

# Survey of Fluor Polymer in China

The Second Edition

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## Contents

Executive summary .....	1
Methodology .....	2
1 Brief introduction to fluor polymer .....	4
2 Fluor resin.....	5
2.1 Overview .....	5
2.2 Technology .....	5
2.3 Raw materials.....	6
2.3.1 Fluorite .....	6
2.3.2 Anhydrous hydrogen fluoride (AHF) .....	8
2.3.3 Hydrochlorofluorocarbon-22 (HCFC-22) .....	10
2.3.4 Hexafluoropropylene (HFP) .....	13
2.4 Production and market situation of major products.....	15
2.4.1 Polytetrafluoroethylene (PTFE) .....	15
2.4.2 Polyvinylidene fluoride (PVDF).....	20
2.4.3 Fluorinated ethylene propylene (FEP).....	23
2.4.4 Perfluoroalkoxy alkane (PFA) .....	25
2.4.5 Ethylene tetrafluoroethylene (ETFE) .....	25
2.5 Development trend.....	26
3 Fluor rubber .....	27
3.1 Overview .....	27
3.2 Technology .....	27
3.3 Production and market situation of fluor rubber .....	28
3.4 Development trend .....	30

### LIST OF TABLES

Table 2.3.1-1 Imports and exports of fluorite ( $\text{CaF}_2 > 97\%$ ) in China, 2011–2016
Table 2.3.1-2 Imports and exports of fluorite ( $\text{CaF}_2 \leq 97\%$ ) in China, 2011–2016
Table 2.3.2-1 China's imports and exports of AHF, 2011–2016
Table 2.3.3-1 Capacity and output of major HCFC-22 producers in China, 2016
Table 2.3.3-2 China's exports of HCFC-22, 2014–2016
Table 2.3.4-1 Capacity and output of HFP major producers in China, 2016
Table 2.4.1-1 Capacity and output of major PTFE producers in China, 2016
Table 2.4.1-2 Imports and exports of PTFE in China, 2011–2016
Table 2.4.2-1 Capacity and output of major PVDF producers in China, 2016
Table 2.4.2-2 Imports and exports of other kinds of fluor polymers in China, 2011–2016
Table 2.4.3-1 Capacity and output of major FEP producers in China, 2016
Table 3.3-1 Capacity and output of major fluor rubber producers in China, 2016

### LIST OF FIGURES

Figure 2.3.1-1 Fluorite reserves in China, 2011–2016
Figure 2.3.1-2 Output of fluorite in China, 2011–2016
Figure 2.3.1-3 Monthly ex-works price of fluorite ( $\text{CaF}_2 > 97\%$ ) in China, Jan. 2013–Sept. 2017
Figure 2.3.2-1 Capacity and output of AHF in China, 2011–2016
Figure 2.3.2-2 Monthly ex-works price of AHF in China, Jan. 2013–Aug. 2017
Figure 2.3.3-1 Capacity and output of HCFC-22 in China, 2007–2016
Figure 2.3.3-2 Consumption of HCFC-22 in China by application, 2016
Figure 2.3.3-3 Monthly ex-works price of HCFC-22 in China, Jan. 2013–Aug. 2017
Figure 2.3.4-1 Capacity and output of of HFP in China, 2014–2016
Figure 2.3.4-2 Monthly ex-works price of HFP in China, Jan. 2017–Aug. 2017
Figure 2.4.1-1 Capacity and output of PTFE in China, 2011–2016
Figure 2.4.1-2 Apparent consumption of PTFE in China, 2011–2016
Figure 2.4.1-3 Monthly ex-works price of PTFE in China, Jan. 2013–Aug. 2017
Figure 2.4.2-1 Capacity and output of PVDF in China, 2011–2016
Figure 2.4.2-2 Monthly ex-works price of PVDF used in lithium-ion battery binder in China, Jan. 2017–Aug. 2017

Figure 2.4.3-1 Capacity and output of FEP in China, 2011–2016  
Figure 2.4.3-2 Monthly ex-works price of FEP in China, Jan. 2017–Aug. 2017  
Figure 3.3-1 Capacity and output of fluor rubber in China, 2011–2016  
Figure 3.3-2 Output and sales volume of automobile in China, 2011–20

## 1. Introduction

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

The key points of this report are listed as below:

- ✓ Fluor polymer development in China
- ✓ Production of fluor polymer in China
- ✓ Import and export analysis
- ✓ Consumption of fluor polymer in China
- ✓ Future forecast

## 2. Approach in 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 is done on the compilation and analysis of the obtained information. Where necessary, checks are made with all kinds of suppliers regarding market information such as key producers, key end-users, production, consumption, export, demand and so on.

