

Survey of Fluorohydrocarbon in China

The Fifth Edition

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Researched & Prepared by:

Kcomber Inc.

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1. Introduction

Survey of Fluorohydrocarbon in China, finished in March 2021, is CCM's fifth 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 H1 2020, price in 2016–H1 2020)
- ✓ Situation of HFCs in China, including HFC-134a, HFC-32, HFC-125 and HFC-410a (production and consumption in H1 2020, price in 2016–H1 2020)
- ✓ Development trend of fluorohydrocarbon in China
- ✓ Forecast on demand for the main fluorine refrigerants in China

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, seminars as well as information from the internet. A lot of work has gone into the compilation and analysis of the obtained information. When necessary, checks have been made with Chinese suppliers regarding production information.

2. Telephone interviews

CCM has carried out extensive telephone interviews in order to survey the market of fluorine industry in China.

Interviewees cover the following:

- Key producers
- Key traders
- Material suppliers
- Associations
- Experts

Data processing and presentation

- The data collected and compiled are sourced from:
- CCM's database, ValoTracer
- Published articles from periodicals, magazines and journals, and third-party databases
- Statistics from governments and international institutes
- Telephone interviews with domestic producers, service suppliers, governments, etc.
- Third-party data providers
- Comments from industrial experts
- Professional databases from other sources
- 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 took place in order to analyse the data and draw conclusions from them.

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 H1 2020, COVID-19 and economic downturn have disrupted the industrial and supply chains and caused weak demand in the industry, the price of fluoride refrigerants fluctuated downward. Although HCFC-22 will be phased out soon, it was still the largest fluoride refrigerant in H1 2020, with an output of XXX tonnes.

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 Ecology and Environment 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 this report?

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

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1.1 Overview of fluorohydrocarbon industry in China

Air conditioners, refrigerators and automobiles account for XXX%, XXX% and XXX % of the domestic demand for refrigerants respectively.

Table 1.1-2 Output of downstream products of refrigerants in China, 2016–H1 2020

Year	Air conditioner		Automobile	
	Output, unit	Growth rate	Output, unit	Growth rate
2016	XXX	XXX	XXX	XXX
2017	XXX	XXX	XXX	XXX
2018	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX
H1 2020	XXX	XXX	XXX	XXX

Source: China Association of Automobile Manufacturers & CCM

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1.1.1 Overview of HCFCs in China

Table 1.1.1-1 Use quotas of HCFCs in China, 2020

No.	Industry	Number of companies	Product	Use quota, tonne	Annual change
1	Room air conditioning	XXX	HCFC-22	XXX	XXX
2	Industrial and commercial refrigeration and air conditioning	XXX	HCFC-22	XXX	XXX
			HCFC-123	XXX	XXX
3	Extrusion polystyrene foam	XXX	HCFC-22	XXX	XXX
			HCFC-142b	XXX	XXX
4	Cleaning	XXX	HCFC-141b	XXX	XXX

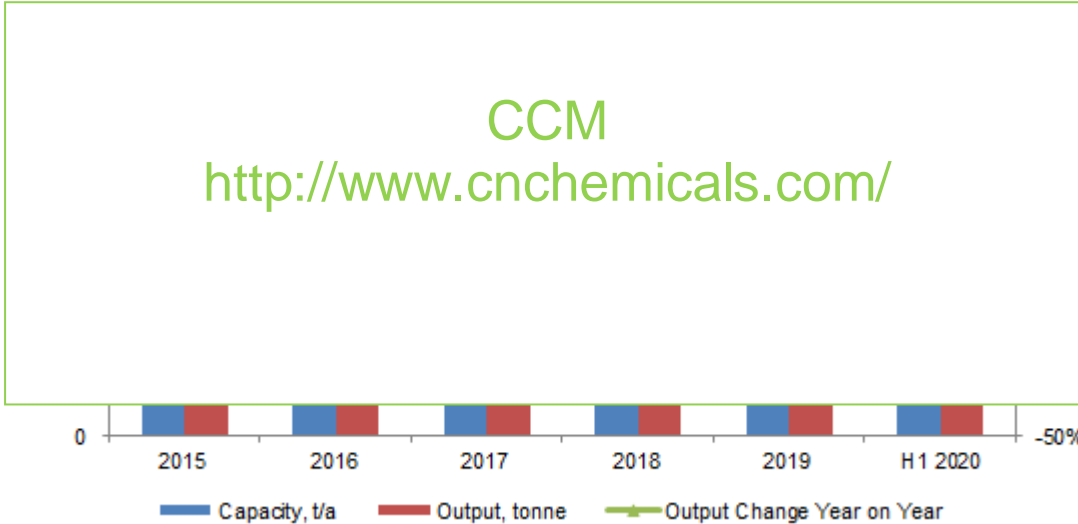
Source: Ministry of Environmental Protection of the People's Republic of China & CCM

