

Bioengineered Industrial Chemicals Market Forecasts to 2034 – Global Analysis By Chemical Type (Bio-Based Organic Acids, Bio-Based Alcohols, Bio-Based Amino Acids, Bio-Based Polymers, Bio-Based Solvents, Bio-Based Surfactants, Bio-Based Industrial Intermediates and Other Bioengineered Chemicals), Biological Production Platform, Feedstock, Engineering Approach, Application, End User and By Geography

<https://marketpublishers.com/r/B8EA1371B4F9EN.html>

Date: September 2026

Pages: 200

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

ID: B8EA1371B4F9EN

Abstracts

According to Statistics MRC, the Global Bioengineered Industrial Chemicals Market is accounted for \$9.1 billion in 2026 and is expected to reach \$24.2 billion by 2034 growing at a CAGR of 13.0% during the forecast period. Bioengineered industrial chemicals refer to sustainably produced organic acids, alcohols, solvents, polymers, surfactants, and other intermediate compounds manufactured through biological processes using engineered microorganisms, enzymes, or cell-free systems that convert renewable feedstocks such as sugars, biomass, or waste streams into valuable chemical products. These bio-based chemicals are produced via microbial fermentation, biocatalysis, or synthetic biology approaches that reduce reliance on fossil-based feedstocks.

Market Dynamics:

Driver: Fossil-Based Chemical Substitution Mandates

Increasing regulatory pressure to reduce dependence on fossil-derived chemicals and growing corporate carbon-reduction commitments are accelerating procurement of

bioengineered industrial chemicals. Chemical manufacturers, consumer goods companies, and packaging producers are increasingly seeking renewable-content materials to meet sustainability targets, ESG expectations, and product-level carbon reduction objectives. Regulations promoting bio-based and biodegradable materials are expanding addressable applications across chemicals, packaging, textiles, personal care, and polymers. Consequently, companies are investing in fermentation capacity, synthetic biology platforms, and renewable feedstock processing to develop commercially scalable alternatives to conventional petrochemical products.

Restraint: Production Cost Competitiveness Gap

The persistent cost competitiveness gap between bioengineered chemicals and conventional petrochemical alternatives remains a major barrier to widespread market adoption. Fermentation-based production frequently requires specialized bioreactors, controlled processing environments, downstream purification, and energy-intensive separation processes, increasing overall manufacturing costs. Feedstock expenses and relatively limited production scale can further weaken economics compared with mature petrochemical facilities benefiting from established infrastructure and economies of scale. Without supportive policy incentives, carbon pricing, or customer willingness to pay sustainability premiums, bioengineered chemicals may face difficulty competing in large-volume commodity chemical applications.

Opportunity: Carbon Capture and Waste-Derived Feedstocks

Carbon capture and waste-derived feedstocks offer significant opportunities to expand sustainable chemical production while improving resource efficiency and reducing greenhouse gas emissions. Technologies using captured carbon dioxide, industrial off-gases, agricultural residues, municipal waste, and other waste streams can provide alternative carbon sources for bioengineered chemical manufacturing. Industrial gas fermentation is gaining commercial interest for converting carbon-rich steel mill and industrial emissions into valuable chemicals and intermediates. Integration of waste utilization, carbon capture, and biomanufacturing can create circular value chains while reducing reliance on food-based agricultural feedstocks and fossil resources.

Threat: Agricultural Commodity Feedstock Price Cycles

Fluctuations in agricultural commodity prices represent a significant threat to bioengineered chemical manufacturers that depend on corn, sugarcane, vegetable oils, and other biological feedstocks. Weather events, droughts, changing crop yields, geopolitical disruptions, transportation costs, and commodity-market speculation can substantially affect feedstock procurement expenses. Competition with food production, animal feed, and biofuel industries can further tighten supply and create feedstock allocation challenges. Rising agricultural input costs can weaken the price competitiveness of bioengineered chemicals against petrochemical alternatives, particularly in commodity markets where customers remain highly sensitive to

production costs.

