CCM Data & Business Intelligence

China Pentaerythritol Market Research 2025

The Twenty-first Edition

July 2025

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2. Approach for this report

- Methodology

The report is drafted by diverse methods as follows:

X) 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 were made with Chinese pentaerythritol suppliers regarding market information such as key producers, key end-users, production and export and so on.

X) 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

X) Internet

CCM contacted with players in this industry through BXB 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 analyse the data and have conclusions drawn.

- Unit

Tonne: equals to metric ton in this report

/t: per tonne

t/a: tonne/annual, tonne per year

USD: US dollar, currency unit in the US

RMB: currency unit in China, also named yuan

Source:The People's Bank of China

3. Executive summary

Facing with increasingly stringent environmental standards, high production costs, fierce competition and other factors, China's pentaerythritol industry structure has been continuously optimized and upgraded.

- Production

As the world's largest producer of pentaerythritol, China had XXX,XXX t/a production capacity as of XXXX. In XXXX, China's pentaerythritol output was XXX,XXX tonnes, up X.X% year on year.

In XXXX, there were ten active pentaerythritol producers in China, among which, Hubei Yihua Chemical Industry Co., Ltd. (Hubei Yihua) and Chifeng Ruiyang Chemical Co., Ltd. (Chifeng Ruiyang) were two leading pentaerythritol producers in the domestic market.

- Consumption

In China, pentaerythritol is mainly consumed in the production of alkyd resin, polyurethane, synthetic lubricant, rosin pentaerythritol ester. In XXXX, pentaerythritol consumption in the key downstream sector alkyd resin was XX,XXX tonnes. It is estimated that the demand from alkyd resin will shrink slowly in the future.

- Import and export

In XXXX, China's import volume of pentaerythritol was X,XXX tonnes, down XX.X% YoY, while the export volume was XX,XXX tonnes, down X.X% year on year. Specifically, China exported XX,XXX tonnes of monopentaerythritol, with year-on-year decreased of X.X%, and X,XXX tonnes of dipentaerythritol, with year-on-year increases and XX.X%.

South Korea, Brazil and Taiwan Province were the three largest export destinations of China's pentaerythritol by volume, together accounting for XX.X% of the national total export volume in XXXX. Taiwan Province was the top import origin of pentaerythritol to China by volume, followed by Sweden and Germany. China's import volume from Taiwan Province accounted for XX.X% of the national total in XXXX.

4. What is in the report?

Note: Key data/information in this sample page is hidden, while in the report it is not.

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1.1 Pentaerythritol development in the world

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- Price

Till XXXX, the global price of pentaerythritol increased year by year and in XXXX, the price hit a record high of USDX,XXX/t. However, the financial crisis that erupted in late XXXX brought down the price.

In XXXX, Perstorp raised the price of its pentaerythritol many times.

In XXXX, the global price of pentaerythritol continued to increase mainly because of rising raw material costs. During Dec. XXXX–March XXXX, the price of Perstorp's pentaerythritol in Asian-Pacific region went up by USDXXX/t. In XXXX, the price gradually declined.

In XXXX–XXXX, global price of pentaerythritol witnessed a significant rise, given increased raw materials prices. In addition, rising demand from downstream sectors drove up the price of pentaerythritol. Perstorp, for instance, increased the price of its pentaerythritol in Europe, Middle East and Africa by USDXXX/t since the beginning of July XXXX. And pentaerythritol price in North America rose from USDX,XXX/t in April XXXX to about USDX,XXX/t in Dec. XXXX.

In QX XXXX, global pentaerythritol prices continued to increase. However, in HX XXXX, the price was on a continuous decline, mainly due to lower cost of methanol, and the affected demand against the energy crisis caused by the Russia-Ukraine conflict.

In XXXX, due to the decline in upstream raw material prices and depressed demand in downstream ink and coating industries, coupled with high inflation suppressing investment and consumption, the global price of pentaerythritol was generally on a downward trend.

In XXXX, due to supply-side capacity contraction and rising raw material costs, coupled with growing demand for high-end products, the market was thrown out of balance, which drove up pentaerythritol price.

