Acetaldehyde

15 July 2020

Abstract

Acetaldehyde is an important chemical intermediate, but the global market has been trending downward for more than 20 years because of the commercialization of more efficient technologies to produce those products formerly based on acetaldehyde. Of the known capacities and processes, over half of the global capacity for acetaldehyde is using ethanol as a raw material, mainly in mainland China and India. About 40% is via the oxidation of ethylene, mainly in the Americas, Western Europe, the CIS and Baltic States, the Middle East, mainland China, Japan, and Taiwan, while only about 6% of capacity is using acetylene as a raw material; most of those plants are located in the CIS and Baltic States.

Ethyl acetate and acetic acid were once the largest uses for acetaldehyde, but these markets have virtually disappeared as other lower-cost processes are used preferentially. As a result, acetaldehyde consumption for pyridines and pyridines bases has become the largest market, followed by pentaerythritol. Other consumption uses include production of crotonaldehyde, 1,3-butylene glycol, glyoxal, and pharmaceuticals.



The following pie chart shows world consumption of acetaldehyde:

Mainland China is the largest consumer of acetaldehyde, followed by Japan, the United States, and Western Europe. World consumption of acetaldehyde is forecast to grow at an average of about 4% per year in the next five years (2020–25), recovering from the more than 11% drop in 2020 caused by the impact of the COVID-19 pandemic on the global economy. Capacity and consumption growth continue to be mainly driven by Asia, particularly by mainland China. Growth in Japan will be muted, owing to weakened demand and its economic recession. The economies of the United States and Western

Contacts

Maria deGuzman · Maria.deguzman@ihsmarkit.com



Europe are being especially hard hit by the pandemic; although full consumption recovery is expected by 2022, growth will be more limited thereafter.

For more detailed information, see the table of contents, shown below.

IHS Markit's Chemical Economics Handbook – *Acetaldehyde* is the comprehensive and trusted guide for anyone seeking information on this industry. This latest report details global and regional information, including





Global summary; regional coverage

Producers with annual capacities and plant sites



Production figures and trends



Consumption and forecasts by end use application



processes and

environmental issues

Trade – imports and exports

Key benefits

IHS Markit's Chemical Economics Handbook – *Acetaldehyde* has been compiled using primary interviews with key suppliers and organizations, and leading representatives from the industry in combination with IHS Markit's unparalleled access to upstream and downstream market intelligence and expert insights into industry dynamics, trade, and economics.

This report can help you

- · Identify trends and driving forces influencing chemical markets
- Forecast and plan for future demand
- Understand the impact of competing materials
- Identify and evaluate potential customers and competitors
- Evaluate producers
- Track changing prices and trade movements
- Analyze the impact of feedstocks, regulations, and other factors on chemical profitability

Contents

Executive summary	6
Summary	7
Introduction Manufacturing processes	12 13
Liquid-phase oxidation of ethylene	13
From ethanol	13
Acetylene hydration	14
Environmental issues	15
Supply and demand by region	16
United States	16
– Producing companies	16
– Salient statistics	16
- Consumption	17
– Pyridines	18
– Acetate esters	18
– 1,3-Butylene glycol (1,3-butanediol)	18
– Pentaerythritol	19
– Other	19
– Price	19
South America	20
– Producing companies	20
– Salient statistics	20
Western Europe	21
– Producing companies	21
– Salient statistics	22
– Consumption	23
– Pentaerythritol	24
– 2-Methyl-5-ethylpyridine	25
– Acetic acid	25
– Ethyl acetate	25
– Other	25
– Crotonaldehyde	25
– Glyoxal/glyoxylic acid	25
– Miscellaneous	26
- Price	26
CIS and Baltic States	26
Middle East	28
Africa	29
Asia Pacific	29
Indian Subcontinent	30

	20
- Producing companies	30
– Salient statistics	30
- Consumption	31
– Trade	33
Northeast Asia	33
- Overview	33
– Producing companies	33
– Salient statistics	33
- Consumption	34
– Mainland China	35
– Producing companies	35
– Salient statistics	36
– Consumption	37
– Pyridines	38
– Pentaerythritol	38
– Acetic acid	39
– Ethyl acetate	39
– Other	39
– Price	40
– Trade	41
– Japan	41
– Producing companies	41
– Salient statistics	42
– Consumption	42
– Pyridines	43
– Pentaerythritol	44
– Ethyl acetate	44
– Other	44
– Price	44
– Trade	45
– Other Northeast Asia	45
– Producing companies	45
– Salient statistics	45
– Consumption	46
– Trade	47
Southeast Asia	47
– Producing companies	48
– Salient statistics	48
– Consumption	48
- Trade	48
Oceania	49
- Producing companies	49
– Salient statistics	49

– Trade	50
Additional resources	52
Revisions	53

IHS Markit Customer Care

CustomerCare@ihsmarkit.com Americas: +1 800 IHS CARE (+1 800 447 2273) Europe, Middle East, and Africa: +44 (0) 1344 328 300 Asia and the Pacific Rim: +604 291 3600

Disclaimer

The information contained in this report is confidential. Any unauthorized use, disclosure, reproduction, or dissemination, in full or in part, in any media or by any means, without the prior written permission of IHS Markit or any of its affiliates ("IHS Markit") is strictly prohibited. IHS Markit owns all IHS Markit logos and trade names contained in this report that are subject to license. Opinions, statements, estimates, and projections in this report (including other media) are solely those of the individual author(s) at the time of writing and do not necessarily reflect the opinions of IHS Markit. Neither IHS Markit nor the author(s) has any obligation to update this report in the event that any content, opinion, statement, estimate, or projection (collectively, "information") changes or subsequently becomes inaccurate. IHS Markit makes no warranty, expressed or implied, as to the accuracy, completeness, or timeliness of any information in this report, and shall not in any way be liable to any recipient for any inaccuracies or omissions. Without limiting the foregoing, IHS Markit shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with any information provided. The inclusion of a link to an external website by IHS Markit should not be understood to be an endorsement of that website or the site's owners (or their products/services). IHS Markit is not responsible for either the content or output of external websites. Copyright © 2020, IHS Markit*. All rights reserved and all intellectual property rights are retained by IHS Markit.