COVID-19 Impact

The COVID-19 pandemic disrupted supply chains for agricultural feedstocks, specialty ingredients, fermentation inputs, and bioprocessing equipment, creating temporary challenges for bioengineered chemical manufacturers. However, the crisis simultaneously demonstrated the strategic value of flexible domestic biomanufacturing capabilities through rapid development and scaling of pharmaceutical, vaccine, and biotechnology production. Governments and private investors subsequently increased support for resilient domestic biomanufacturing infrastructure and advanced biotechnology platforms. Growing emphasis on supply-chain security, sustainable production, and reduced dependence on geographically concentrated manufacturing networks strengthened long-term investment in bioengineered chemicals and industrial biotechnology.

The Bio-Based Organic Acids segment is expected to be the largest during the forecast period

The Bio-Based Organic Acids segment is expected to account for the largest market share during the forecast period, supported by established large-scale fermentation pathways for products such as lactic acid, citric acid, and succinic acid. These organic acids have broad applications across food and beverages, pharmaceuticals, personal care, industrial chemicals, and bio-based polymers. Growing demand for polylactic acid (PLA) and other sustainable materials is creating additional downstream opportunities for bio-based acid producers. Established production infrastructure, recognized product functionality, and improving fermentation economics are expected to reinforce the segment's market leadership.

The Microbial Fermentation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Microbial Fermentation segment is predicted to witness the highest growth rate, driven by rapid advances in metabolic engineering, synthetic biology, strain optimization, and precision fermentation technologies. These developments are enabling microorganisms to produce increasingly complex chemicals from renewable and alternative feedstocks while improving yields and reducing processing requirements. Advances in bioreactor design, continuous fermentation, downstream processing, and process automation are further supporting commercial scalability. Increasing investment in industrial biotechnology and demand for sustainable chemical alternatives are expected to accelerate deployment of microbial fermentation platforms across diverse chemical manufacturing applications.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, supported by established fermentation infrastructure, abundant

agricultural feedstock availability, advanced biotechnology capabilities, and strong government support for domestic biomanufacturing. The United States has a mature ecosystem of biotechnology companies, research institutions, chemical manufacturers, and venture investors developing sustainable production platforms. Companies such as BASF, Genomatica, and Ginkgo Bioworks contribute to regional innovation and commercialization capabilities. Growing investment in renewable chemicals, synthetic biology, and domestic manufacturing capacity is further strengthening North America's competitive position.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by rapid expansion of chemical manufacturing, biotechnology capabilities, and industrial production across China, India, Japan, South Korea, and Southeast Asia. Governments are increasingly supporting biomanufacturing, synthetic biology, renewable chemicals, and sustainable industrial development through investment programs and policy initiatives. The region's large consumer base and expanding manufacturing sectors are generating strong demand for bio-based materials and specialty chemicals. Growing availability of agricultural resources, improving biotechnology infrastructure, and increasing corporate sustainability commitments are expected to accelerate regional market expansion.

Key players in the market

Some of the key players in Global Bioengineered Industrial Chemicals Market include BASF SE, DSM-Firmenich AG, Novonesis A/S, Corbion N.V., Genomatica, Inc., Ginkgo Bioworks Holdings, Inc., Gevo, Inc., LanzaTech Global, Inc., ADM, Cargill, Incorporated, DuPont de Nemours, Inc., Evonik Industries AG, Clariant AG, Braskem S.A., TotalEnergies SE, Covestro AG, Lonza Group Ltd., and Ajinomoto Co., Inc.

Key Developments:

In August 2026, BASF launched a bioengineered lactic acid facility dedicated to PLA bioplastic manufacturing applications. The venture expands sustainable material options, enabling lower carbon footprints for food packaging and consumer goods. In July 2026, Genomatica formed a strategic partnership for commercial-scale production of bio-based butanol. The collaboration accelerates the transition away from petrochemical feeds, offering renewable chemical alternatives for industrial applications. In June 2026, LanzaTech expanded its industrial fermentation capacity to convert waste gases into ethanol and chemicals. The carbon-capture initiative prevents industrial emissions while delivering sustainable raw materials for circular chemical

manufacturing.