### 2) Telephone interviews

CCM International has carried out extensive telephone interviews in order to track the actual market situation of the fluorine industry in China.

Interviewees cover:

- Major producers of fluor polymer
- Major producers of fluor rubber
- Major producers of semi-finished products
- Major producers of finished products
- Major traders
- Suppliers of fluorspar, AHF, HCFC-22 and HFP
- Associations

### 3) Network search

CCM employs a network to contact industry participants by using B2B website and software.

#### 4) Data processing and presentation

The data collected and compiled is variously sourced from:

- CCM's database
- Published articles from periodicals, magazines, journals and third party databases
- Statistics from governments and international institutes
- Telephone interviews with domestic producers, joint ventures, service suppliers and government agencies
- Third-party data providers
- Customs statistics
- Comments from industrial experts
- Information from the Internet

The data is combined and cross-checked to ensure that this report is as accurate and methodologically sound as possible. Throughout the process, a series of discussions are held within CCM to systematically analyse the data and draw appropriate conclusions.

### **3. Executive summary**

There are two main varieties of fluor polymer in China, including fluor resin and fluor rubber. The output of fluor polymer was more than XXX tonnes in China in 2016. The fluor polymer industry, especially fluor resin, is developing very quickly in China but facing many problems such as the inefficient technology and the lack of high-end products.

The output of fluor resin was about XXX tonnes in China in 2016. The product is widely used in coatings, sealing, architecture, electronic and other fields.

There were XXX enterprises producing polytetrafluoroethylene (PTFE) in China in 2016, and China has become one of the most important producers of PTFE in the world. The production of PTFE accounted for about XXX% of the production of fluor resin in China, with a capacity of XXX t/a and an output of XXX tonnes in 2016.

Polyvinylidene fluoride (PVDF) and fluorinated ethylene propylene (FEP) industries in China have developed quickly in the past few years. The capacities of PVDF and FEP were XXX t/a and XXX t/a in 2016 respectively. There were about XXX enterprises producing PVDF and XXX enterprises producing FEP in China in 2016. PVDF coating is the most important application field of PVDF, and most FEP is mainly used in communications cables and wires.

Although perfluoroalkoxy alkane (PFA) and ethylene tetrafluoroethylene (ETFE) markets are still small, these two fluor resins have already started batch production in 2016. Some products

of PFA and ETFE still need to be imported, mainly from Japan and the US. PFA and ETFE are mainly used in high-end market and have good prospects for development.

In recent years, along with the development of automobile and petrochemical industry, the fluor rubber develops rapidly with an output of XXX tonnes in 2016. However, the lack of varieties and backward processing technology have constained the development of the fluor rubber industry in China.

#### 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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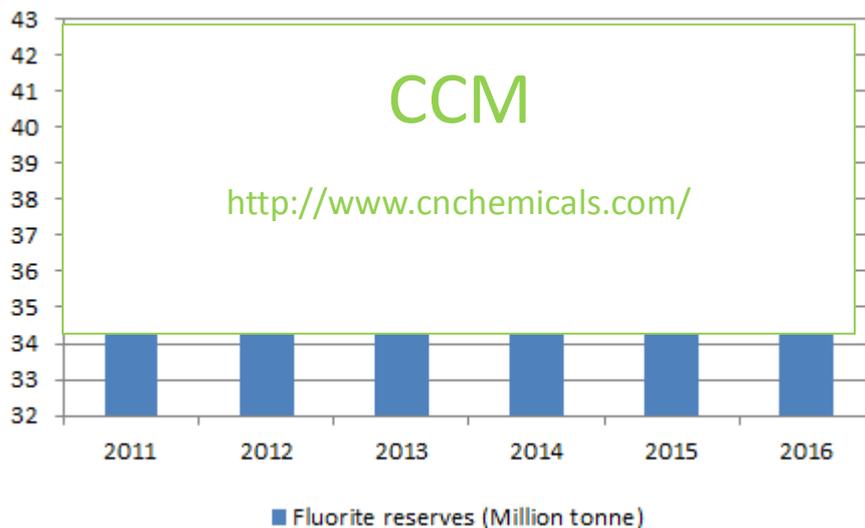
### 2.3 Raw materials

