

China Pentaerythritol Market Research

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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, 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 t/a production capacity as of 2021. In 2021, China's pentaerythritol output was XXX tonnes, up XXX year on year, and the output of dipentaerythritol increased by XXX year on year.

In 2021, there were twelve 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 domestic market. Baoding Guoxiu Chemical Industry Co., Ltd. was still in suspension because its relocation has not been completed yet.

- Consumption

In China, pentaerythritol is mainly consumed in production of alkyd resin, polyurethane (PU), synthetic lubricant, rosin pentaerythritol ester. In 2021, pentaerythritol consumption in the key downstream sector alkyd resin was XXX tonnes. It is estimated that the demand from alkyd resin will decrease slowly in the future.

- Import and export

In 2021, China's import volume and export volume of pentaerythritol were XXX tonnes and XXX tonnes respectively, up by XXX and XXX year on year respectively. China's export volume of dipentaerythritol was XXX tonnes, up by XXX year on year.

South Korea, Brazil and The US were the three largest export destinations of China's pentaerythritol by volume, together accounting for XXX of the national total export volume in 2021. Sweden was the top import origin of pentaerythritol to China by volume, followed by Taiwan Province and Germany. China's import volume from Sweden accounted for XXX of the national total in 2021.

4. What is in the report

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2 Production of pentaerythritol in China

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 much more affected by its demand and price than 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

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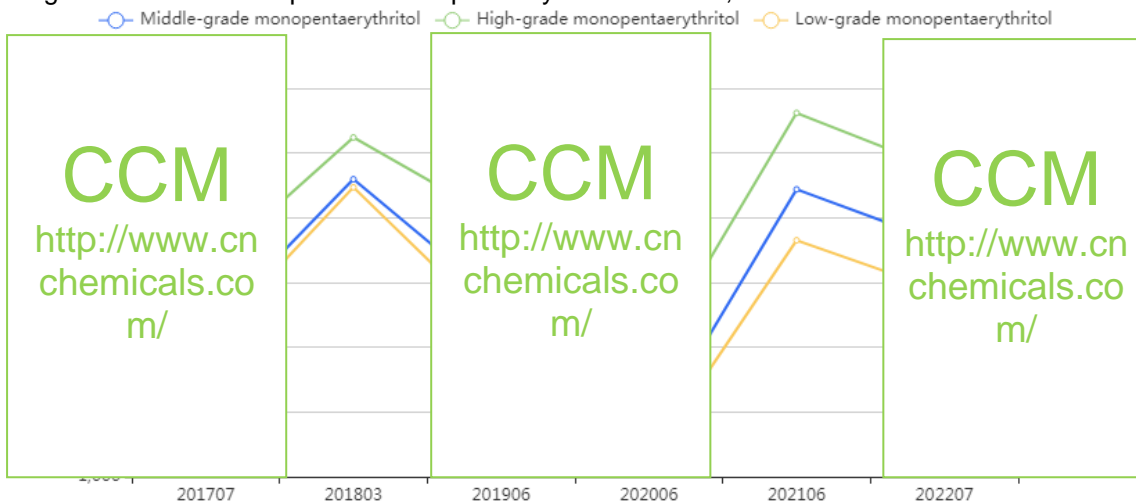
2.3 Price of pentaerythritol

- Price of monopentaerythritol

From June 2017 to July 2022, China's ex-works price of monopentaerythritol substantially fluctuated but basically remained under XXX.

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Figure 2.3-1 Ex-works price of monopentaerythritol in China, 2017–2022

