

## China Organic Silicon Industry Report, 2009-2010

May/2010



Property right statement: Copyright of charts, tables and sentences in this report belongs to ResearchInChina (Beijing Waterwood). For charts or tables marketed as from other sources, original publishers own the copyright. The quoted data in this report are collected from public sources. If there is any problem related to property right, please do not hesitate to contact ResearchInChina.

## 2. Development of Global Organic Silicon Industry

### 2.1 Raw Material Market

In 2009, the global metallic silicon market was still oversupplied, while the demand was decreased by 13%; promisingly, in 2010, the global demand for metallic silicon will be increased by 15%, reaching \*\* million tons, or return to the level of 2008. But the global output of metallic silicon is predicted to hit \*\* million tons, increasing by 13%, as a result, the supply in the global metallic silicon market will maintain exceeding the demand.

### 2.2 Organic Silicon Monomer

Taking a wide view of the global organic silicon market, the total output capacity of organic silicon monomer of the Top 4 manufacturers, i.e. Dow Corning USA, Momentive USA, Wacker Germany, and ShinEtsu Japan, occupies 65.5% of the global output capacity of organic silicon. Of which, the annual output capacity of monomer of Dow Corning is \*\* kilotons, accounting for 28% or so of the global output capacity. Nevertheless, in China there is only a small number of enterprises that can achieve scale production of monomer (100 kilotons and above), for instance, Xinan, Bluestar, Shandong Jinling, etc., as a whole, the scaled operating level is relatively low.

#### ***Monomer Scale Comparison of Global Main Organic Silicon Companies, 2009 (Unit: kiloton)***

***(Omitted)***

Source: ResearchInChina

### 2.3 Organic Silicon Intermediate

At present, there are five overseas enterprises-Dow Corning, Momentive, Wacker, ShinEtsu, and Rhodia (has been sold to Bluestar) - possessing the capacity of scale production, and these 5 large manufacturers occupy over 80% of the global output of polysiloxane. As for China, only Xinan, Bluestar and Jinlin Chemical possess the capacity of scale production.

### 2.4 Organic Silicon Downstream Products

Organic silicon downstream products mainly include silicon rubber, silicon oil, silicone and silane coupling agent with 3,000-5,000 varieties, of which, Dow Corning possesses 7,000 types of organic silicon products, Momentive possesses 5,000 types, Wacker possesses 3,400 types, ShinEtsu Japan and Rhodia France possess more than 3,000.

#### ***Siloxane Value-added Comparison of Global Main Organic Silicon Companies, 2009***

Main Companies	Monomer Output Capacity (kiloton)	Added Value of Siloxane (RMB/ton)
Dow Corning	860	12,000
Momentive	450	---
Wacker	420	---
Xinan	100	About 4,500
Bluestar	200	About 500

Source: CCSC; ResearchInChina

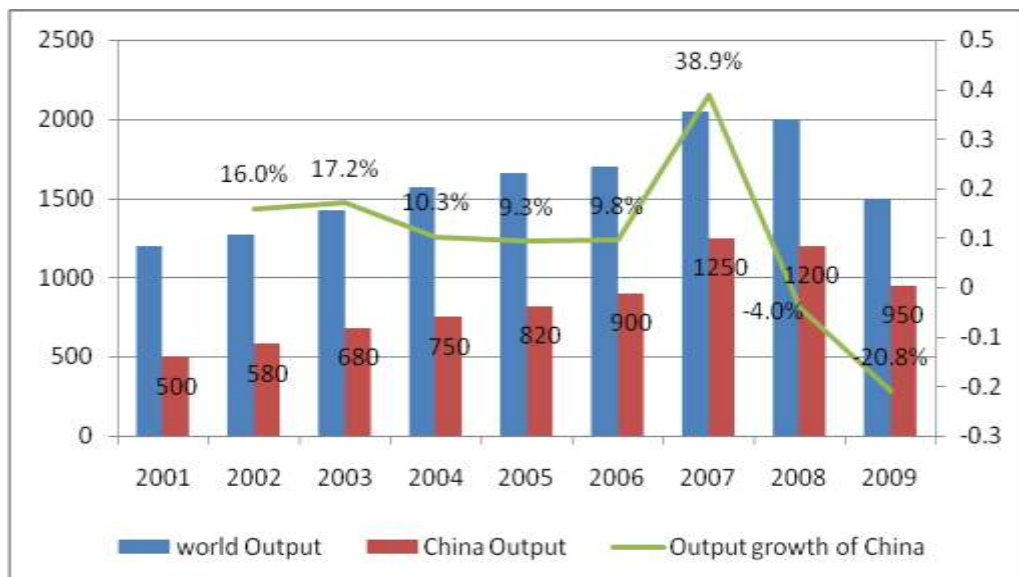
### 3. Development of China Organic Silicon Industry