#### 2.3.1 Fluorite

##### - Production of fluorite in China

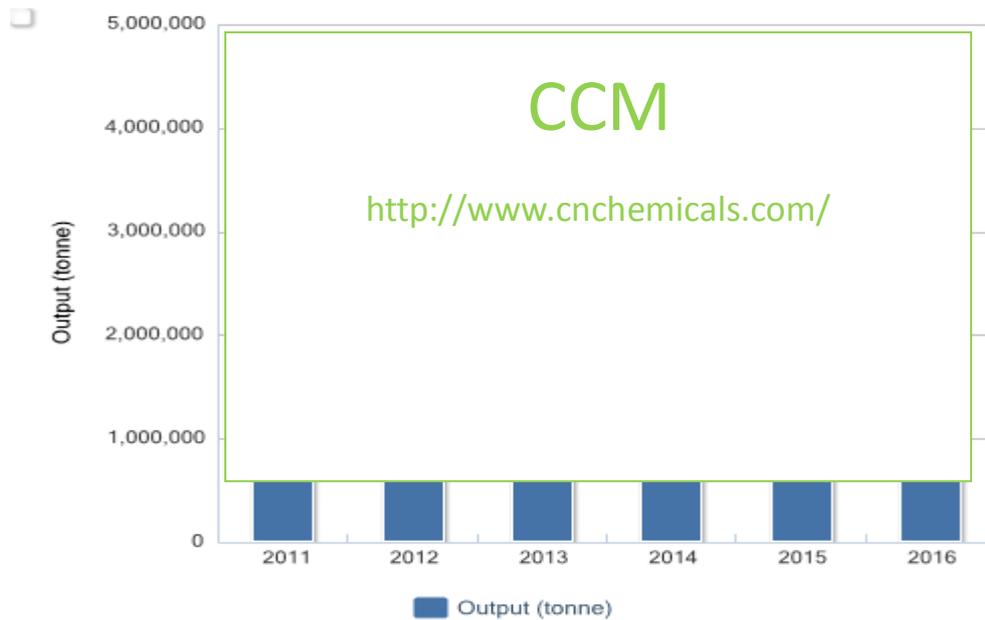
From 2011 to 2016, fluorite reserves in China had been increasing yearly at a CAGR of XXX%. In 2016, the identified fluorite reserves in the country was XXX million tonnes, and the fluorite production was generally stable during 2011–2016.

Figure 2.3.1-1 Fluorite reserves in China, 2011–2016



Source: CCM

Figure 2.3.1-2 Output of fluorite in China, 2011–2016



Source: CCM

#### - Imports and exports of fluorite in China

In 2016, China's import volume of fluorite ( $\text{CaF}_2 > 97\%$ ) was XXX tonnes, down by XXX% year on year; while the export volume was XXX tonnes, up by XXX% year on year. In addition, from 2011 to 2015, the export volume of fluorite ( $\text{CaF}_2 > 97\%$ ) decreased year by year at a CAGR of XXX%.

 Table 2.3.1-1 Imports and exports of fluorite ( $\text{CaF}_2 > 97\%$ ) in China, 2011–2016

Year	Import		Export	
	Volume, tonne	Value, USD	Volume, tonne	Value, USD
2011	XXX	XXX	XXX	XXX
2012	XXX	XXX	XXX	XXX
2013	XXX	XXX	XXX	XXX
2014	...	...	...	...
2015	...	...	...	...
2016	...	...	...	...