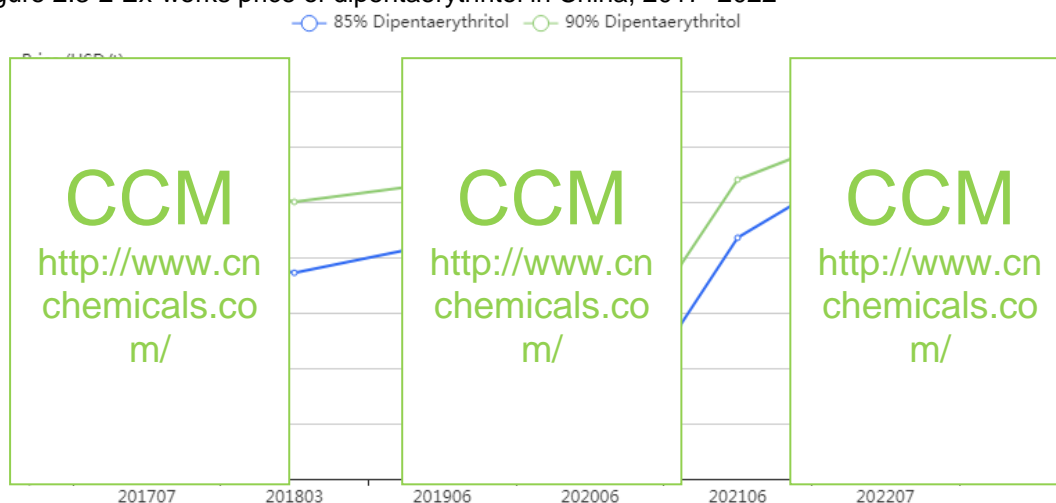


Source: CCM

- Price of dipentaerythritol

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Figure 2.3-2 Ex-works price of dipentaerythritol in China, 2017–2022



Source: CCM

...

2.4 Geographical distribution of producers

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Table 2.4-1 Capacity and output of pentaerythritol producers in China, 2021

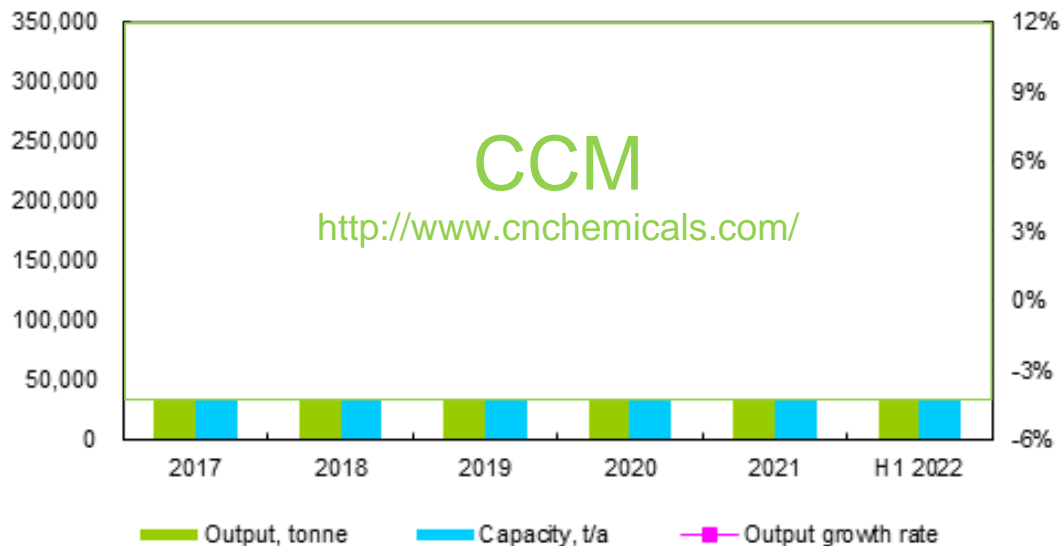
Producer	Capacity, t/a	Output, tonne		
		Mono-	Di-	Tri-
Chifeng Ruiyang	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX

Note: The capacity of pentaerythritol in Chifeng Ruiyang is the sum of monopentaerythritol capacity and dipentaerythritol capacity.
Source: CCM

2.5 Production of pentaerythritol

...

Figure 2.5-1 Capacity and output of pentaerythritol in China, 2017–H1 2022



Source: CCM

Table 2.5-1 Output of monopentaerythritol, dipentaerythritol and tripentaerythritol in China, 2017–H1 2022, tonne

Year	Monopentaerythritol	Dipentaerythritol	Tripentaerythritol
2017	XXX	XXX	XXX
2018	XXX	XXX	XXX
2019	XXX	XXX	XXX
2020	XXX	XXX	XXX
2021	XXX	XXX	XXX
H1 2022	XXX	XXX	XXX

Source: CCM

...

There were XXX dipentaerythritol producers in China, with a total capacity of XXX t/a in 2021. Dipentaerythritol used to be merely a by-product of monopentaerythritol, but has become a critical part of manufacturers' product portfolio now.

...

