

Survey of Fluorohydrocarbon in China

The Fourth Edition

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Contents

Executive summary	1
Introduction and methodology.....	2
1 Development of fluorohydrocarbon.....	5
1.1 Overview of fluorohydrocarbon industry in China.....	6
1.1.1 Overview of HCFCs in China	12
1.1.2 Overview of HFCs in China.....	13
1.2 Production and market situation of major products	14
1.2.1 Situation of HCFC-22.....	14
1.2.2 Situation of HFC-134a	18
1.2.3 Situation of HFC-32	22
1.2.4 Situation of HFC-125	26
1.2.5 Situation of HFC-410a	29
1.2.6 Situation of other major products	32
1.3 Development trend	33
2 Forecast.....	37
3 Conclusions	38

LIST OF TABLES

Table 1.1-1 Refrigerants and phase-out plan in China
Table 1.1-2 Output of downstream products of refrigerants in China, 2005–2017
Table 1.1.1-1 Use quotas of HCFCs in China, 2017
Table 1.2.1-1 Major producers and production quota of HCFC-22 in China, 2017
Table 1.2.1-2 China's exports of HCFC-22, 2014–2017
Table 1.2.2-1 Major producers of HFC-134a in China, 2017
Table 1.2.3-1 Major producers of HFC-32 in China, 2017
Table 1.2.4-1 Major producers of HFC-125 in China, 2017
Table 2-1 Forecast on demand for the main fluorine refrigerants in China

LIST OF FIGURES

Figure 1.1-1 Main refrigerant substitutes in China
Figure 1.2.1-1 Production quota of HCFC-22 in China, 2013–2030E
Figure 1.2.1-2 Capacity and output of HCFC-22 in China, 2004–2017
Figure 1.2.1-3 Consumption pattern of HCFC-22 in China, 2017
Figure 1.2.1-4 Monthly ex-works price of HCFC-22 in China, Jan. 2014–Dec. 2017
Figure 1.2.2-1 Capacity and output of HFC-134a in China, 2013–2017
Figure 1.2.2-2 Consumption pattern of HFC-134a in China, 2017
Figure 1.2.2-3 Monthly ex-works price of HFC-134a in China, Jan. 2014–Dec. 2017
Figure 1.2.3-1 Capacity and output of HFC-32 in China, 2014–2017
Figure 1.2.3-2 Monthly ex-works price of HFC-32 in China, Jan. 2014–Dec. 2017
Figure 1.2.4-1 Capacity and output of HFC-125 in China, 2014–2017
Figure 1.2.4-2 Monthly ex-works price of HFC-125 in China, Jan. 2014–Dec. 2017
Figure 1.2.5-1 Monthly ex-works price of HFC-410a in China, Jan. 2014–Dec. 2017

1. Introduction

Survey of Fluorohydrocarbon in China, finished in Oct. 2018, is CCM's fourth edition report on China's fluorohydrocarbon. This intelligent report attaches importance to the following parts:

- Production, consumption, export and price of HCFCs (HCFC-22) in China (production and consumption in 2017, price in 2014–2017).
- Situation of HFCs in China, including HFC-134a, HFC-32, HFC-125 and HFC-410a (production and consumption in 2017, price in 2014–2017).
- Development trend of fluorohydrocarbon in China.
- Forecast on demand for the main fluorine refrigerants in China.

2. Approach for this report

The report is based on data sourced by diverse methods, as follows:

-Desk research

Desk research includes access to published magazines, journals, government statistics, industry statistics, customs statistics, association seminars as well as information on the Internet. Much work goes into the compilation and analysis of the information obtained. Where necessary, information is checked with Chinese market players regarding intelligence related to market structure and performance characteristics such as key producers, key end users, production levels, end user demand and so on.

-Telephone interview

CCM conducts an extensive field survey using telephone interviews in order to survey the fluorohydrocarbon industry in China.

