Global and China Ultra High Molecular Weight Polyethylene (UHMWPE) Industry Report, 2017-2021

Oct. 2017
STUDY GOAL AND OBJECTIVES
This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES
◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
◆ To complement the organizations’ internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
◆ To help company to succeed in a competitive market, and

METHODOLOGY
Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.
Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES
The primary information sources include Company Reports, and National Bureau of Statistics of China etc.
Abstract

Ultra High Molecular Weight Polyethylene (UHMWPE), a kind of linear polyethylene with relative molecular weight of above 1.5 million and an engineering thermoplastic with excellent comprehensive properties, can be processed into products like sheets, pipes, fibers and films. It is primarily used in high-end fields, such as body armor, bulletproof helmet, bulletproof armor, anti-cutting gloves and aerospace, marine equipment, rail transit, medical stents and lithium-battery separator.

Global UHMWPE resin capacity and demand were 221kt and 200kt in 2016, respectively. As manufacturing has increasingly higher requirements on material properties, UHMWPE resin enjoys broad market prospects because of its excellent properties, finding output and demand as estimated 380kt and 367kt in 2021 separately.

UHMWPE fiber, a fiber spun out of UHMWPE, is a key strategic and high-tech material and one of three high-performance fibers, and has been in a state of short supply. Global demand for UHMWPE fiber was about 60kt in 2016, compared with an output of only 30kt or so. As more military and civilian products (like high-strength light cables) are developed, the demand for UHMWPE fiber is expected to maintain a growth rate of around 15% over the next five years, reaching 108.7kt in 2021 but still in short supply.

Meanwhile, the demand far exceeds the supply in the Chinese market. About 20kt of UHMWPE fiber was needed in the country in 2016, while the output was roughly 9kt. Restricted by lack of production technologies for spinning-grade specialty resins and weaker spinning technology and outdated production facilities than that in the developed countries, local Chinese enterprises produce mainly mid and low-end products, while high-end ones are monopolized by foreign players with core technologies including Dutch DSM, U.S. Honeywell and Japanese Mitsui Chemicals. DSM produces the most in the world.

Major global UHMWPE resin makers include CELANESE, Braskem, DSM and Mitsui Chemicals. CELANESE has the world's largest UHMWPE products capacity with production bases in Oberhausen (Germany), Bishop, Texas (U.S.) and Nanjing (China) with capacity totaling about 108kt/a, followed by Braskem with capacity of approximately 45kt/a.
Key local Chinese resin producers are Henan Wosen Ultra-high Chemical Industry Science and Technology, Shanghai Lianle Chemical Industry Science and Technology, Anhui Teijajin Fine Chemicals, Jiujiang Zhongke Xinxing New Materials and Sinopec Qilu Petrochemical Company with a combined capacity of about 80kt/a (including Celanese’s Nanjing-based plant), indicating a highly concentrated market but mainly for mid and low-end products due to technological limitations. Driven by rapid growth in demand from the downstream sectors of UHMWPE resin in recent years, companies have kept expanding capacity to scramble for market share. Jiujiang Zhongke Xinxing New Materials is building 60kt/a UHMWPE resin project, and Nanjing Jinling Plastic & Petrochemical is constructing 10kt/a UHMWPE project.

The UHMWPE market is expected to grow rapidly over the next couple of years with completion and operation of new enterprises and capacity expansion of existing companies going simultaneously. High-performance, low-cost and special-purpose will be main trends of UHMWPE resin. If Chinese producers wish to grab a larger market share, they must improve the quality of products, beside price factor.

Global and China Ultra High Molecular Weight Polyethylene (UHMWPE) Industry Report, 2017-2021 highlights the followings:

- Global and Chinese UHMWPE resin market (supply & demand, price, competitive landscape, development trends, etc.);
- Global and Chinese UHMWPE fiber market (status quo, demand, competitive landscape, development trends, etc.);
- UHMWPE sheet, pipe, and lithium-battery separator markets;
- 12 major global and Chinese UHMWPE resin enterprises (operation, development strategies, etc.);
- 13 major global and Chinese UHMWPE fiber enterprises (operation, development strategies, etc.).
Global UHMWPE Resin Demand, 2016-2021E

Source: Global and China Ultra High Molecular Weight Polyethylene (UHMWPE) Industry Report, 2017-2021
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