Chemical Types Covered:

Bio-Based Organic Acids

Bio-Based Alcohols

Bio-Based Amino Acids

Bio-Based Polymers

Bio-Based Solvents

Bio-Based Surfactants

Bio-Based Industrial Intermediates

Other Bioengineered Chemicals

Biological Production Platforms Covered:

Microbial Fermentation

Engineered Microorganisms

Enzyme-Based Production

Cell-Free Biomanufacturing

Algae-Based Production

Plant-Based Biomanufacturing

Biocatalytic Production

Feedstocks Covered:

Sugars and Starch

Lignocellulosic Biomass

Vegetable Oils

Organic Waste

Industrial By-Products

CO₂-Derived Feedstocks

Other Renewable Feedstocks

Engineering Approaches Covered:

Metabolic Engineering

Synthetic Biology

Genome Editing

Protein Engineering

Enzyme Engineering

Directed Evolution

Computational Biology and AI-Assisted Engineering

Applications Covered:

Chemicals and Materials

Food and Beverage

Pharmaceuticals

Personal Care and Cosmetics

Agriculture

Energy and Biofuels

Paints, Coatings and Adhesives

Consumer and Industrial Products

End Users Covered:

Chemical Manufacturers

Biotechnology Companies

Pharmaceutical Companies

Food and Beverage Companies

Personal Care and Cosmetics Companies

Agricultural Companies

Energy and Fuel Producers

Industrial Manufacturers

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY CHEMICAL TYPE

- 5.1 Bio-Based Organic Acids
 - 5.1.1 Lactic Acid
 - 5.1.2 Succinic Acid
 - 5.1.3 Citric Acid
- 5.2 Bio-Based Alcohols
 - 5.2.1 Ethanol
 - 5.2.2 Butanol
- 5.3 Bio-Based Amino Acids
- 5.4 Bio-Based Polymers
- 5.5 Bio-Based Solvents
- 5.6 Bio-Based Surfactants
- 5.7 Bio-Based Industrial Intermediates
- 5.8 Other Bioengineered Chemicals

6 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY BIOLOGICAL PRODUCTION PLATFORM

- 6.1 Microbial Fermentation
 - 6.1.1 Bacterial Fermentation
 - 6.1.2 Yeast Fermentation
 - 6.1.3 Fungal Fermentation
- 6.2 Engineered Microorganisms
- 6.3 Enzyme-Based Production
- 6.4 Cell-Free Biomanufacturing
- 6.5 Algae-Based Production
- 6.6 Plant-Based Biomanufacturing
- 6.7 Biocatalytic Production

7 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY FEEDSTOCK

- 7.1 Sugars and Starch

- 7.1.1 Corn-Based Feedstock
- 7.1.2 Sugarcane-Based Feedstock
- 7.2 Lignocellulosic Biomass
- 7.3 Vegetable Oils
- 7.4 Organic Waste
- 7.5 Industrial By-Products
- 7.6 CO₂-Derived Feedstocks
- 7.7 Other Renewable Feedstocks

8 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY ENGINEERING APPROACH

- 8.1 Metabolic Engineering
- 8.2 Synthetic Biology
- 8.3 Genome Editing
- 8.4 Protein Engineering
- 8.5 Enzyme Engineering
- 8.6 Directed Evolution
- 8.7 Computational Biology and AI-Assisted Engineering

9 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY APPLICATION

- 9.1 Chemicals and Materials
 - 9.1.1 Industrial Intermediates
 - 9.1.2 Performance Materials
- 9.2 Food and Beverage
- 9.3 Pharmaceuticals
- 9.4 Personal Care and Cosmetics
- 9.5 Agriculture
- 9.6 Energy and Biofuels
- 9.7 Paints, Coatings and Adhesives
- 9.8 Consumer and Industrial Products

10 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY END USER

- 10.1 Chemical Manufacturers
- 10.2 Biotechnology Companies
- 10.3 Pharmaceutical Companies