#### 3.1 Raw Material Sector

##### 3.1.1 Metallic Silicon

In 2009, the global demand of metallic silicon experienced slump. And there was no exception for China. Nevertheless, the domestic consumption didn't shrink, but it was mainly represented by drop in export volume. In 2009, the global output of metallic silicon reached 1.5 million tons, down 25% year-on-year; while the domestic output was 950,000 tons, down 20% year-on-year. Yet, according to the statistics from General Administration Customs of PRC, the export volume of metallic silicon in China was 422,000 tons, decreasing by 39% year-on-year; while the domestic demand volume touched 530,000 tons, increasing slightly over 2008.

**Global and China's Metallic Silicon Output, 2001-2009 (Unit: kiloton)**



Source: www.atk.com; ResearchinChina

In terms of domestic consumption, the output of 551 # metallic silicon declined slightly year on year, while the

### **3.1.3 Chloromethanes (CMS)**

Currently, the domestic methane chloride enterprises have entered a period of industry adjustment, but for a long time in the future, the market will continue the situation of supply exceeding demand, and the situation of intensive market competition will continue.

#### ***Output Capacity of China's Main Chloromethanes Companies, 2005-2010***

***(Omitted)***

Source: ResearchInChina

## **3.2 Organic Silicon Monomer Sector**

### **3.2.1 Production**

In 2009, the output capacity and output of organic silicon monomer in China reached \*\* million tons and \*\* tons respectively, and industry capacity utilization was only \*\* % due to low market prices of organic silicon.

It is expected that to 2010, the foreign companies, Bluestar New Chemical Materials Co., Ltd and Zhejiang Wynca Chemical Group Co., Ltd will dominate China's medium and high-end organic silicon monomer market, and the other companies are all in low-end market competition. The demand and supply in Chinese market of organic silicon monomer is still in balance.

#### ***Monomer Scale Comparison of China's Main Organic Silicon Companies, 2008-2010***

***(Omitted)***

Source: ResearchInChina

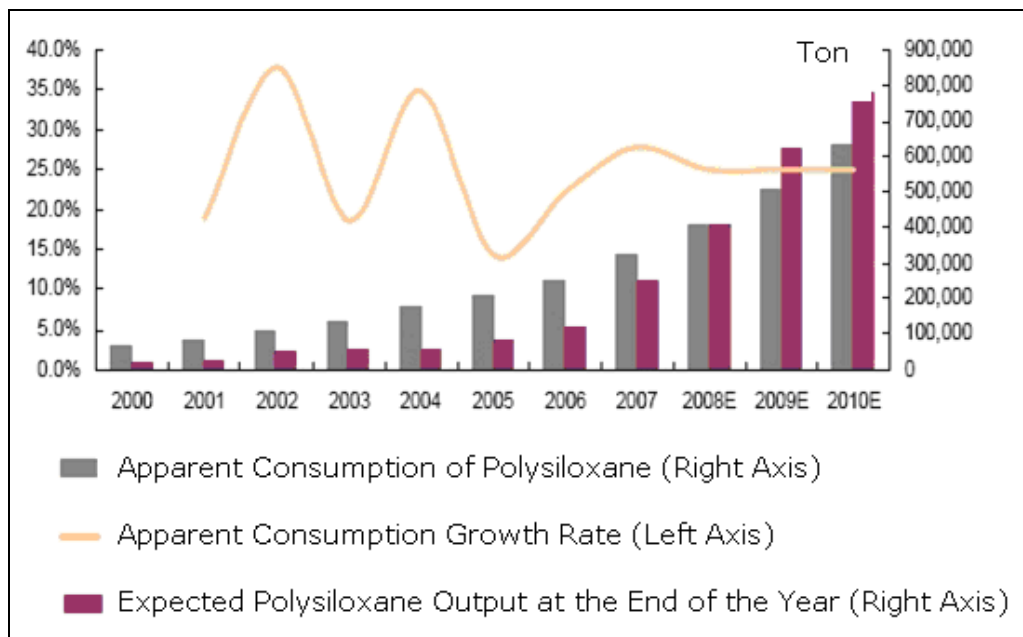
### 3.3 Organic Silicon Intermediate Sector

#### 3.3.1 Supply & Demand

At present, 50-60% organic silicon demand has to be met by imported products; in the meantime, import price is much higher than export price. Although the surplus of production capacity made the price of intermediates decline in 2009, it helped ease the supply-demand contradiction in China as the imports decreased, which is good for long-term development of the industry.

