

The Vertical Portal for China Business Intelligence

#### 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 costeffective 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.

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### **Abstract**

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

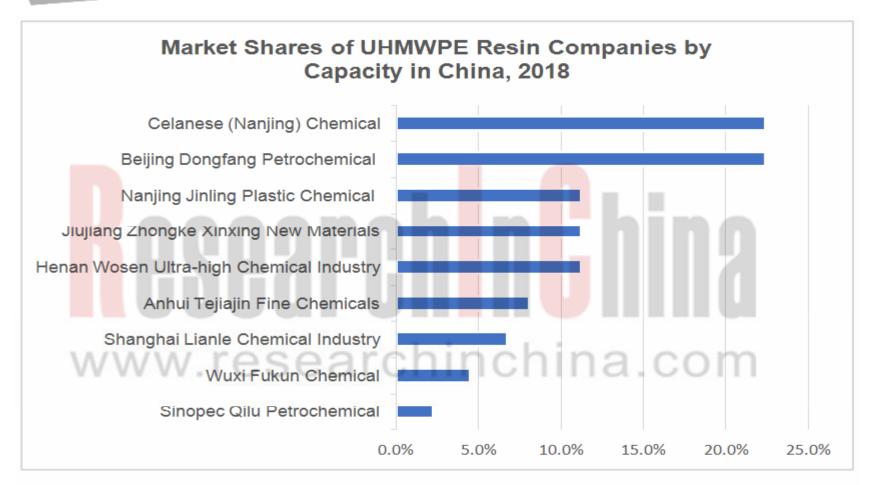
Global UHMWPE resin capacity and demand were 240kt and 250kt in 2018, respectively. As key industries such as medical care, automotive, consumer goods and energy storage demand more special materials, 650kt UHMWPE resin is expected to be produced and 600kt demanded in 2025.

Global UHMWPE resin market is dominated by foreign companies like Germany's CELANESE and Braskem, Holland-based DSM and Japanese producer Mitsui Chemicals. Among them, CELANESE boasts the largest capacity, and has built production bases in Oberhausen of Germany, Texas of the US and Nanjing of China, with a collective capacity of approximately 108kt/a. In 2018, CELANESE added a 14kt/a UHMWPE resin plant in Nanjing City, Jiangsu Province, which would become operational in the second half of 2019.

There are only a few resin producers in China such as Henan Wosen Ultra-high Chemical Industry Science and Technology Co., Ltd., Shanghai Lianle Chemical Industry Science and Technology Co., Ltd., Anhui Tejiajin Fine Chemicals Co., Ltd., Jiujiang Zhongke Xinxing New Materials Co., Ltd., Sinopec Qilu Petrochemical Corporation and Nanjing Jinling Plastic Chemical Co., Ltd., with a combined capacity of about 90kt/a (including Celanese's Nanjing-based plant) in 2018, indicating a highly concentrated market. Chinese resin players, however, focus on low- and mid-end products because of backward technology. They have continued capacity expansion over the years to scramble for market shares. Examples include Jiujiang Zhongke Xinxing New Materials Co., Ltd. which is constructing Phase II of its 60kt/a UHMWPE resin project, and Hubei Yuhong Advanced Material Technology Co., Ltd. with a plan of building an 8kt/a UHMWPE project.

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UHMWPE fiber, a fiber spun out of UHMWPE as a key strategic and high-tech material among the world's three major high-performance fibers, is in short supply. Global demand for UHMWPE fiber reaches roughly 70kt, compared with an output of a mere 30kt. As more military and civilian products (like high-strength light cables) are developed, UHMWPE fiber demand is expected to grow at a rate of around 15% in the next five years, up to 200kt in 2025, but still less than the volume demanded.

In the Chinese market, the gap between supply and demand remains big as well. About 30kt of UHMWPE fiber is needed annually in the country, while the output is less than 10kt per annum. Local companies focus on low- and mid-end products because they remain weaker in production technology for spinning-grade specialty resins, spinning technology and production facilities than their foreign counterparts like DSM, Honeywell and Mitsui Chemicals, which monopolize core technologies and high-end products. DSM ranks first worldwide by output.

UHMWPE market will usher in a period of prosperity amid increasing demand for special materials, of which UHMWPE resin will tend to be more efficient, cheaper and more specialized. Besides price, Chinese producers should prioritize quality improvement if wanting larger shares.

Global and China Ultra High Molecular Weight Polyethylene (UHMWPE) Industry Report, 2019-2025 highlights the following:

- •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.).

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