The interviewees include the following groups:

- Key producers
- Key end users
- Key traders
- Material suppliers
- Associations involved
- Industry experts

-Network search

CCM employs a network to contact industry participants by using B2B website and software. CCM also obtains registration information via network.

-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
- Professional databases
- 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

Fluorine chemical industry has been one of the fastest developing and most promising chemical industries in China, which has become an important part of national strategic emerging industries. As an important part of fluorine chemical industry, fluohydrocarbon is used in various industries such as refrigerant, foaming agent, extinguishant, insecticide, medical and chemical. Among them, the refrigerant industry shares the largest consumption of fluohydrocarbon.

At present, the main fluorine refrigerants in China are HCFC-22, HFC-134a, HFC-32, HFC-125 and HFC-410a. In 2017, the prices of these refrigerants in China increased a lot due to strong demand from downstream industries and limited supply affected by rigorous environmental inspections. With the capacity and output of XXX t/a and XXX tonnes respectively in 2017, HCFC-22 is still the most popular refrigerant in China. However, in accordance with the HCFCs elimination schedule under the *Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol)*, the production of HCFC-22 has been restricted and its consumption as a refrigerant has been decreasing.

China agreed to take steps to phase out HCFCs. In order to achieve targets set in the phase-out plan of HCFCs, China implements quota management system for production and use of HCFCs. Since 2013, the Ministry of Environmental Protection of the People's Republic of China has published production quota and domestic production quota for each HCFCs manufacturer and use quota for each downstream enterprise every year. In recent years, the total production quota of HCFCs has seen a general decrease and has been concentrating in large enterprises.

HFCs have been a substitute for HCFCs. However, HFCs are not the final alternative to HCFCs because HFCs still have global warming potential (GWP). Therefore, Chinese refrigerant enterprises have been actively looking for safer and more environmentally friendly refrigerants such as CFOs, close-to-natural refrigerants and natural refrigerants.

4. What's in the report?

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

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1.2 Production and market situation of major products

1.2.1 Situation of HCFC-22

Production

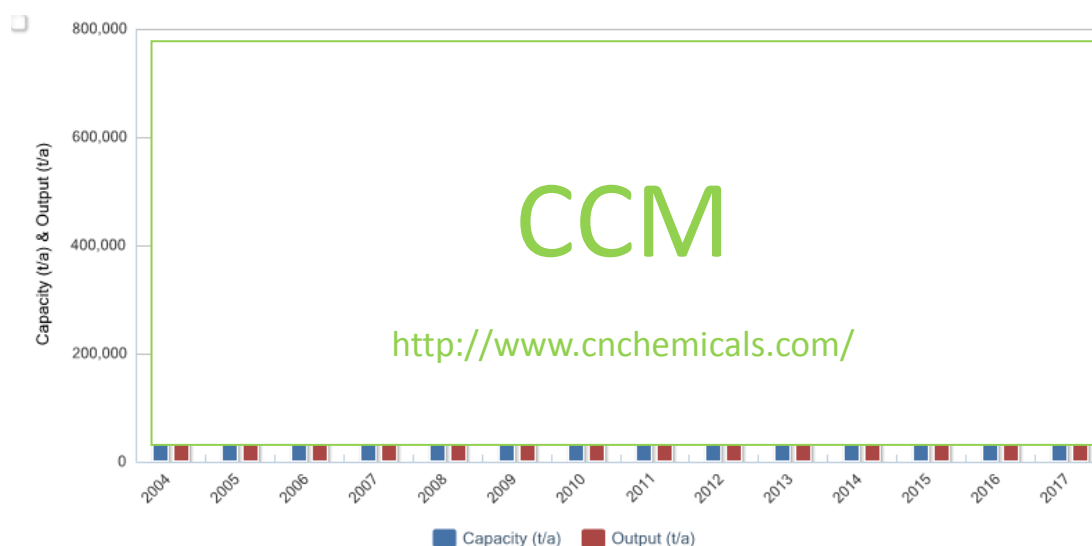
HCFC-22 is one of the major fluorine refrigerants in China. The domestic capacity and output of HCFC-22 were XXX t/a and XXX tonnes in 2017, with XXX and XXX growth in capacity and output compared with those in 2016.