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1.2.1 HCFC-22

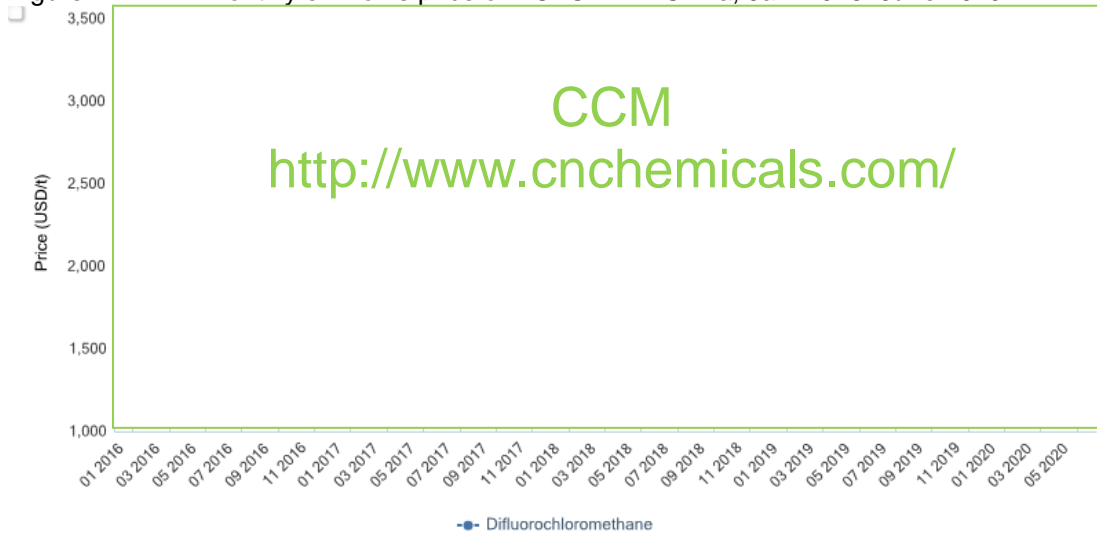
According to the Ministry of Ecology and Environment of the People's Republic of China (MEE), the output of HCFCs-22 were XXX tonnes, XXX tonnes, XXX tonnes and XXX tonnes respectively from 2016 to 2019. Influenced by the COVID-19, the output was XXX tonnes in H1 2020.

Figure 1.2.1-1 Capacity and output of HCFC-22 in China, 2015–H1 2020



Source: CCM

Figure 1.2.1.1-1 Monthly ex-works price of HCFC-22 in China, Jan. 2016–June 2020



Source: CCM

1.2.1.2 Export

In H1 2020, China exported XXX tonnes of HCFC-22, worth USD XXX million.

