

Chemical Recycling Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

<https://marketpublishers.com/r/CDC6056CF883EN.html>

Date: November 2025

Pages: 210

Price: US\$ 4,850.00 (Single User License)

ID: CDC6056CF883EN

Abstracts

The Global Chemical Recycling Market was valued at USD 815 million in 2024 and is estimated to grow at a CAGR of 36.1% to reach USD 18.5 billion by 2034.

Demand is accelerating as industries shift toward high-performance materials and sustainable production methods. The growing use of smart materials across packaging, electronics, and automotive manufacturing continues to elevate the need for high-purity recycled plastics, which mechanical processes often cannot supply. The volume of plastic waste collected worldwide highlights a significant opportunity for advanced conversion pathways such as depolymerization and pyrolysis, supporting the transition toward a more circular materials system. Consistent and traceable polymer feedstocks are becoming essential for specialized applications, particularly in sectors that require strict quality benchmarks. This trend encourages manufacturers to adopt chemically recycled inputs as part of their long-term sustainability strategies while ensuring that next-generation materials meet rigorous performance criteria. As chemical recycling technologies continue to evolve, strategic investments and expanding capacity are strengthening the market's foundation and accelerating the shift toward large-scale implementation, and continue to secure a major share of the chemical recycling landscape.

The pyrolysis segment reached USD 475.2 million in 2024. Its appeal stems from its ability to process diverse waste streams and convert them into valuable circular feedstocks such as syngas, naphtha, and pyrolysis oil, which can be routed back into modern petrochemical systems. Its adaptable nature and compatibility with current refining assets position it as a preferred choice among companies scaling advanced recycling operations.

The polyolefins segment accounted for USD 344 million in 2024, reflecting their substantial presence in global waste volumes and widespread use in consumer goods, packaging, and automotive components. Their molecular structure makes them particularly suitable for chemical recycling technologies that convert these polymers into new hydrocarbon-based materials used in circular polymer production.

North America Chemical Recycling Market held 30.2% share in 2024 owing to its expansive industrial infrastructure, well-capitalized market, and rapid adoption of advanced recycling platforms. The region demonstrates strong momentum supported by increasing production capacity and rising purchaser confidence.

Major companies in the Global Chemical Recycling Market include BASF SE, Dow Inc., Eastman Chemical Company, PureCycle Technologies, Shell plc, ExxonMobil Corporation, SABIC, Agilyx Corporation, Neste Corporation, Evonik, USEON Technology Limited, Andritz, Sulrez Ltd, Carbios SA, Shell Global, and Mura Technology. Companies competing in the Chemical Recycling Market focus on several strategic measures to secure stronger market positioning. Many are expanding production capacity to boost output of circular feedstocks, while others are entering partnerships with polymer producers and waste management firms to establish stable supply channels. Firms are accelerating R&D investments to improve depolymerization and pyrolysis efficiency, reduce operating costs, and enhance monomer purity. Several organizations are also adopting licensing models to scale their technology globally.

Contents

CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Market scope and definition
- 1.2 Research design
 - 1.2.1 Research approach
 - 1.2.2 Data collection methods
- 1.3 Data mining sources
 - 1.3.1 Global
 - 1.3.2 Regional/Country
- 1.4 Base estimates and calculations
 - 1.4.1 Base year calculation
 - 1.4.2 Key trends for market estimation
- 1.5 Primary research and validation
 - 1.5.1 Primary sources
- 1.6 Forecast model
- 1.7 Research assumptions and limitations

CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis
- 2.2 Key market trends
 - 2.2.1 Regional
 - 2.2.2 Technology
 - 2.2.3 Feedstock Type
 - 2.2.4 Polymer Type
 - 2.2.5 End Use Industry
- 2.3 TAM Analysis, 2025-2034
- 2.4 CXO perspectives: Strategic imperatives
 - 2.4.1 Executive decision points
 - 2.4.2 Critical success factors
- 2.5 Future Outlook and Strategic Recommendations

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
 - 3.1.1 Supplier Landscape
 - 3.1.2 Profit Margin

- 3.1.3 Value addition at each stage
- 3.1.4 Factor affecting the value chain
- 3.1.5 Disruptions
- 3.2 Industry impact forces
 - 3.2.1 Growth drivers
 - 3.2.1.1 Rising demand for smart materials
 - 3.2.1.2 Advancements in biomedical applications
 - 3.2.1.3 Growing aerospace and defense sector
 - 3.2.1.4 Increasing pressure from global sustainability regulations
 - 3.2.2 Industry pitfalls and challenges
 - 3.2.2.1 High energy and operational costs
 - 3.2.2.2 Limited scalability and infrastructure
 - 3.2.2.3 Complexity of mixed plastic waste
 - 3.2.3 Market opportunities
 - 3.2.3.1 Integration with existing petrochemical assets
 - 3.2.3.2 Growing demand for high-quality recycled polymers
 - 3.2.3.3 Supportive government policies and funding
- 3.3 Growth potential analysis
- 3.4 Regulatory landscape
 - 3.4.1 North America
 - 3.4.2 Europe
 - 3.4.3 Asia Pacific
 - 3.4.4 Latin America
 - 3.4.5 Middle East & Africa
- 3.5 Porter's analysis
- 3.6 PESTEL analysis
- 3.7 Price trends
 - 3.7.1 By region
 - 3.7.2 Technology
 - 3.7.3 Feedstock Type
 - 3.7.4 Polymer Type
 - 3.7.5 End Use Industry
- 3.8 Future market trends
- 3.9 Technology and Innovation Landscape
 - 3.9.1 Current technological trends
 - 3.9.2 Emerging technologies
- 3.10 Patent Landscape
- 3.11 Trade statistics (HS code) (Note: the trade statistics will be provided for key countries only)