Table 2.5-4 Capacity and output of dipentaerythritol producers in China, 2019–H1 2022

No.	Producer	Capacity H1 2022, t/a	Output, tonne			
			2019	2020	2021	H1 2022
1	Chifeng Ruiyang	XXX	XXX	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX	XXX	XXX
Total		XXX	XXX	XXX	XXX	XXX

Note: Hubei Yihua has two production bases producing pentaerythritol, including Hubei Yihua (Yidu) and Inner Mongolia Yihua.

Source: CCM

...

3 Production technology of pentaerythritol in China

3.1 Brief introduction and comparison of different production pathways/methods

Technology pathway of pentaerythritol

According to the species of condensing agent, the preparation for pentaerythritol can be classified into XXX and XXX.

...

Table 3.1-1 Monopentaerythritol technology source of Chinese producers, 2021

No.	Producer	Capacity '21, t/a	Pathway	Technology source
1	Hubei Yihua	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX

Source: CCM

...

4 Industry analysis in China

4.1 SWOT analysis

Table 4.1-1 SWOT analysis of Hubei Yihua's development in 2021

Hubei Yihua	Strength	Weakness
	XXX	XXX
Opportunity	SO	WO
XXX	XXX	XXX
Threat	ST	WT
XXX	XXX	XXX

Source: CCM

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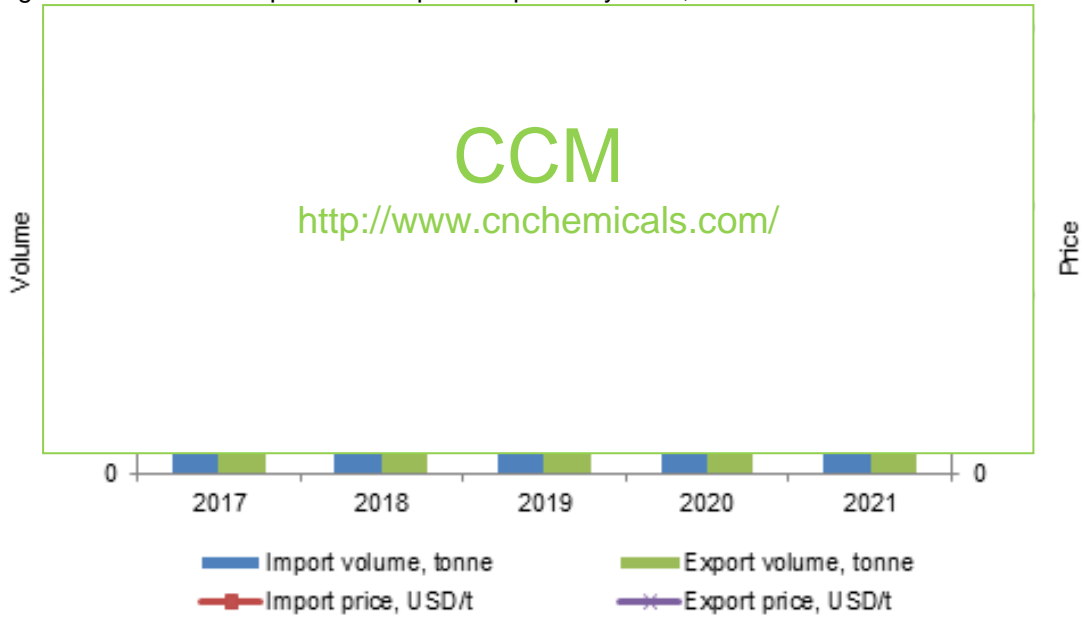
5 Import and export analysis

5.2 Import and export of pentaerythritol, 2021

China is a net exporter of pentaerythritol. Annual export of pentaerythritol from China fell within the range of XXX tonnes–XXX tonnes in 2017–2019. The export volume dropped by about XXX year on year in 2020, due to sluggish overseas demand influenced by COVID-19. However, it surged to XXX tonnes in 2021 with recovered overseas demand.