Note:  $\text{CaF}_2 > 97\%$ : containing more than 97% calcium fluoride by weight

Source: China Customs & CCM

In 2016, China's import volume of fluorite ( $\text{CaF}_2 \leq 97\%$ ) was XXX tonnes, down by XXX% year on year; while the export volume was XXX tonnes, up by XXX% year on year. In addition, from 2012 to 2016, the export volume of fluorite ( $\text{CaF}_2 \leq 97\%$ ) remained stable.

Table 2.3.1-2 Imports and exports of fluorite ( $\text{CaF}_2 \leq 97\%$ ) in China, 2011–2016

Year	Import		Export	
	Volume, tonne	Value, USD	Volume, tonne	Value, USD
2011	XXX	XXX	XXX	XXX
2012	XXX	XXX	XXX	XXX
2013	...	...	...	...
2014	...	...	...	...
2015	...	...	...	...
2016	...	...	...	...

Note:  $\text{CaF}_2 \leq 97\%$ : containing 97% or less than 97% calcium fluoride by weight

Source: China Customs & CCM

### - Price of fluorite in China

From January 2014 to March 2016, the ex-works price of fluorite ( $\text{CaF}_2 > 97\%$ ) in China fell sharply due to overcapacity, with the lowest ex-works price being USDXXX/t in March 2016 during Jan. 2014–Aug. 2017. Since March 2016, the ex-works price has risen in general due to the short supply of the product. Specifically, because of the environmental inspection, equipment overhaul and other reasons, fluorite producers suspended their production commonly; at the same time, there was a great demand for refrigerant from the downstream.

From June to August 2017, the ex-works price of fluorite ( $\text{CaF}_2 > 97\%$ ) decreased, mainly due to the decline in demand from downstream refrigerant manufacturers and the oversupply of fluorite.

 Figure 2.3.1-3 Monthly ex-works price of fluorite ( $\text{CaF}_2 > 97\%$ ) in China, Jan. 2013–Sept. 2017


Note:  $\text{CaF}_2 > 97\%$ : containing more than 97% calcium fluoride by weight

Source: CCM

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## 2.4 Production and market situation of major products

### 2.4.1 Polytetrafluoroethylene (PTFE)

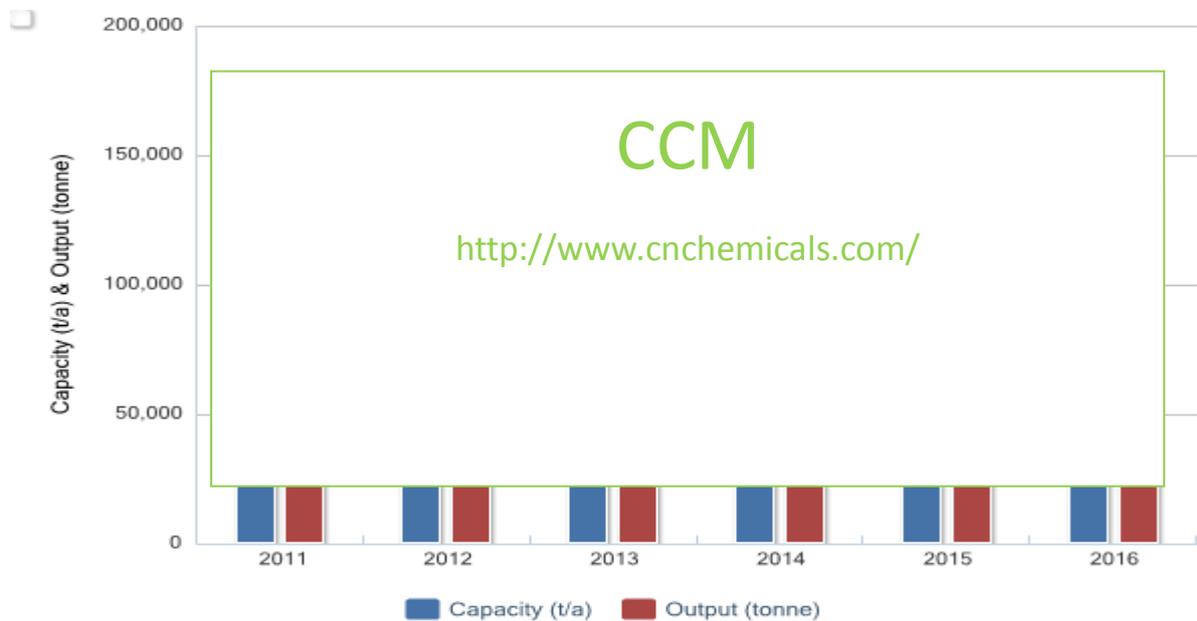
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#### - Production of PTFE in China