- 10.4 Food and Beverage Companies
- 10.5 Personal Care and Cosmetics Companies
- 10.6 Agricultural Companies
- 10.7 Energy and Fuel Producers
- 10.8 Industrial Manufacturers

11 GLOBAL BIOENGINEERED INDUSTRIAL CHEMICALS MARKET, BY GEOGRAPHY

- 11.1 North America
 - 11.1.1 United States
 - 11.1.2 Canada
 - 11.1.3 Mexico
- 11.2 Europe
 - 11.2.1 United Kingdom
 - 11.2.2 Germany
 - 11.2.3 France
 - 11.2.4 Italy
 - 11.2.5 Spain
 - 11.2.6 Netherlands
 - 11.2.7 Belgium
 - 11.2.8 Sweden
 - 11.2.9 Switzerland
 - 11.2.10 Poland
 - 11.2.11 Rest of Europe
- 11.3 Asia Pacific
 - 11.3.1 China
 - 11.3.2 Japan
 - 11.3.3 India
 - 11.3.4 South Korea
 - 11.3.5 Australia
 - 11.3.6 Indonesia
 - 11.3.7 Thailand
 - 11.3.8 Malaysia
 - 11.3.9 Singapore
 - 11.3.10 Vietnam
 - 11.3.11 Rest of Asia Pacific
- 11.4 South America
 - 11.4.1 Brazil

- 11.4.2 Argentina
- 11.4.3 Colombia
- 11.4.4 Chile
- 11.4.5 Peru
- 11.4.6 Rest of South America
- 11.5 Rest of the World (RoW)
 - 11.5.1 Middle East
 - 11.5.1.1 Saudi Arabia
 - 11.5.1.2 United Arab Emirates
 - 11.5.1.3 Qatar
 - 11.5.1.4 Israel
 - 11.5.1.5 Rest of Middle East
 - 11.5.2 Africa
 - 11.5.2.1 South Africa
 - 11.5.2.2 Egypt
 - 11.5.2.3 Morocco
 - 11.5.2.4 Rest of Africa

12 STRATEGIC MARKET INTELLIGENCE

- 12.1 Industry Value Network and Supply Chain Assessment
- 12.2 White-Space and Opportunity Mapping
- 12.3 Product Evolution and Market Life Cycle Analysis
- 12.4 Channel, Distributor, and Go-to-Market Assessment

13 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 13.1 Mergers and Acquisitions
- 13.2 Partnerships, Alliances, and Joint Ventures
- 13.3 New Product Launches and Certifications
- 13.4 Capacity Expansion and Investments
- 13.5 Other Strategic Initiatives

14 COMPANY PROFILES

- 14.1 BASF SE
- 14.2 DSM-Firmenich AG
- 14.3 Novonesis A/S
- 14.4 Corbion N.V.

- 14.5 Genomatica, Inc.
- 14.6 Ginkgo Bioworks Holdings, Inc.
- 14.7 Gevo, Inc.
- 14.8 LanzaTech Global, Inc.
- 14.9 ADM
- 14.10 Cargill, Incorporated
- 14.11 DuPont de Nemours, Inc.
- 14.12 Evonik Industries AG
- 14.13 Clariant AG
- 14.14 Braskem S.A.
- 14.15 TotalEnergies SE
- 14.16 Covestro AG
- 14.17 Lonza Group Ltd.
- 14.18 Ajinomoto Co., Inc.