- 3.11.1 Major importing countries
- 3.11.2 Major exporting countries
- 3.12 Sustainability and environmental aspects
 - 3.12.1 Sustainable practices
 - 3.12.2 Waste reduction strategies
 - 3.12.3 Energy efficiency in production
 - 3.12.4 Eco-friendly initiatives
- 3.13 Carbon footprint considerations

CHAPTER 4 COMPETITIVE LANDSCAPE, 2024

- 4.1 Introduction
- 4.2 Company market share analysis
 - 4.2.1 By region
 - 4.2.1.1 North America
 - 4.2.1.2 Europe
 - 4.2.1.3 Asia Pacific
 - 4.2.1.4 LATAM
 - 4.2.1.5 MEA
- 4.3 Company matrix analysis
- 4.4 Competitive analysis of major market players
- 4.5 Competitive positioning matrix
- 4.6 Key developments
 - 4.6.1 Mergers & acquisitions
 - 4.6.2 Partnerships & collaborations
 - 4.6.3 New product launches
 - 4.6.4 Expansion plans

CHAPTER 5 MARKET ESTIMATES AND FORECAST, BY TECHNOLOGY, 2021 - 2034 (USD MILLION) (KILO TONS)

- 5.1 Key trends
- 5.2 Pyrolysis
 - 5.2.1 Thermal cracking
 - 5.2.2 Catalytic pyrolysis
- 5.3 Gasification
 - 5.3.1 Plasma gasification
 - 5.3.2 Steam reforming
- 5.4 Depolymerization

- 5.4.1 Glycolysis
- 5.4.2 Methanolysis
- 5.4.3 Hydrolysis
- 5.5 Solvolysis
 - 5.5.1 Alcoholysis
 - 5.5.2 Ammonolysis
 - 5.5.3 Hydrothermal processing
- 5.6 Dissolution & Solvent-based recycling
 - 5.6.1 Selective dissolution
 - 5.6.2 Solvent extraction
- 5.7 Others
 - 5.7.1 Enzymatic recycling
 - 5.7.2 Microwave assisted recycling

CHAPTER 6 MARKET ESTIMATES AND FORECAST, BY FEEDSTOCK TYPE, 2021 - 2034 (USD MILLION) (KILO TONS)

- 6.1 Key trends
- 6.2 Plastic waste
 - 6.2.1 Plastic waste (PE)
 - 6.2.2 Polyethylene (PP)
 - 6.2.3 Polypropylene (PS)
 - 6.2.4 Polyethylene terephthalate (PET)
 - 6.2.5 Polyvinyl chloride
 - 6.2.6 Multilayer & mixed plastics
- 6.3 Textile waste
 - 6.3.1 Polyester fiber
 - 6.3.2 Nylon
- 6.4 Rubber waste
- 6.5 Industrial packaging waste

CHAPTER 7 MARKET ESTIMATES AND FORECAST, BY POLYMER TYPE, 2021 - 2034 (USD MILLION) (KILO TONS)

- 7.1 Key trends
- 7.2 Polyolefins (PE, PP)
- 7.3 Polyesters (PET, PBT)
- 7.4 Polystyrene (PS)
- 7.5 Polyamides (PA, Nylon)

7.6 Polyvinyl chloride (PVC)

7.7 Polycarbonate (PC)

7.8 Others

CHAPTER 8 MARKET ESTIMATES AND FORECAST, BY END USE INDUSTRY, 2021 - 2034 (USD MILLION) (KILO TONS)

8.1 Key trends

8.2 Packaging

8.2.1 Food & beverage packaging

8.2.2 Industrial packaging

8.3 Automotive

8.3.1 Interior and exterior components

8.3.2 Under-the-hood applications

8.4 Textiles & Apparel

8.4.1 Synthetic fiber

8.4.2 Clothing

8.5 Building & Construction

8.6 Electrical & Electronics

8.7 Consumer Goods

CHAPTER 9 MARKET ESTIMATES AND FORECAST, BY REGION, 2021 - 2034 (USD MILLION) (KILO TONS)

9.1 Key trends

9.2 North America

9.2.1 U.S.

9.2.2 Canada

9.3 Europe

9.3.1 Germany

9.3.2 UK

9.3.3 France

9.3.4 Spain

9.3.5 Italy

9.3.6 Rest of Europe

9.4 Asia Pacific

9.4.1 China

9.4.2 India

9.4.3 Japan

- 9.4.4 Australia
- 9.4.5 South Korea
- 9.4.6 Rest of Asia Pacific
- 9.5 Latin America
 - 9.5.1 Brazil
 - 9.5.2 Mexico
 - 9.5.3 Rest of Latin America
- 9.6 Middle East and Africa
 - 9.6.1 Saudi Arabia
 - 9.6.2 South Africa
 - 9.6.3 UAE
 - 9.6.4 Rest of Middle East and Africa

CHAPTER 10 COMPANY PROFILES

- 10.1 Eastman Chemical Company
- 10.2 BASF SE
- 10.3 ExxonMobil Corporation
- 10.4 Evonik
- 10.5 Dow Inc.
- 10.6 SABIC
- 10.7 Shell plc
- 10.8 Neste Corporation
- 10.9 PureCycle Technologies
- 10.10 Agilyx Corporation
- 10.11 Carbios SA
- 10.12 USEON Technology Limited
- 10.13 Andritz
- 10.14 Sulzer Ltd
- 10.15 Shell Global
- 10.16 Mura Technology

I would like to order

Product name: Chemical Recycling Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

Product link: <https://marketpublishers.com/r/CDC6056CF883EN.html>

Price: US\$ 4,850.00 (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/CDC6056CF883EN.html>