China has become one of most important producers of PTFE in the world, with the total capacity of XXX t/a and output of XXX tonnes in 2016. The output of PTFE in China had increased from XXX tonnes in 2012 to XXX tonnes in 2016, with a CAGR of XXX%. And the capacity of PTFE in China had increased from XXX t/a in 2011 to XXX t/a in 2016, with a CAGR of XXX%.

...

Figure 2.4.1-1 Capacity and output of PTFE in China, 2011–2016



Source: CCM

There are about XXX PTFE producers in China and most of them are located in East China. More than XXX% of the PTFE capacity is concentrated in Shandong Province and Jiangsu Province, followed by Zhejiang Province and Sichuan Province. In 2016, the domestic capacity and output of PTFE mainly were concentrated in the six top enterprises, which accounted for XXX% and XXX% of total ones respectively.

Table 2.4.1-1 Capacity and output of major PTFE producers in China, 2016

No.	Producer	Capacity (t/a)	Output (tone)	Operating rate
1	XXX	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX
3	XXX	XXX	XXX	XXX
4	XXX	XXX	XXX	XXX
5	XXX	XXX	XXX	XXX
6	XXX	XXX	XXX	XXX
7	...	...	...	...
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...
11	...	...	...	...
12	...	...	...	...
13	...	...	...	...
Others		...	...	...
<b>Total</b>		...	...	...

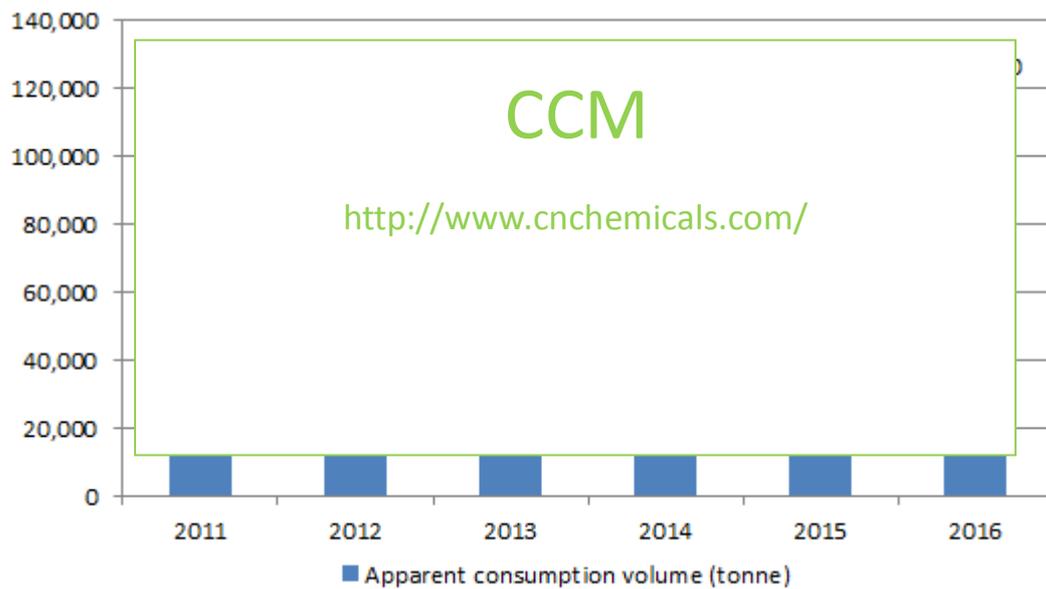
Source: CCM

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#### - Consumption of PTFE in China