List Of Tables

LIST OF TABLES

Table 1 Global Bioengineered Industrial Chemicals Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Bioengineered Industrial Chemicals Market Outlook, By Chemical Type (2023-2034) (\$MN)

Table 3 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Organic Acids (2023-2034) (\$MN)

Table 4 Global Bioengineered Industrial Chemicals Market Outlook, By Lactic Acid (2023-2034) (\$MN)

Table 5 Global Bioengineered Industrial Chemicals Market Outlook, By Succinic Acid (2023-2034) (\$MN)

Table 6 Global Bioengineered Industrial Chemicals Market Outlook, By Citric Acid (2023-2034) (\$MN)

Table 7 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Alcohols (2023-2034) (\$MN)

Table 8 Global Bioengineered Industrial Chemicals Market Outlook, By Ethanol (2023-2034) (\$MN)

Table 9 Global Bioengineered Industrial Chemicals Market Outlook, By Butanol (2023-2034) (\$MN)

Table 10 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Amino Acids (2023-2034) (\$MN)

Table 11 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Polymers (2023-2034) (\$MN)

Table 12 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Solvents (2023-2034) (\$MN)

Table 13 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Surfactants (2023-2034) (\$MN)

Table 14 Global Bioengineered Industrial Chemicals Market Outlook, By Bio-Based Industrial Intermediates (2023-2034) (\$MN)

Table 15 Global Bioengineered Industrial Chemicals Market Outlook, By Other Bioengineered Chemicals (2023-2034) (\$MN)

Table 16 Global Bioengineered Industrial Chemicals Market Outlook, By Biological Production Platform (2023-2034) (\$MN)

Table 17 Global Bioengineered Industrial Chemicals Market Outlook, By Microbial Fermentation (2023-2034) (\$MN)

Table 18 Global Bioengineered Industrial Chemicals Market Outlook, By Bacterial

Fermentation (2023-2034) (\$MN)

Table 19 Global Bioengineered Industrial Chemicals Market Outlook, By Yeast

Fermentation (2023-2034) (\$MN)

Table 20 Global Bioengineered Industrial Chemicals Market Outlook, By Fungal

Fermentation (2023-2034) (\$MN)

Table 21 Global Bioengineered Industrial Chemicals Market Outlook, By Engineered
Microorganisms (2023-2034) (\$MN)

Table 22 Global Bioengineered Industrial Chemicals Market Outlook, By Enzyme-Based
Production (2023-2034) (\$MN)

Table 23 Global Bioengineered Industrial Chemicals Market Outlook, By Cell-Free
Biomanufacturing (2023-2034) (\$MN)

Table 24 Global Bioengineered Industrial Chemicals Market Outlook, By Algae-Based
Production (2023-2034) (\$MN)

Table 25 Global Bioengineered Industrial Chemicals Market Outlook, By Plant-Based
Biomanufacturing (2023-2034) (\$MN)

Table 26 Global Bioengineered Industrial Chemicals Market Outlook, By Biocatalytic
Production (2023-2034) (\$MN)

Table 27 Global Bioengineered Industrial Chemicals Market Outlook, By Feedstock
(2023-2034) (\$MN)

Table 28 Global Bioengineered Industrial Chemicals Market Outlook, By Sugars and
Starch (2023-2034) (\$MN)

Table 29 Global Bioengineered Industrial Chemicals Market Outlook, By Corn-Based
Feedstock (2023-2034) (\$MN)

Table 30 Global Bioengineered Industrial Chemicals Market Outlook, By Sugarcane-
Based Feedstock (2023-2034) (\$MN)

Table 31 Global Bioengineered Industrial Chemicals Market Outlook, By Lignocellulosic
Biomass (2023-2034) (\$MN)

Table 32 Global Bioengineered Industrial Chemicals Market Outlook, By Vegetable Oils
(2023-2034) (\$MN)

Table 33 Global Bioengineered Industrial Chemicals Market Outlook, By Organic Waste
(2023-2034) (\$MN)

Table 34 Global Bioengineered Industrial Chemicals Market Outlook, By Industrial By-
Products (2023-2034) (\$MN)

Table 35 Global Bioengineered Industrial Chemicals Market Outlook, By CO₂-Derived
Feedstocks (2023-2034) (\$MN)

Table 36 Global Bioengineered Industrial Chemicals Market Outlook, By Other
Renewable Feedstocks (2023-2034) (\$MN)

Table 37 Global Bioengineered Industrial Chemicals Market Outlook, By Engineering
Approach (2023-2034) (\$MN)

Table 38 Global Bioengineered Industrial Chemicals Market Outlook, By Metabolic Engineering (2023-2034) (\$MN)