Table 1.2.1.2-1 Exports of HCFC-22 in China, 2015–H1 2020

Year	Volume, tonne	Value, USD
2015	XXX	XXX
2016	XXX	XXX
2017	XXX	XXX
2018	XXX	XXX
2019	XXX	XXX
H1 2020	XXX	XXX

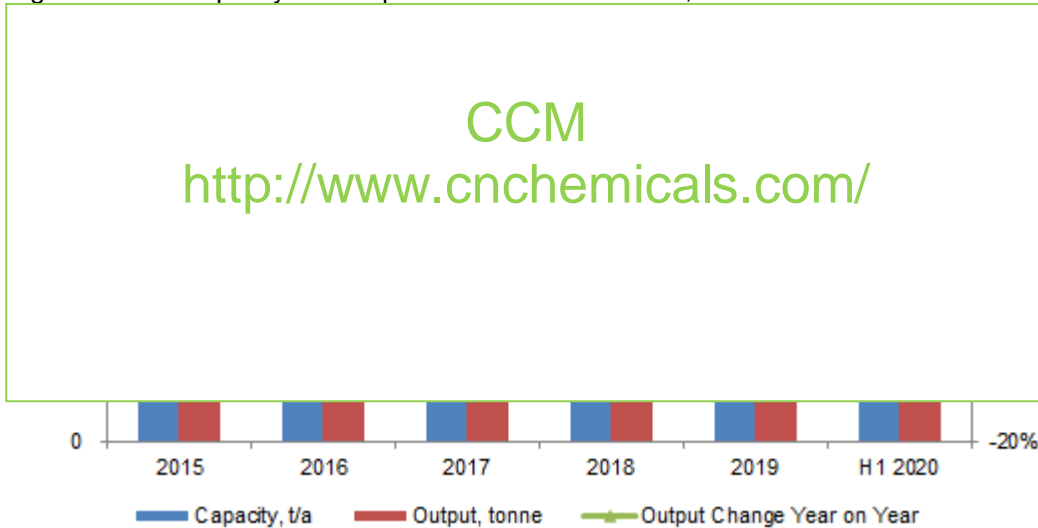
Source: China Customs & CCM

1.2.2 Situation of HFC-134a

Production

During 2015–2019, the output of HFC-134a stayed around XXX tonnes; the CAGR in this period was just XXX%. Its high price makes it difficult to promote its use in China. In H1 2020, affected by the COVID-19, the operating rate of manufacturers decreased, along with the output falling to XXX tonnes.

Figure 1.2.2-1 Capacity and output of HFC-134a in China, 2015–H1 2020



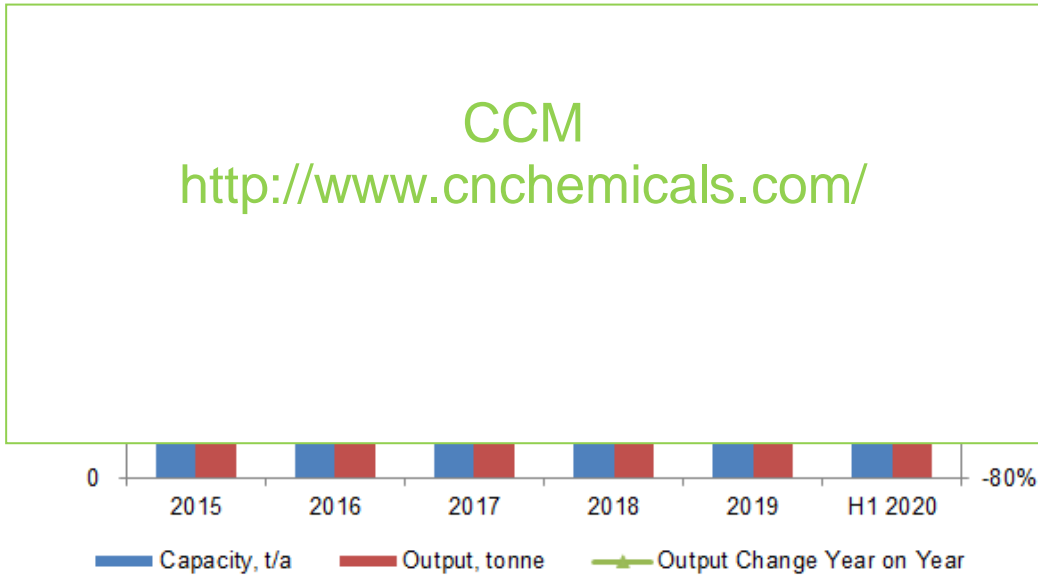
Source: CCM

1.2.3 Situation of HFC-32

Production

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Figure 1.2.3-1 Capacity and output of HFC-32 in China, 2015–H1 2020



Source: CCM

1.2.4 Situation of HFC-125

In H1 2020, the capacity and output of HFC-125 were XXX t/a and XXX tonnes. The top three manufacturers were XXX, XXX and XXX.

