Survey of Sodium Formate and Formic Acid in China

The First Edition

May 2018

Researched & Prepared by:

Kcomber Inc.
Copyright by Kcomber Inc.
Any publication, distribution or copying of the content in this report is prohibited.
Contents

Executive summary .................................................................................................................. 1
Methodology ............................................................................................................................ 2
1 Overview of sodium formate and formic acid industries in China ...................................... 4
  1.1 Brief introduction to sodium formate and formic acid .................................................... 4
  1.2 Current sodium formate and formic acid industries ........................................................ 5
  1.3 Government policies on sodium formate and formic acid industries ............................... 6
2 Sodium formate industry in China, 2017 ............................................................................ 8
  2.1 Producer ......................................................................................................................... 8
  2.2 Production ....................................................................................................................... 11
  2.3 Price ............................................................................................................................... 13
  2.4 Exports ........................................................................................................................... 14
  2.5 Consumption ................................................................................................................... 16
  2.6 Raw materials consumption by different methods in China ............................................. 17
  2.7 Forecast, 2018–2019 ...................................................................................................... 18
3 Formic acid industry in China, 2017 .................................................................................. 20
  3.1 Producer ......................................................................................................................... 20
  3.2 Production ....................................................................................................................... 21
  3.3 Price ................................................................................................................................ 23
  3.4 Exports ........................................................................................................................... 24
  3.5 Consumption ................................................................................................................... 26
  3.6 Raw material consumption ............................................................................................. 28
  3.7 Forecast, 2018–2019 ...................................................................................................... 28
4 Profiles of major sodium formate and formic acid producers in China................................. 30
  4.1 Luxi Chemical Group Co., Ltd. ....................................................................................... 30
  4.2 Hubei Yihua Chemical Industry Co., Ltd. ...................................................................... 30
  4.3 Qianjiang Fuyang Chemical Co., Ltd. ............................................................................ 31
  4.4 Yibin Tianyuan Group Co., Ltd. .................................................................................... 32
  4.5 Anhui Jinhe Industrial Co., Ltd. .................................................................................... 33
  4.6 Shandong Fufeng Perstorp Chemical Co., Ltd. ............................................................... 34
  4.7 Chongqing Chuandong Chemical (Group) Co., Ltd. ....................................................... 34
  4.8 Guizhou Kaiyang Qingli Tianmeng Chemical Co., Ltd. .................................................. 35
  4.9 Jiangsu Kailin Ruiyang Chemical Co., Ltd. .................................................................. 36
LIST OF TABLES
Table 1.1-1 National Standard on Formic Acid for Industrial Use GB/T 2093–2011
Table 2.1-1 List of sodium formate producers in China, as of May 2018
Table 2.2-1 Capacity and output of sodium formate in China, 2017
Table 2.4-1 Monthly exports of sodium formate from China, 2017
Table 2.4-2 Top ten export destinations of China's sodium formate, 2017
Table 2.5-1 Application fields of sodium formate in China
Table 2.6-1 Reaction of carbon monoxide and sodium hydroxide
Table 2.6-2 By-product of pentaerythritol
Table 2.6-3 By-product of NPG
Table 2.6-4 By-product of TMP
Table 3.1-1 List of formic acid producers in China, as of May 2018
Table 3.2-1 Capacity and output of formic acid in China, 2017
Table 3.4-1 Monthly exports of formic acid from China, 2017
Table 3.4-2 Top ten export destinations of China's formic acid, 2017
Table 3.5-1 Application fields of formic acid in China
Table 3.6-1 Unit consumption of major raw materials for formic acid (85%) production in China
Table 4.1-1 Capacity and output of sodium formate and formic acid in Luxi Chemical, 2017
Table 4.2-1 Capacity and output of sodium formate in Hubei Yihua, 2017
Table 4.3-1 Capacity and output of sodium formate in Qianjiang Fuyang, 2017
Table 4.4-1 Capacity and output of sodium formate and formic acid in Yibin Tianyuan, 2017
Table 4.5-1 Capacity and output of sodium formate and formic acid in Anhui Jinhe, 2017
Table 4.6-1 Capacity and output of sodium formate in Shandong Perstorp, 2017
Table 4.7-1 Capacity and output of sodium formate and formic acid in Chongqing Chuandong, 2017
Table 4.8-1 Capacity and output of sodium formate in Kaiyang Qingli, 2017
Table 4.9-1 Capacity and output of sodium formate and formic acid in Kailin Ruiyang, 2017
Table 4.10-1 Capacity and output of sodium formate in Puyang Pengxin, 2017
Table 4.11-1 Capacity and output of sodium formate and formic acid in Xinke Aode, 2017
Table 4.12-1 Capacity and output of sodium formate in Nantong Baichuan, 2017
Table 4.13-1 Capacity and output of sodium formate in Shuifu Yuntianhua, 2017
Table 4.14-1 Capacity and output of sodium formate in Puyang Yong'an, 2017
Table 4.15-1 Capacity and output of sodium formate in Baoding Guoxiu, 2011–2017
Table 4.16-1 Capacity and output of sodium formate in Bazhou Shengfang, 2011–2017
Table 4.17-1 Capacity and output of formic acid in BASF-YPC, 2017
Table 4.18-1 Capacity and output of formic acid in Huanghua Pengfa, 2017
Table 4.19-1 Capacity and output of formic acid in Zouping Fenlian, 2017