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In 2017, the total production quota and domestic production quota was XXX tonnes and XXX tonnes respectively. Under the *Montreal Protocol*, in China, it's agreed to keep the production and consumption of HCFC-22 at the average level in XXX by XXX, and reduce about XXX by XXX, XXX by XXX, XXX by XXX and XXX by XXX, all based on XXX level. So it is expected the supply of HCFC-22 will be tight in the future.

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Figure 1.2.1-2 Capacity and output of HCFC-22 in China, 2004–2017



Source: CCM


There were about XXX HCFC-22 producers in China in 2017. Domestic capacity and output of HCFC-22 are mainly concentrated in three large producers, namely XXX, XXX and XXX. Their www.cnchemicals.com E-mail: econtact@cnchemicals.com

HCFC-22 capacity and output combined accounted for about XXX and XXX of China's totals respectively in 2017, a little higher than those of 2016.

...

Table 1.2.1-1 Major producers and production quota of HCFC-22 in China, 2017

No.	Producer	Capacity, t/a	Output, tonne	Production quota, tonne	Domestic production quota, tonne
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					



<http://www.cnchemicals.com/>

Source: Ministry of Environmental Protection of the People's Republic of China & CCM

Consumption

HCFC-22 is the most widely used low-temperature refrigerant in China, mainly used for air conditioner refrigerant. It is also used in producing tetrafluoroethylene (TFE) and foam beaters. TFE is an important raw material for HFC-125, polytetrafluoroethylene (PTFE) and hexafluoride propylene. In 2017, China produced XXX tonnes HCFC-22 and more than XXX of HCFC-22 were used for air conditioner refrigerant.

Since HCFC-22 as an air conditioning refrigerant is to be phased out, its application will be narrowed rapidly. In the future, HCFC-22 will be mainly used as a raw material for producing other substances, TFE for example.

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Figure 1.2.1-3 Consumption pattern of HCFC-22 in China, 2017




Source: CCM

Export

In 2017, the export volume of HCFC-22 was XXX tonnes, down by XXX year on year, due to the tight supply in China; in contrast, the export value crept up to XXX, up by XXX, thanks to the soaring price. Overall, from 2014 to 2017, the export volume and value of HCFC-22 declined, with CAGRs of XXX and XXX respectively.

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Table 1.2.1-2 China's exports of HCFC-22, 2014–2017

Year	Volume, tonne	Annual Change	Value, million USD	Annual Change
2014				
2015				
2016				
2017				

Source: China Customs

Price

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In 2017, the price rocketed, hitting USDXXX in December, up XXX year on year. Here are the reasons:

- Rigorous environmental inspections throughout China forced many small- or medium-sized companies to suspend production. Consequently, the remaining large refrigerant manufacturers had the upper hand and quoted higher prices.
- Great efforts were taken to avoid pollution of hydrofluoric acid and hydrochloric acid, driving up production cost.
- The strong demand from the air conditioner market also boosted the price.

Figure 1.2.1-4 Monthly ex-works price of HCFC-22 in China, Jan. 2014–Dec. 2017



Source: CCM

1.2.2 Situation of HFC-134a

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2 Forecast

- Fluorine refrigerant

With the further implementation of environmental policies in China, the number of domestic HCFC manufacturers will gradually decrease, while that of domestic HFC manufacturers will gradually increase.

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Table 2-1 Forecast on demand for the main fluorine refrigerants in China

Product	Forecast
HCFC-22	 http://www.cnchemicals.com/
HCFC-141b	
HFC-134a	
HFC-410a	
HFC-32 and HFC-125	

Source: CCM

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

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