After a number of small organic silicon monomer devices were put into operation gradually, China's total output of polysiloxane reached \*\* to \*\* tons in 2009, with an increase of \*\* % -\*\* %. As a result, the domestic supply experienced a substantial increase, thus reducing dependence on import. In addition, Dow Corning, Xin An, BlueStar and other companies have projects under construction. It is expected that China's polysiloxane output will maintain growth in the next few years.

**Polysiloxane Supply & Demand in China, 2000-2010**



Source: ResearchInChina, Company Bulletin

### **3.4 Downstream Products**

Downstream products of organic silicon mainly cover silicon rubber, silicon oil, silicone and silane coupling agent, of which, the first two are common in our country, occupying a total 95% of national organic silicon deep-processed products.

In 2009, the output of silicon rubber in China was \*\* kilotons, the output capacity of silicon oil was 100 kilotons while the output was \*\* kilotons; the output capacity of silicone was 20 kilotons, the output was \*\* kilotons, the demand was \*\* kilotons, and the import volume was \*\* kilotons; the supply of silane coupling agent could not satisfy the demand, the estimated output was \*\* kilotons; the output of fumed silica was \*\* kilotons.

## 5. Key Companies

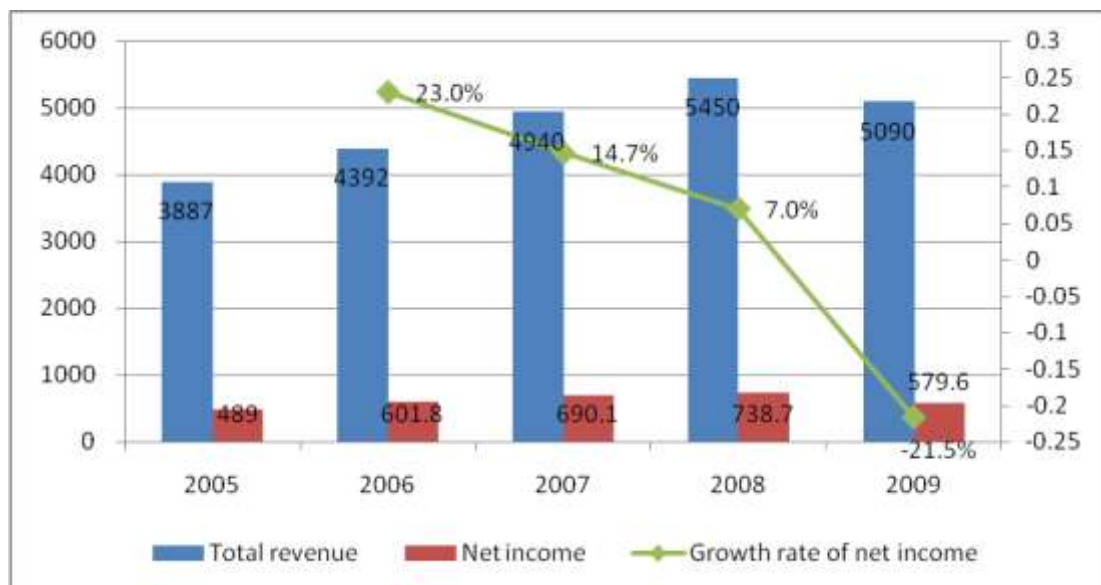
### 5.1 Dow Corning

#### 5.1.1 Profile

Dow Corning, established together by Corning Glass and Dow Chemicals in 1943, is the world's leading organic silicon manufacturer and also is one of Europe's largest corporations of producing and marketing electrical tape. Dow Corning enjoys the highlighted advantages in technology R&D and boasts of thousands of scientists and engineers worldwide as well as more than 4,000 patents effective. 6-7% of its sales revenue per year goes to technology development, far higher than the industry's average.