Table 39 Global Bioengineered Industrial Chemicals Market Outlook, By Synthetic Biology (2023-2034) (\$MN)

Table 40 Global Bioengineered Industrial Chemicals Market Outlook, By Genome Editing (2023-2034) (\$MN)

Table 41 Global Bioengineered Industrial Chemicals Market Outlook, By Protein Engineering (2023-2034) (\$MN)

Table 42 Global Bioengineered Industrial Chemicals Market Outlook, By Enzyme Engineering (2023-2034) (\$MN)

Table 43 Global Bioengineered Industrial Chemicals Market Outlook, By Directed Evolution (2023-2034) (\$MN)

Table 44 Global Bioengineered Industrial Chemicals Market Outlook, By Computational Biology and AI-Assisted Engineering (2023-2034) (\$MN)

Table 45 Global Bioengineered Industrial Chemicals Market Outlook, By Application (2023-2034) (\$MN)

Table 46 Global Bioengineered Industrial Chemicals Market Outlook, By Chemicals and Materials (2023-2034) (\$MN)

Table 47 Global Bioengineered Industrial Chemicals Market Outlook, By Industrial Intermediates (2023-2034) (\$MN)

Table 48 Global Bioengineered Industrial Chemicals Market Outlook, By Performance Materials (2023-2034) (\$MN)

Table 49 Global Bioengineered Industrial Chemicals Market Outlook, By Food and Beverage (2023-2034) (\$MN)

Table 50 Global Bioengineered Industrial Chemicals Market Outlook, By Pharmaceuticals (2023-2034) (\$MN)

Table 51 Global Bioengineered Industrial Chemicals Market Outlook, By Personal Care and Cosmetics (2023-2034) (\$MN)

Table 52 Global Bioengineered Industrial Chemicals Market Outlook, By Agriculture (2023-2034) (\$MN)

Table 53 Global Bioengineered Industrial Chemicals Market Outlook, By Energy and Biofuels (2023-2034) (\$MN)

Table 54 Global Bioengineered Industrial Chemicals Market Outlook, By Paints, Coatings and Adhesives (2023-2034) (\$MN)

Table 55 Global Bioengineered Industrial Chemicals Market Outlook, By Consumer and Industrial Products (2023-2034) (\$MN)

Table 56 Global Bioengineered Industrial Chemicals Market Outlook, By End User (2023-2034) (\$MN)

Table 57 Global Bioengineered Industrial Chemicals Market Outlook, By Chemical

Manufacturers (2023-2034) (\$MN)

Table 58 Global Bioengineered Industrial Chemicals Market Outlook, By Biotechnology Companies (2023-2034) (\$MN)

Table 59 Global Bioengineered Industrial Chemicals Market Outlook, By Pharmaceutical Companies (2023-2034) (\$MN)

Table 60 Global Bioengineered Industrial Chemicals Market Outlook, By Food and Beverage Companies (2023-2034) (\$MN)

Table 61 Global Bioengineered Industrial Chemicals Market Outlook, By Personal Care and Cosmetics Companies (2023-2034) (\$MN)

Table 62 Global Bioengineered Industrial Chemicals Market Outlook, By Agricultural Companies (2023-2034) (\$MN)

Table 63 Global Bioengineered Industrial Chemicals Market Outlook, By Energy and Fuel Producers (2023-2034) (\$MN)

Table 64 Global Bioengineered Industrial Chemicals Market Outlook, By Industrial Manufacturers (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

I would like to order

Product name: Bioengineered Industrial Chemicals Market Forecasts to 2034 – Global Analysis By Chemical Type (Bio-Based Organic Acids, Bio-Based Alcohols, Bio-Based Amino Acids, Bio-Based Polymers, Bio-Based Solvents, Bio-Based Surfactants, Bio-Based Industrial Intermediates and Other Bioengineered Chemicals), Biological Production Platform, Feedstock, Engineering Approach, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/B8EA1371B4F9EN.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/B8EA1371B4F9EN.html>