LIST OF FIGURES
Figure 1.1-1 Molecular structure of sodium formate
Figure 1.1-2 Molecular structure of formic acid
Figure 2.2-1 Capacity distribution of sodium formate in China, 2017
Figure 2.2-2 Output distribution of sodium formate in China, 2017
Figure 2.3-1 Monthly ex-works price of sodium formate in China, 2017
Figure 2.4-1 Monthly exports of sodium formate from China, 2017
Figure 2.4-2 Distribution of exports of sodium formate from China by destination, 2017
Figure 2.5-1 Apparent consumption of sodium formate in China, 2017, tonne
Figure 2.7-1 Forecast on China's sodium formate capacity and output, 2018–2019
Figure 3.2-1 Capacity distribution of formic acid in China, 2017
Figure 3.2-2 Output distribution of formic acid in China, 2017
Figure 3.3-1 Monthly ex-works price of formic acid by product grade in China, 2017
Figure 3.4-1 Monthly exports of formic acid from China, 2017
Figure 3.4-2 Distribution of exports of formic acid from China by destination, 2017
Figure 3.5-1 Apparent consumption of formic acid in China, 2017, tonne
Figure 3.5-2 Downstream consumption distribution of formic acid in China, 2017
Figure 3.7-1 Forecast on China's formic acid capacity and output, 2018–2019
1. Introduction

Survey of Sodium Formate and Formic Acid in China, finished in May 2018, is CCM's first edition report on sodium formate and formic acid industries. This intelligent report attaches importance to the following parts:

- Sodium formate and formic acid production, price, exports and consumption in China
- Relative government policies to sodium formate and formic acid industries in China
- Forecasts on sodium formate and formic acid markets in China
2. Approach for this report

This report is based on data collected with diverse methods, which are listed as follows:

- **Desk research**
  This includes access to published magazines, journals, government, industry and customs statistics, association 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, information has been checked with sodium formate and formic acid industries participants and specialists regarding to sodium formate and formic acid production, industrial data, production method, market price, industrial development trend, downstream industry applications and policies. Data collected and compiled are variously sourced from:
  - CCM’s database
  - Published articles from periodicals, magazines, journals and third-party database
  - Statistics from governments and international institutes
  - Customs statistics
  - Comments from industrial experts on various platforms
  - Information from the Internet

- **Telephone interview targets**
  - Key producers
  - Key end users
  - Key traders
  - Key raw material suppliers
  - Industrial associations
  - Industrial experts

- **Data compilation and crosscheck**
  Data obtained from various sources have been combined and cross-checked to ensure that this report is as accurate and methodologically sound as possible.
3. Executive summary

China's sodium formate and formic acid industries were under structural reform in 2017. The development of both industries was restricted by the tightening environmental regulations.

As of May 2018, there were 16 active sodium formate producers and nine active formic acid producers in China. Most of these producers are located in Shandong, Hubei, Hebei, Sichuan and Jiangsu provinces. Among the 16 active sodium formate producers, six of them also produce formic acid.

The capacity of both sodium formate and formic acid in China witnessed reduction during 2016 to May 2018. Several producers were forced out of the market under strict environmental regulations.

Affected by the decrease of domestic supply and increase of raw material cost, the ex-works price of sodium formate and formic acid surged in H2 2017. The annual average ex-works price of sodium formate was USD383.77/t in 2017, increasing by 76% year on year. The annual average ex-works price of formic acid increased by 117% year on year to USD750.29/t in 2017.

China exported 57,259.390 tonnes of sodium formate and 99,998.698 tonnes of formic acid in 2017. The apparent consumption of sodium formate and formic acid in 2017 was 338,621 tonnes and 249,157 tonnes, respectively.
4. What is in the report?

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

... 

1.3 Government policies on sodium formate and formic acid industries

The Chinese government has been tightening the environmental regulations since 2015 when the new Environmental Protection Law was officially implemented. In Dec. 2016, the Chinese government passed the Environmental Protection Tax Law which was brought into effect on 1 Jan., 2018, further tightened the environmental laws. Chemical industries in China, including sodium formate and formic acid industries are restricted by the environmental laws in the following aspects:

1. Control on emissions: the total emission control quota of waste gas, waste water and solid waste is assigned to each provincial government, city government and enterprise. The EIA approval for enterprises’ new construction projects for those fail to fulfill the total emission control quota or achieve the environmental quality targets will be suspended. For sodium formate and formic acid producers, limitation on total emission forced some companies to suspend or stop their sodium formate or formic acid production during 2016–2017 to achieve the assigned environmental quality targets.

...
2 Sodium formate industry in China, 2017

2.1 Producer

Table 2.2-1 Capacity and output of sodium formate in China, 2017

<table>
<thead>
<tr>
<th>Producer</th>
<th>Capacity, t/a</th>
<th>Output, tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>XXX</td>
<td>XXX</td>
</tr>
</tbody>
</table>

Source: CCM

Figure 2.2-2 Output distribution of sodium formate in China, 2017

Source: CCM
3 Formic acid industry in China, 2017

3.1 Producer

The commercial production of formic acid in China first started in 1989, adopting acidification of sodium formate method. Currently, there are three formic acid production methods in China, namely hydrogenation of carbon monoxide, hydrolysation of methyl formate and acidification of sodium formate.

Figure 3.2-1 Capacity distribution of formic acid in China, 2017
3.4 Exports

...

Figure 3.4-1 Monthly exports of formic acid from China, 2017

![CCM](http://www.cnchemicals.com/)

*Source: China Customs, CCM*

...

3.5 Consumption

...

Table 3.5-1 Application fields of formic acid in China

<table>
<thead>
<tr>
<th>Downstream industry</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: CCM*

...

If you want more information, please feel free to contact us
Tel: +86-20-37616606 Fax: +86-20-37616968
Email: econtact@cnchemicals.com