#### 5.1.2 Operation

**Revenue and Net Profit of Dow Corning, 2003-2009 (unit: US\$M)**





Source: Annals of Dow Corning, ResearchInChina

In 2009, the sales revenue of Dow Corning reached US\$5.09 billion, a 7% drop against US\$5.45 billion in 2008. In particular, the sales in 2009Q4 grew to US\$1.47 billion with a rise of 13% from US\$1.3 billion in the same period of 2008. Besides, the net income of Dow Corning amounted to RMB579.6 million in the year 2009, decreasing by 21.5% from US\$738.7 million in 2008.

As a whole, the shrinking market demand for organic silicon products and the low prices in the first half of 2009 were the main factors that led to the drop in the revenue of the Company. As global economic situation turns for the better starting from Aug.2009, the market prices of organic silicon products has been climbing up, and at the same time, the organic silicon business acquisitions by Dow Corning in 2009Q4 will increase organic silicon output as well, and it is expected that the business revenue of Dow Corning will grow further in 2010.

### **5.1.3 Business Expansion in China**

Dow Corning began to enter Chinese market early in 1973, and it has made a total investment of more than US\$40 million in China. Dow Corning has offices in Shanghai, Beijing, Chengdu, Guangzhou and Hong Kong respectively, and owns production base and application service center in Songjiang District, Shanghai.

Dow Corning has completed the construction of the complete organic silicon product chains in China from technical service, production to sales as well as from primary raw materials, the production of intermediates to the development of downstream products. Localization will bring the advantages to Dow Corning in the supply of raw materials, cost and closeness to the market; while other foreign funded corporations have no choice but to rely on the supply of intermediates from Dow Corning, or to select the products (processed abroad) by ocean shipping to Chinese market and then conduct the sales in China.

On Oct.21, 2009, Dow Corning and Wacker jointly funded and began the construction of the gas phase silicon dioxide 2nd-phase project in Zhangjiagang, Jiangsu province, China, it is expected that the rated annual output capacity of siloxane plant and gas phase silicon dioxide plant of the both parties will reach \*\* tons.

***Business Expansion of Dow Corning in China, 1973-2009***

***(Omitted)***

Source: ResearchInChina

## → Related Reports

- **Global and China Lithium Carbonate Industry Report, 2008-2010 (3rd Edition)**  
<http://www.researchinchina.com/htmls/Report/2009/5659.html>
- **China Fiberglass Industry Report, 2008**  
<http://www.researchinchina.com/htmls/Report/2008/5585.html>
- **China Cement Industry Report, 2008-2009**  
<http://www.researchinchina.com/htmls/Report/2008/5615.html>
- **China Glass Industry Market Report, 2008**  
<http://www.researchinchina.com/htmls/Report/2008/5538.html>
- **China Ceramic Industry Report, 2007-2008**  
<http://www.researchinchina.com/htmls/Report/2008/5460.html>
- **Global and China Solar Polysilicon Industry Chain Report, 2008**  
<http://www.researchinchina.com/Htmls/Report/2008/5537.html>
- **China ABS Plastic Market Report, 2008**  
<http://www.researchinchina.com/Htmls/Report/2008/5592.html>
- **China Acrylonitrile Industry Chain Report, 2008**  
<http://www.researchinchina.com/Htmls/Report/2008/5614.html>
- **China Calcium Carbonate Market Report, 2008**  
<http://www.researchinchina.com/Htmls/Report/2009/5628.html>
- **China Glycol Market Report, 2007-2008**  
<http://www.researchinchina.com/Htmls/Report/2008/5604.html>
- **China Acetone Market Report, 2007-2008**  
<http://www.researchinchina.com/Htmls/Report/2008/5606.html>
- **China Polypropylene (PP) Market Report, 2007-2008**  
<http://www.researchinchina.com/Htmls/Report/2008/5612.html>

### **About ResearchInChina**

ResearchInChina (www.researchinchina.com) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

ResearchInChina also offers subscription products for clients, including Market Weekly, Market Monthly and Market Quarterly on various industries. Market Weekly (Monthly and Quarterly) is the important step to understand the investment potential in China market.

We have over 600 clients worldwide, including the largest commercial and investment banks; insurance companies; research institutions; financial services firms; mutual funds; manufacturers; utilities; and industrial and technology clients.

***Address: Room 1008, A2, Tower A, Changyuan  
Tiandi Building, No. 18, Suzhou Street, Haidian  
District, Beijing, China 100080***

***Tel: 0086-10-82600828, 82600893***

***Fax: 00-86-10-82601570***

***Mail: report@researchinchina.com***