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Figure 2.4.1-2 Apparent consumption of PTFE in China, 2011–2016



Note: Apparent consumption=Output+Import-Export, rounded to hundred

Source: CCM

#### - Imports and exports of PTFE in China

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Table 2.4.1-2 Imports and exports of PTFE in China, 2011–2016

Year	Import			Export		
	Volume, tonne	Value, USD	Price, USD/kg	Volume, tonne	Value, USD	Price, USD/kg
2011	XXX	XXX	XXX	XXX	XXX	XXX
2012	XXX	XXX	XXX	XXX	XXX	XXX
2013	XXX	XXX	XXX	XXX	XXX	XXX
2014	XXX	XXX	XXX	XXX	XXX	XXX
2015	XXX	XXX	XXX	XXX	XXX	XXX
2016	XXX	XXX	XXX	XXX	XXX	XXX

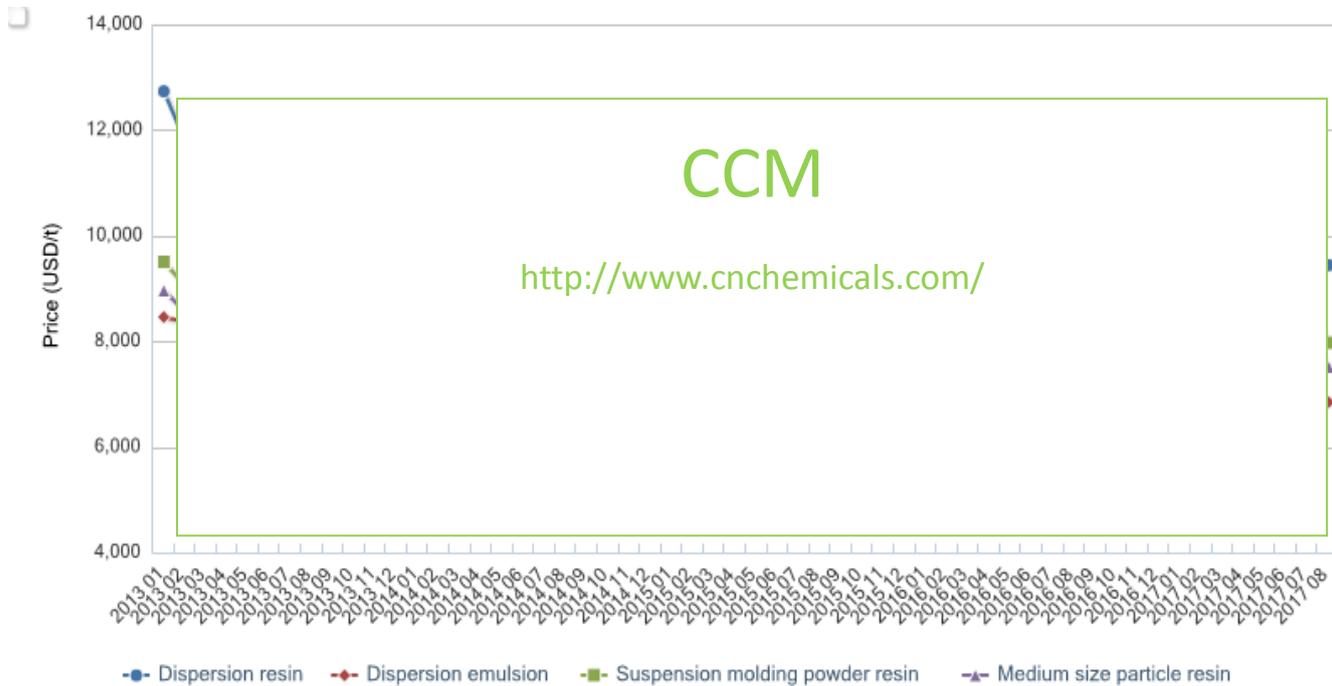
Source: China Customs & CCM

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### - Price of PTFE in China

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Figure 2.4.1-3 Monthly ex-works price of PTFE in China, Jan. 2013–Aug. 2017



Source: CCM

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**If you want more information, please feel free to contact us**

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