

Metalworking Fluid Additives Market Forecasts to 2030 – Global Analysis By Additive Type (Antioxidants, Corrosion Inhibitors, Emulsifiers, Biocides, Surfactants, pH Control Agents, Dispersants and Other Additive Types), Formulation, Application, End User and By Geography

<https://marketpublishers.com/r/M5104634E121EN.html>

Date: February 2025

Pages: 150

Price: US\$ 4,150.00 (Single User License)

ID: M5104634E121EN

Abstracts

According to Statistics MRC, the Global Metalworking Fluid Additives Market is accounted for \$14.92 billion in 2024 and is expected to reach \$21.83 billion by 2030 growing at a CAGR of 5.5% during the forecast period. Metalworking fluid additives are chemical substances incorporated into metalworking fluids to enhance their performance and functionality. These additives serve various purposes, including improving lubrication, reducing friction, cooling, preventing rust and corrosion, and dispersing contaminants. They help extend the life of both the fluid and the machinery, improve cutting tool performance, and ensure better surface finishes on metal parts. Metalworking fluid additives are essential for optimizing the efficiency and effectiveness of machining operations.

According to National Centre for Biotechnological Information (NCBI) the 50-70% of the workers gets prone to diseases who work in direct contact with the metal working fluids.

Market Dynamics:

Driver:

Rapid industrialization and urbanization

As industries expand in emerging economies, especially in regions like Asia-Pacific and Latin America, there is a heightened demand for metalworking fluids in sectors such as automotive, aerospace, and machinery manufacturing. The need for advanced manufacturing techniques and high-quality components drives the requirement for specialized fluid additives that improve efficiency, precision, and surface quality. Urbanization leads to increased infrastructure development, which, in turn, stimulates industrial activity and boosts demand for metalworking fluid additives, fueling market growth globally.

Restraint:

Health and safety issues

Health and safety issues in metalworking fluid additives arise from the potential exposure to harmful chemicals, such as oils, solvents, and biocides, which can pose risks to workers, including skin irritation, respiratory problems, and long-term diseases like cancer. Improper handling and inadequate ventilation increase these risks. The additional costs and operational complexity resulting from these health and safety challenges can hamper market growth by limiting the adoption and increasing expenses for manufacturers.

Opportunity:

Increasing demand for efficient manufacturing processes

Industries aiming for higher productivity, precision, and cost-effectiveness rely on metalworking fluid additives to improve machining operations. These additives help reduce friction, heat, and wear, leading to smoother processes and enhanced surface finishes. Additionally, the growing emphasis on sustainable manufacturing practices drives the development of eco-friendly additives. With a focus on minimizing downtime, extending tool life, and improving operational efficiency, the demand for optimized metalworking fluids continues to rise, fueling the growth of the market.

Threat:

Volatility in raw material prices

Volatility in raw material prices arises from factors like supply chain disruptions, geopolitical instability, fluctuating demand, and changes in natural resource availability.

These fluctuations impact the cost of essential ingredients in metalworking fluid additives, such as base oils, chemicals, and specialized compounds. As raw material prices increase unpredictably, manufacturers face higher production costs, which can lead to price hikes for consumers and reduced market stability and thus this uncertainty hampers the market.

Covid-19 Impact:

The covid-19 pandemic significantly impacted the metalworking fluid additives market due to disruptions in manufacturing, supply chain issues, and reduced industrial activity. With factories and production plants temporarily shut down, demand for metalworking fluids dropped. However, recovery post-pandemic led to an increase in demand for efficient and high-quality additives as industries resumed operations. The pandemic accelerated the adoption of advanced, eco-friendly additives in response to sustainability concerns.

The grinding fluids segment is expected to be the largest during the forecast period

The grinding fluids segment is expected to account for the largest market share during the forecast period. Grinding fluids are a crucial type of metalworking fluid additive used to improve the grinding process by reducing friction, dissipating heat, and enhancing lubrication. These fluids help prevent tool wear, improve surface finishes, and increase the efficiency of grinding operations. They also provide cooling to the workpiece, which prevents thermal damage and distortion.

The electronics manufacturing segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the electronics manufacturing segment is predicted to witness the highest growth rate owing to its ensured precision, reliability, and quality. These additives help in processes like CNC machining, drilling, and milling of parts such as semiconductors, connectors, and circuit boards. They provide lubrication, cooling, and corrosion protection, preventing damage to delicate parts. They improve the overall machining efficiency, which is crucial for maintaining the high standards required in the electronics industry.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market

share driven by rapid industrialization, increased manufacturing activities, and the expanding automotive and aerospace sectors. Countries like China, India, Japan, and South Korea are key contributors to market expansion due to their large-scale manufacturing bases. Moreover, the growing focus on technological innovations and automation in machining processes further boosts the market in the region.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR fuelled by strong manufacturing sectors in the U.S. and Canada, including automotive, aerospace, and heavy machinery industries. The region emphasizes technological advancements, with a focus on high-performance and environmentally friendly additives. Additionally, strict environmental regulations in North America push for the development of sustainable, biodegradable additives, creating growth opportunities for the market in this region.

