

The global demand-supply balance for polyamide 66 was impacted due to force majeures at Invista and BASF’s adiponitrile production facilities in Europe, and Solvay and BASF’s adiponitrile facilities in the US. This led to a demand-supply gap with demand outstripping supply by over 100 kilo tons in 2018-2019. This further led to increased polyamide 66 prices. However, new capacity additions were announced and many of them are now taking shape with new facilities starting commercial operations and the industry is moving towards consolidation.
DOMO Chemicals has invested around Euro 14 million in China to start a new polyamide plant in Haiyan, Jiaxing, Zhejiang, China with installed capacity of around 35 kilo tons. The plant is expected to be operational by early 2024 and will produce TECHNYL polyamide-based grades. The company is further planning to expand the production capacity gradually to 50 kilo tons.
Invista is planning to significantly increase the production capacity of Polyamide 66 resins at its facility in Camden, South Carolina, USA to address the rising demand of polyamide 66 from e-mobility and electronics applications. The company currently operates Polyamide 66 plants in Seaford, Camden and Waynesboro with total installed capacity of more than 500 kilo tons.

Tejas Shah
Prismane Consulting Private Limited
+91 20 6727 7711
tejas.shah@prismaneconsulting.com