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1.3 Product types of pentaerythritol

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- Tripentaerythritol

Tripentaerythritol is used for antifoaming coating, lubricant for vehicle and motors. Up till May XXXX, there were only two tripentaerythritol producers in China—Chifeng Ruiyang (XXX t/a) and Puyang Yongan Chemical Co., Ltd. (XXX t/a).

The optimal feedstock ratio for the preparation of tripentaerythritol is:
Formaldehyde (XX%–XX%): acetaldehyde: caustic soda = X.X:X:X.XX–X.XX (mol/mol)

The total yield is XX% min., including X% min. of tripentaerythritol.

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2.2 Price of pentaerythritol

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- Price of dipentaerythritol

In June XXXX, due to the COVID-XX pandemic, downstream demand shrank, and the ex-works prices of XX% and XX% dipentaerythritol declined to USDX,XXX/t and USDX,XXX/t respectively.

As the global economy recovered, the demand for dipentaerythritol increased and the prices recorded in June XXXX returned to the level seen in XXXX–XXXX. This upward trend continued as of July XXXX.

In HX XXXX, due to worsened COVID-XX situation in China, downstream demand for dipentaerythritol declined. Since XXXX, despite China's deregulation of the COVID-XX, the downstream demand for dipentaerythritol has not been restored as expected. Until March XXXX, the price of dipentaerythritol continued to decline. From HX XXXX to June XXXX, due to supply - demand imbalance, dipentaerythritol

prices rose significantly, exceeding USDX,XXX/t.

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2.3 Geographical distribution of producers

Figure 2.3-1 Geographical distribution of pentaerythritol producers in China, 2024

Note:Hubei Yihua has two production bases producing pentaerythritol; one is located in Yidu City of Hubei Province and the other in Wuhai City of Inner Mongolia Autonomous Region.
Source:CCM

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2.5 Summary of Chinese manufacturers and five major producers of pentaerythritol

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Table 2.5-1 Average market price of ethanol at the locations of top two producers, 2024

No.	Producer	Location	Average market price, USD/t
X	XXXXX XXXXX	XXXXX	XXXXX
X	XXXXXXX XXXXXXX	XXXXX XXXXXXXX	XXXXX

Note:The raw material of Chifeng Ruiyang's acetaldehyde is ethanol, which is made by purchased corn. Average market price of corn in Inner Mongolia was USD0.39/kg in 2023.
Source:CCM

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5.2.2 Analysis on export

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Table 5.2.2-1 China's exports of pentaerythritol by destination, 2024

No.	Destination	Export volume, tonne	Export value, USD	Export price, USD/t
X	XXXXX XXXXX	XXXXX	XXXXXXXXXX	XXXXX
X	XXXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXXXXX XXXXXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXXXXXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXXXXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXXXXXXXX	XXXXX	XXXXXXXXX	XXXXX
X	XXX XXXXXX XXXX XXXXXXXX	XXXXX	XXXXXXXXX	XXXXX
XX	XXX XX	XXXXX	XXXXXXXXX	XXXXX
XXXXXX		XXXXXX	XXXXXXXXXX	XXXXX
XXXXX		XXXXXX	XXXXXXXXXX	XXXXX

Source:China Customs & CCM

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6.2 Consumption in major end-use segments

The consumption of pentaerythritol continued to decline in XXXX–XXXX, during which the market was relatively weak, especially in XXXX–XXXX when the COVID-XX affected on a large scale. In XXXX–XXXX, the consumption of pentaerythritol stayed below XXX,XXX tonnes, as the recovery of market demand was slow. However, in XXXX, pentaerythritol consumption in China rose to XXX,XXX tonnes.

To be specific, consumption of pentaerythritol saw continuous increases in PU, rosin pentaerythritol ester and synthetic lubricant sectors in XXXX–XXXX, while the volumes in alkyd resin and other fields fluctuated overall. As synthetic lubricant, rosin pentaerythritol ester and PU have higher quality requirements for pentaerythritol, domestic pentaerythritol has been gradually developing towards higher-end of the spectrum.

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9.2 Hubei Yihua Chemical Industry Co., Ltd.