Key players in the market

Some of the key players in Metalworking Fluid Additives market include ExxonMobil Corporation, TotalEnergies SE, Chevron Corporation, BASF SE, Dow Chemical Company, Croda International Plc, Evonik Industries AG, Lanxess AG, Wacker Chemie AG, Clariant AG, Royal Dutch Shell Plc, Petro-Canada Lubricants Inc., Castrol Limited, Chaoshui Technology Corporation, BP p.l.c., Idemitsu Kosan Corporation, Lubrizol Corporation and Quaker Houghton.

Key Developments:

In August 2023, Chaoshui Technology Co. inaugurated a metalworking fluid production facility in Foshan, Guangdong province, China. This plant has an annual capacity of 30,000 metric tons and aims to reduce China's reliance on imported metalworking fluids. The facility was developed with support from Tsinghua University in Beijing and the Jihua Laboratory in Foshan.

In September 2022, Clariant announced an expansion of its support for the manufacturers of fully synthetic metalworking fluids. This move is part of the company's ongoing efforts to provide advanced, sustainable solutions to the metalworking industry, particularly as demand for high-performance, environmentally friendly products increases.

Additive Types Covered:

Antioxidants

Corrosion Inhibitors

Emulsifiers

Biocides

Surfactants

pH Control Agents

Dispersants

Other Additive Types

Formulations Covered:

Water-Soluble Metalworking Fluids

Oil-Based Metalworking Fluids

Synthetic Fluids

Semisynthetic Fluids

Other Formulations

Applications Covered:

Cutting Fluids

Grinding Fluids

Forming Fluids

Drawing & Stamping Fluids

Milling & Turning Fluids

Other Applications

End Users Covered:

Automotive

Aerospace

Construction & Mining

Energy & Power

Electronics Manufacturing

Medical Devices

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Application Analysis
- 3.7 End User Analysis
- 3.8 Emerging Markets
- 3.9 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL METALWORKING FLUID ADDITIVES MARKET, BY ADDITIVE TYPE

- 5.1 Introduction
- 5.2 Antioxidants
- 5.3 Corrosion Inhibitors
- 5.4 Emulsifiers
- 5.5 Biocides
- 5.6 Surfactants
- 5.7 pH Control Agents
- 5.8 Dispersants
- 5.9 Other Additive Types

6 GLOBAL METALWORKING FLUID ADDITIVES MARKET, BY FORMULATION

- 6.1 Introduction
- 6.2 Water-Soluble Metalworking Fluids
- 6.3 Oil-Based Metalworking Fluids
- 6.4 Synthetic Fluids
- 6.5 Semisynthetic Fluids
- 6.6 Other Formulations

7 GLOBAL METALWORKING FLUID ADDITIVES MARKET, BY APPLICATION

- 7.1 Introduction
- 7.2 Cutting Fluids
- 7.3 Grinding Fluids
- 7.4 Forming Fluids
- 7.5 Drawing & Stamping Fluids
- 7.6 Milling & Turning Fluids
- 7.7 Other Applications

8 GLOBAL METALWORKING FLUID ADDITIVES MARKET, BY END USER

- 8.1 Introduction
- 8.2 Automotive
- 8.3 Aerospace
- 8.4 Construction & Mining
- 8.5 Energy & Power
- 8.6 Electronics Manufacturing

8.7 Medical Devices

8.8 Other End Users

9 GLOBAL METALWORKING FLUID ADDITIVES MARKET, BY GEOGRAPHY

9.1 Introduction

9.2 North America

9.2.1 US

9.2.2 Canada

9.2.3 Mexico

9.3 Europe

9.3.1 Germany

9.3.2 UK

9.3.3 Italy

9.3.4 France

9.3.5 Spain

9.3.9 Rest of Europe

9.4 Asia Pacific

9.4.1 Japan

9.4.2 China

9.4.3 India

9.4.4 Australia

9.4.5 New Zealand

9.4.9 South Korea

9.4.7 Rest of Asia Pacific

9.5 South America

9.5.1 Argentina

9.5.2 Brazil

9.5.3 Chile

9.5.4 Rest of South America

9.9 Middle East & Africa

9.9.1 Saudi Arabia

9.9.2 UAE

9.9.3 Qatar

9.9.4 South Africa

9.9.5 Rest of Middle East & Africa

10 KEY DEVELOPMENTS

- 10.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 10.2 Acquisitions & Mergers
- 10.3 New Product Launch
- 10.4 Expansions
- 10.5 Other Key Strategies

