Market Insights: Ultra High Molecular Weight Polyethylene - 2020 is one in a series of reports published as part of Nexant’s Markets & Profitability program.

Nexant’s upcoming Market Insights report provides a comprehensive review of the global Ultra High Molecular Weight Polyethylene (UHMWPE) market and includes:

- Discussion regarding key market drivers and constraints for each region
- Supply, demand trade for nine regions: North America, South America, Western Europe, Central Europe, Eastern Europe, Middle East, Africa, Asia Pacific, and China
- Competitiveness analysis, including competitive landscape, who’s who of suppliers and cost competitiveness
- Price forecasts with commentary regarding latest trends
- Forecast period: 10 years history and 15 year forecast to 2035

Along with the written report, data is provided in Excel including global capacity listings.

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Report Abstract:

Polyethylene (PE) is one of the most widely used plastics with a global demand of more than 100 million tons, and has the simplest chemical structure of all the commercial polymers. Based on the polymer architecture and resulting density, polyethylenes are classified into high density polyethylene (HDPE; few short or no branches), linear low density polyethylene (LLDPE; many short branches) and low density polyethylene (LDPE; both long and short chain branches). While these three classes of polyethylenes are widely known, it is possible to produce other polyethylene architectures, one of which ultra-high molecular weight polyethylene (UHMWPE). UHMWPE is so named because these materials have a molar mass of over a million grams per mol whereas HDPE typically has a molar mass between 50 000 to 300 000 grams per mol.

Major application areas of UHMWPE include bulk material handling, food and beverage machinery, chemical, mining and mineral processing equipment, recreational equipment, transportation and orthopaedic implants – largely due to its abrasion resistance, chemical resistance and good frictional properties UHMWPE resin is also gel processed for applications such as battery separators, synthetic paper or high-strength fibre applications. The sintering process can be used to produce porous parts such as filters, wicking parts and fluid delivery components.

North America and China are the largest consumers of UHMWPE resin, accounting for about 65 percent of global consumption of the resin. Currently, the UHMWPE market is oversupplied with global operating rates for 2019 estimated at around 77 percent. Global capacity is expected to increase to 2024, and demand is also expected to increase in the same period. As a result, the global operating rates are expected to reach 80 percent by 2024. Operating rates are next expected to peak in 2028, at 84 percent, and then in 2035 at 86 percent, in line with Nexant’s petrochemical cycle forecast. Most of the capacity addition is expected in China and North America. China is the only region where new capacity announcements have been made.
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Each region section in Chapter 3 includes:
- Market Overview
- Market Drivers
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For additional analysis on polyolefins, please refer to:
- Market Analytics: Polyolefins – 2020
- Market Insights: LDPE EVA Copolymers – 2020
- Market Insights: Bimodal HDPE - 2020
- Market Insights: Polyolefin Elastomers – 2020
- Profitability and Price Forecasts: Polyolefins - 2020

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For more information please contact markets@nexant.com
or www.nexantsubscriptions.com

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Markets and Profitability tracks over 60 feedstocks, petrochemicals, polymers, chemical intermediates and fertilizers on an ongoing basis and provides regularly updated reports covering all commercial aspects of these global industries. The accompanying database, provides global analysis and forecasts in two major inter-related areas: Markets and Profitability.

Nexant serves its clients from over 30 offices located throughout the Americas, Europe, the Middle East, Africa and Asia.

Americas
Tel: +1 914 609 0300
44 S Broadway,
4th Floor White Plains
NY 10601-4425
USA

Europe, Middle East & Africa
Tel: +44 20 7950 1600
1 King’s Arms Yard
London EC2R 7AF
United Kingdom

Asia Pacific
Tel: +662 793 4600
22nd Floor, Rasa Tower I
555 Phahonyothin Road
Kwaeng Chatuchak
Khet Chatuchak
Bangkok 10900
Thailand