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Table 9.2-1 Quotation of pentaerythritol in Hubei Yihua, 2020–2025, USD/t

Specification	Monopentaerythritol		Dipentaerythritol	
	95%	98%	85%	90%
XXXX XXXX	XXXXX	XXXXX	XXXXX	XXX
XXXX XXXX	XXXXX	XXX	XXX	XXX
XXXX XXXX	XXXXX	XXX	XXX	XXX
XXX XXXX	XXXXX	XXXXX	XXXXX	XXX
XXXXX XXXX	XXXXX	XXXXX	XXX	XXX
XXXXX XXXX	XXXXX	XXXXX	XXX	XXX

Source:CCM

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9.3 Puyang Pengxin Chemical Co., Ltd.

Address: West of Shengli Road, Puyang City, Henan Province XXXXXX, P. R. China

Tel.: +XX-XXX-XXXXXXX; +XX-XXX-XXXXXXX; +XX-XXX-XXXXXXX

Fax: +XX-XXX-XXXXXXX

E-mail: pengxinchemical@outlook.com

Person to contact: Mr. Zhou

Website: www.pyspx.com

- Company background

Puyang Pengxin Chemical Co., Ltd. (Puyang Pengxin), established in XXXX, has total assets of RMBXXX million and over XXX employees, covering an area of XX,XXX mX.

Puyang Pengxin's main capacity include XX,XXX t/a pentaerythritol, X,XXX t/a dipentaerythritol, XXX,XXX t/a formaldehyde, and XX,XXX t/a sodium formate. It is also among the first batch of revisors of national standards for pentaerythritol and formaldehyde, as well as industrial standards for dipentaerythritol.

In Aug. XXXX, Puyang Pengxin became a co-founder of the Professional Committee of Polyol under the framework of the Formaldehyde Industry Association to enlarge the production scale, advance technology and improve the comprehensive strength of the whole industry.

Puyang Pengxin has been certified to ISO XXXX Quality Management System and ISO XXXXX Environmental Management System.

- Pentaerythritol

Puyang Pengxin mainly produces XX%, XX% and XX% monopentaerythritol and XX% and XX% dipentaerythritol. In HX XXXX, it mainly produces XX%, XX% monopentaerythritol and XX% dipentaerythritol.

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9.5 Bazhou Shengfang United Chemical Co., Ltd.

Address: Xinzhang Industrial Zone, Shengfang Town, Bazhou City, Hebei Province XXXXXX, P. R. China

Tel.: +XX-XXX-XXXXXXX, XXXXXXXXXXX

Fax: +XX-XXX-XXXXXXX

Person to contact: Mr. Li

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9.6 Yunnan Yuntianhua Co., Ltd.

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Table 9.6-1 Capacity and output of pentaerythritol in Yunnan Yuntianhua, 2020–H1 2025E

Year	2020	2021	2022	2023	2024	H1 2025E
XXXXXXXXX XXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXXX XXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXX

Note:1. Dipentaerythritol and tripentaerythritol are byproducts during the production of monopentaerythritol. The capacity of monopentaerythritol equals that of pentaerythritol, and the output of dipentaerythritol is determined by that of monopentaerythritol.2. The output in H1 2025 is an estimate.
Source:CCM

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9.8 Puyang Yongan Chemical Co., Ltd.

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Table 9.8-1 Capacity and output of pentaerythritol in Puyang Yongan, 2020–H1 2025E

Year	2020	2021	2022	2023	2024	H1 2025E
XXXXXXXXX XXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXXX XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX

Note:1. Dipentaerythritol and tripentaerythritol are byproducts during the production of monopentaerythritol. The capacity of monopentaerythritol equals that of pentaerythritol, and the output of dipentaerythritol and tripentaerythritol is determined by that of monopentaerythritol.2. The output in H1 2025 is an estimate.

Source:CCM

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9.9 Shandong Xinzhiyuan Chemical Co., Ltd.

Address: Caoxian Chemical Industry Park, Pulianji Town, Caoxian County, Heze City, Shandong Province XXXXXX, P. R. China

Tel.: +XX-XXXXXXXXXX

Person to contact: Mr. Zhang

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9.10 Ningxia Ningshun New Material Technology Co., Ltd.

Address: Ningdong Chemical New Material Park, Yinchuan City, Ningxia Hui Autonomous Region XXXXXX, P. R. China

Tel.: +XX-XXXXXXXXXX; +XX-XXX-XXXXXXX

Person to contact: Mr. Wu

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