Figure 1.2.4-2 Monthly ex-works price of HFC-125 in China, Jan. 2016–June 2020



Source: CCM

1.2.5 Situation of HFC-410a

Production

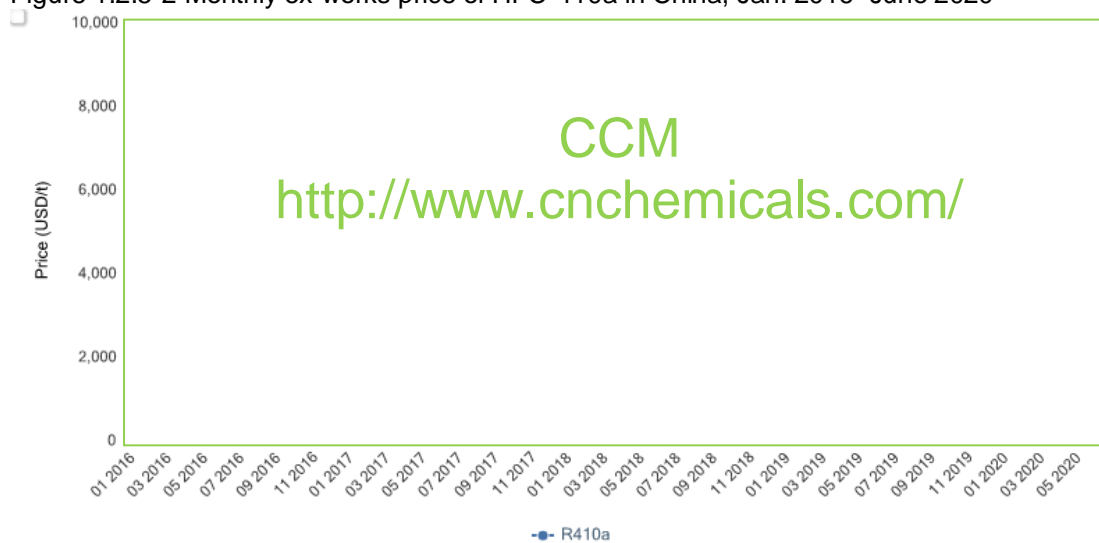
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Table 1.2.5-1 Capacity and output of major HFC-410a manufacturers in China, H1 2020

No.	Manufacturer	Capacity, t/a	Output, tonne	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	XXX	XXX	XXX	XXX
8	XXX	XXX	XXX	XXX
9	XXX	XXX	XXX	XXX
10	XXX	XXX	XXX	XXX

Source: CCM

Figure 1.2.5-2 Monthly ex-works price of HFC-410a in China, Jan. 2016–June 2020



Source: CCM

1.2.6 Situation of other major products

- Foam beaters

In 2014, Cangzhou Lingang Heji Chemical Co., Ltd. planned a XXX t/a HFC-245fa project (phase I XXX t/a and phase II XXX t/a HFC-245fa). In Jan. 2019, the first XXX t/a HFC-245fa facilities passed the environmental protection acceptance. In H1 2020, the company proposed a technical upgrading project to the XXX t/a HFC-245fa capacity.

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2 Forecast

- Fluorine refrigerant

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

Product	Forecast
HCFC-22	XXX
HCFC-141b	XXX
HFC-134a	XXX
HFC-410a	XXX
HFC-32 and HFC-125	XXX

Source: CCM

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

Tel: +86-20-37616606 Fax: +86-20-37616968

Email: econtact@cnchemicals.com