

# **China Pentaerythritol Market Research**

**The Thirteen Edition**

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**Kcomber Inc.**

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## 1. Introduction

The report provides you with detailed information of the pentaerythritol industry in China from the raw materials, import and export, consumption in major end-use segments and profiles of nine major pentaerythritol manufacturers in China.

The key points of this report are listed as below::

- ✓ Pentaerythritol development in China
- ✓ Production of pentaerythritol in China
- ✓ Import and export analysis
- ✓ Consumption of pentaerythritol in China
- ✓ Future forecast
- ✓ Profiles of pentaerythritol manufacturers

## 2. Approach for this report

The report is drafted by diverse methods as follows:

### 1) Desk research

The sources of desk research are various, including published magazines, journals, government statistics, industrial statistics, Customs statistics, association seminars as well as information from the Internet. A lot of work has gone into compilation and analysis of the obtained information. When necessary, checks will be made with Chinese pentaerythritol suppliers regarding market information such as key producers, key end-users, production and export and so on.

### 2) Telephone interview

CCM has carried out extensive telephone interviews in order to grasp the actual market situation of pentaerythritol in China.

Interviewees cover:

- Producers
- End-users
- Traders
- Associations

### 3) Internet

CCM contacted with players in this industry through B2B websites.

Data processing and presentation

The data collected and compiled were sourced from:

- CCM's own database
- Published articles from periodicals, magazines and journals
- Statistics from governments and international institutes
- Telephone interviews with domestic suppliers, end-users, government, industrial experts
- Third-party data providers
- Information from the Internet

The data from various sources have been combined and cross-checked to make this report as precise and scientific as possible. Throughout the process, a series of internal discussions were made in order to analyze the data and have conclusions drawn.

### 3. Executive summary

Facing with increasingly stringent environmental standards, high production costs and other factors, China's pentaerythritol industry is still in tough situation.

#### - Production

As the world's largest producer of pentaerythritol, China had a capacity of XXX t/a as of H1 2017. In 2016, China's pentaerythritol output was XXX tonnes, up by XXX% year on year. Specifically, the output volume of monopentaerythritol and dipentaerythritol increased in 2016.

In H1 2017, there were XXX active producers of pentaerythritol in China, among which, Jiangsu Kailin Ruiyang Chemical Co., Ltd. (Jiangsu Ruiyang) and Hubei Yihua Chemical Industry Co., Ltd. (Hubei Yihua) were two leading pentaerythritol producers in domestic market. They suspended some of their pentaerythritol production lines. In the same period, most specifications of pentaerythritol were in a normal sale but XXX% pentaerythritol was in a tight supply.

In 2017–2020, there will be no new pentaerythritol capacity expansion plans in China due to increasingly stringent environmental standards and low profits; besides, the pentaerythritol output is expected to decrease slowly.

#### - Consumption

In China, pentaerythritol is mainly consumed in the production of alkyd resin, polyurethane (PU), synthetic lubricant, rosin pentaerythritol ester. In 2016, the consumption volume of pentaerythritol in alkyd resin, the key downstream product of pentaerythritol, was XXX tonnes. It is estimated that the demand from alkyd resin for pentaerythritol will decrease slowly in the future.

#### - Import and export

In 2016, China's export volume of pentaerythritol fell to XXX tonnes in 2016, down by XXX% year on year, while its import volume of pentaerythritol rose to XXX tonnes in 2016, up by XXX% year on year.

The US, Taiwan and South Korea were the three largest export destinations of China's pentaerythritol by volume, together accounting for more than XXX% of the national total export volume in 2016, while Sweden, Germany and Japan were the three largest import origins of pentaerythritol from China by volume, together accounting for more than XXX% of the national total import volume.



#### 4. What is in the report

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##### 2.1 Supply of major raw materials of pentaerythritol

Major raw materials for pentaerythritol production in China include methanol, formaldehyde, acetaldehyde, sodium hydroxide and sulfuric acid. These raw materials are fairly abundant in China, so the production of pentaerythritol is more affected by its demand and price, but is less affected by the supply of its raw materials.

Table 2.1-1 Unit consumption of major raw materials for pentaerythritol production in China

Raw material	Specification	Unit consumption, kg/t
Methanol	XXX	XXX
Formaldehyde	XXX	XXX
Acetaldehyde	XXX	XXX
Sodium hydroxide	XXX	XXX
Sulfuric acid	XXX	XXX

Source: CCM

...