11 COMPANY PROFILING

- 11.1 ExxonMobil Corporation
- 11.2 TotalEnergies SE
- 11.3 Chevron Corporation
- 11.4 BASF SE
- 11.5 Dow Chemical Company
- 11.6 Croda International Plc
- 11.7 Evonik Industries AG
- 11.8 Lanxess AG
- 11.9 Wacker Chemie AG
- 11.10 Clariant AG
- 11.11 Royal Dutch Shell Plc
- 11.12 Petro-Canada Lubricants Inc.
- 11.13 Castrol Limited
- 11.14 Chaoshui Technology Corporation
- 11.15 BP p.l.c.
- 11.16 Idemitsu Kosan Corporation
- 11.17 Lubrizol Corporation
- 11.18 Quaker Houghton

List Of Tables

LIST OF TABLES

- 1 Global Metalworking Fluid Additives Market Outlook, By Region (2022-2030) (\$MN)
- 2 Global Metalworking Fluid Additives Market Outlook, By Additive Type (2022-2030) (\$MN)
- 3 Global Metalworking Fluid Additives Market Outlook, By Antioxidants (2022-2030) (\$MN)
- 4 Global Metalworking Fluid Additives Market Outlook, By Corrosion Inhibitors (2022-2030) (\$MN)
- 5 Global Metalworking Fluid Additives Market Outlook, By Emulsifiers (2022-2030) (\$MN)
- 6 Global Metalworking Fluid Additives Market Outlook, By Biocides (2022-2030) (\$MN)
- 7 Global Metalworking Fluid Additives Market Outlook, By Surfactants (2022-2030) (\$MN)
- 8 Global Metalworking Fluid Additives Market Outlook, By pH Control Agents (2022-2030) (\$MN)
- 9 Global Metalworking Fluid Additives Market Outlook, By Dispersants (2022-2030) (\$MN)
- 10 Global Metalworking Fluid Additives Market Outlook, By Other Additive Types (2022-2030) (\$MN)
- 11 Global Metalworking Fluid Additives Market Outlook, By Formulation (2022-2030) (\$MN)
- 12 Global Metalworking Fluid Additives Market Outlook, By Water-Soluble Metalworking Fluids (2022-2030) (\$MN)
- 13 Global Metalworking Fluid Additives Market Outlook, By Oil-Based Metalworking Fluids (2022-2030) (\$MN)
- 14 Global Metalworking Fluid Additives Market Outlook, By Synthetic Fluids (2022-2030) (\$MN)
- 15 Global Metalworking Fluid Additives Market Outlook, By Semisynthetic Fluids (2022-2030) (\$MN)
- 16 Global Metalworking Fluid Additives Market Outlook, By Other Formulations (2022-2030) (\$MN)
- 17 Global Metalworking Fluid Additives Market Outlook, By Application (2022-2030) (\$MN)
- 18 Global Metalworking Fluid Additives Market Outlook, By Cutting Fluids (2022-2030) (\$MN)
- 19 Global Metalworking Fluid Additives Market Outlook, By Grinding Fluids (2022-2030)

(\$MN)

20 Global Metalworking Fluid Additives Market Outlook, By Forming Fluids (2022-2030)

(\$MN)

21 Global Metalworking Fluid Additives Market Outlook, By Drawing & Stamping Fluids

(2022-2030) (\$MN)

22 Global Metalworking Fluid Additives Market Outlook, By Milling & Turning Fluids

(2022-2030) (\$MN)

23 Global Metalworking Fluid Additives Market Outlook, By Other Applications

(2022-2030) (\$MN)

24 Global Metalworking Fluid Additives Market Outlook, By End User (2022-2030)

(\$MN)

25 Global Metalworking Fluid Additives Market Outlook, By Automotive (2022-2030)

(\$MN)

26 Global Metalworking Fluid Additives Market Outlook, By Aerospace (2022-2030)

(\$MN)

27 Global Metalworking Fluid Additives Market Outlook, By Construction & Mining

(2022-2030) (\$MN)

28 Global Metalworking Fluid Additives Market Outlook, By Energy & Power

(2022-2030) (\$MN)

29 Global Metalworking Fluid Additives Market Outlook, By Electronics Manufacturing

(2022-2030) (\$MN)

30 Global Metalworking Fluid Additives Market Outlook, By Medical Devices

(2022-2030) (\$MN)

31 Global Metalworking Fluid Additives Market Outlook, By Other End Users

(2022-2030) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

I would like to order

Product name: Metalworking Fluid Additives Market Forecasts to 2030 – Global Analysis By Additive Type (Antioxidants, Corrosion Inhibitors, Emulsifiers, Biocides, Surfactants, pH Control Agents, Dispersants and Other Additive Types), Formulation, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/M5104634E121EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/M5104634E121EN.html>