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Figure 5.2-1 China's imports and exports of pentaerythritol, 2017–2021



Source: China Customs & CCM

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Figure 5.2-3 Top ten export destinations of pentaerythritol from China by volume, 2021



Source: China Customs & CCM

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6 Consumption of pentaerythritol in China

6.1 Consumption pattern

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Figure 6.1-1 Apparent consumption of pentaerythritol in China by end use segment, 2021



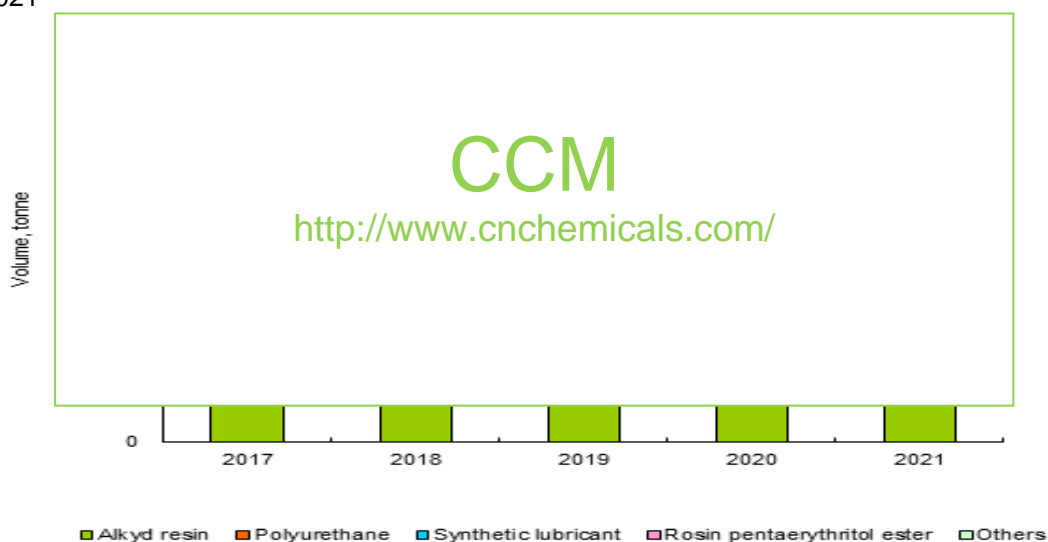
Source: CCM

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6.2 Consumption in major end use segments

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Figure 6.2-1 Apparent consumption of pentaerythritol in China by end-use segment, 2017–2021



Source: CCM

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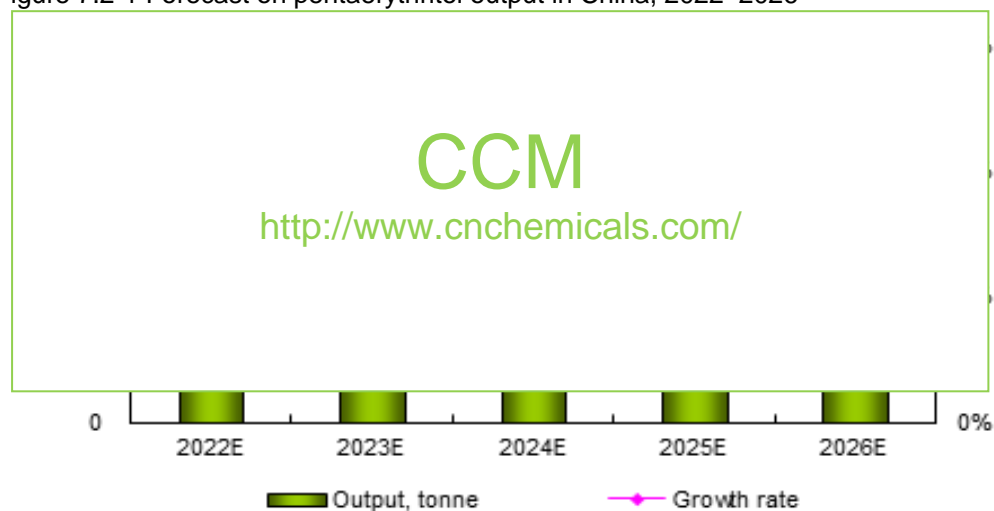
7 Future forecast

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7.2 Outlook for pentaerythritol industry, 2022–2026

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Figure 7.2-1 Forecast on pentaerythritol output in China, 2022–2026



Source: CCM

...

9 Profile of pentaerythritol manufacturers

9.1 Active manufacturers

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9.1.2 Hubei Yihua Chemical Industry Co., Ltd.

Table 9.1.2-2 Capacity and output of pentaerythritol in Hubei Yihua, 2017–H1 2022

Year	2017	2018	2019	2020	2021	H1 2022
Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX
Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX

Note: 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.

Source: CCM

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