##### 2.2 Price of pentaerythritol

- Price of monopentaerythritol

Figure 2.2-1 Ex-works price of monopentaerythritol in China, April 2011–July 2017



Source: CCM

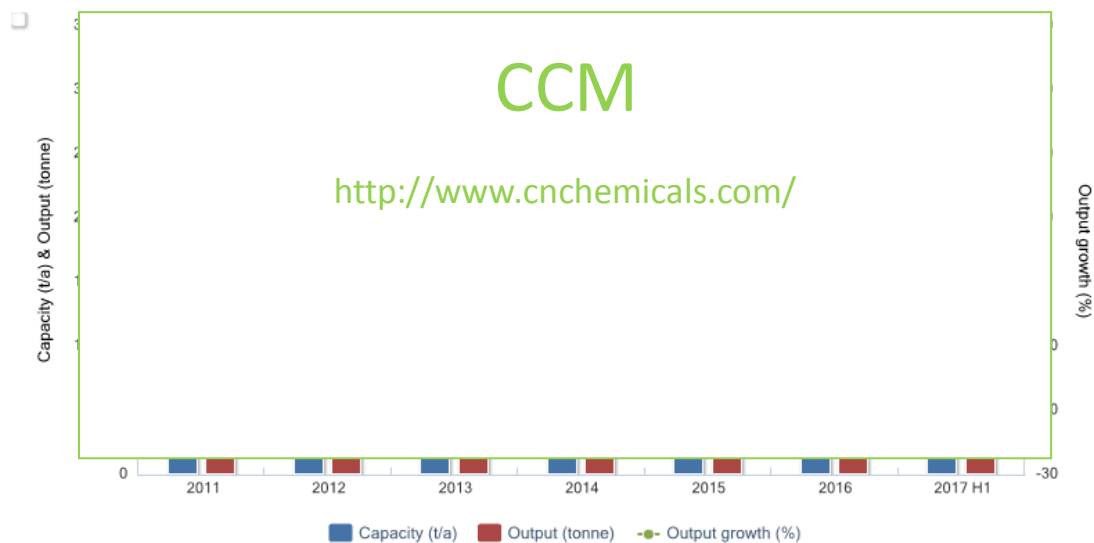
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## 2.4 Production of pentaerythritol

In H1 2017, the capacity of pentaerythritol in China was XXX t/a, down by XXX% compared with that in 2016. Although the market for pentaerythritol had improved in 2016, the annual output of pentaerythritol increased slightly, up by XXX% compared with that in 2015 due to high production cost, low profit, weak downstream market and increasing environmental pressure.

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Figure 2.4-1 Capacity and output of pentaerythritol in China, 2011–H1 2017



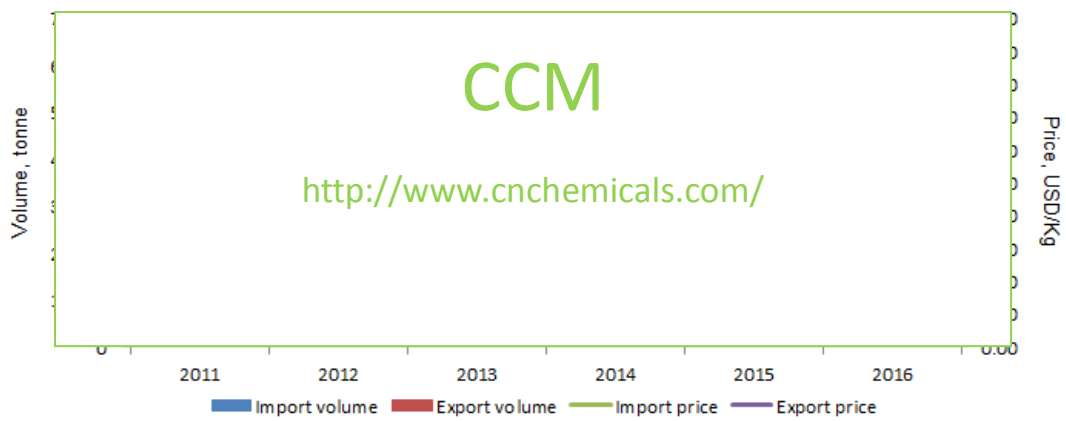
Source: CCM

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## 3.1 Import and export of pentaerythritol, 2015–2016

In 2016, China's export volume of pentaerythritol fell to XXX tonnes, down by XXX%, while its import volume of that rose to XXX tonnes, up by XXX%. At the same time, the average export price of pentaerythritol dropped from USDXXX/kg to USDXXX/kg, while the average import price of that rose from USDXXX/kg to USDXXX/kg.

Figure 3.1-1 China's imports and exports of pentaerythritol, 2011–2016



Source: China Customs

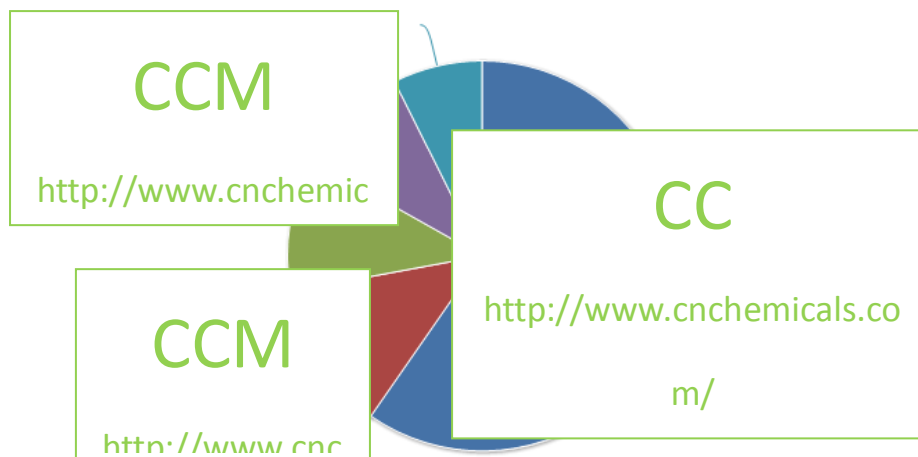
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#### 4.1 Consumption pattern

In China, pentaerythritol is mainly consumed in the production of alkyd resin, polyurethane (PU), synthetic lubricant, rosin pentaerythritol ester, etc.

Figure 4.1-1 Apparent consumption of pentaerythritol in China by end use segment, 2016

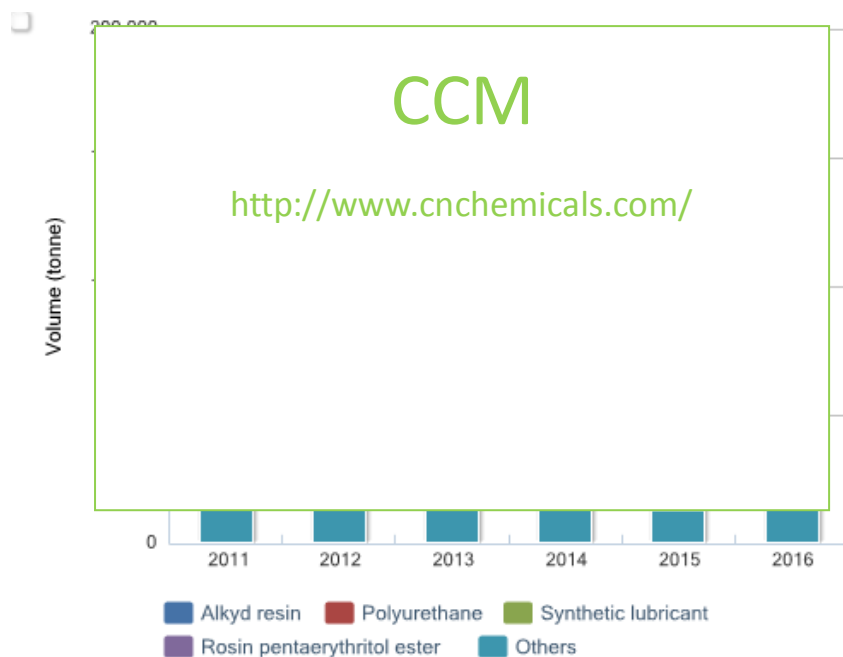
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Source: CCM

## 4.2 Consumption in major end use segments

Figure 4.2-1 Apparent consumption of pentaerythritol in China by end use segment, 2011–2016



Source: CCM

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### 7.1.1 Jiangsu Kailin Ruiyang Chemical Co., Ltd.

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Table 7.1.1-1 Capacity and output of pentaerythritol in Jiangsu Ruiyang, 2011–H1 2017

Year	2011	2012	2013	2014	2015	2016	H1 2017
Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

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