

The Global Market for Chemical Recycling and Dissolution of Plastics 2024-2040

<https://marketpublishers.com/r/G758E58C4E97EN.html>

Date: May 2024

Pages: 300

Price: US\$ 1,250.00 (Single User License)

ID: G758E58C4E97EN

Abstracts

The global plastics industry is facing a growing challenge - the need to address the environmental impact of plastic waste. As traditional waste management methods struggle to keep pace, advanced chemical recycling and dissolution technologies have emerged as a crucial solution to transform the industry towards a more sustainable, circular model. This comprehensive market report provides an in-depth analysis of the rapidly evolving landscape of chemical recycling and dissolution, offering stakeholders a roadmap to navigate this transformative shift.

The report begins by examining the global production and use of plastics, highlighting the importance of this material in modern society, as well as the issues associated with its widespread adoption. It delves into the rise of bio-based and biodegradable plastics, as well as the growing problem of plastic pollution and the policy and regulatory responses shaping the industry. At the heart of this report lies a detailed analysis of the advanced chemical recycling market, exploring the key drivers and trends that are propelling its growth. The report tracks the industry's dynamic developments, funding, and capacity expansions from 2020 to 2024, painting a comprehensive picture of the competitive landscape.

A critical comparative analysis of mechanical and chemical recycling is presented, underscoring the advantages and limitations of each approach. The report then provides an in-depth forecast of global polymer demand segmented by recycling technology, polymer type, and geographic region, offering stakeholders valuable insights to guide their strategic decision-making.

The report delves into the various advanced recycling technologies, including pyrolysis, gasification, dissolution, and depolymerization, providing a thorough examination of

their technical attributes, applications, market forecasts, and leading industry players. It also explores emerging trends, such as the recycling of thermoset materials and the chemical recycling of textiles, highlighting the industry's continuous evolution.

The report provides an in-depth exploration of the key advanced recycling technologies, including:

1. **Pyrolysis:** Leveraging thermal decomposition to convert plastic waste into valuable petrochemical products, along with the application of catalytic pyrolysis and the co-processing of biomass and plastic waste.
2. **Gasification:** Employing high-temperature, oxygen-limited processes to convert plastic waste into synthesis gas, which can be further processed into fuels, chemicals, or renewable natural gas.
3. **Dissolution:** Utilizing solvents to selectively dissolve and separate specific polymers from plastic waste, enabling the recovery of high-purity materials.
4. **Depolymerization:** Utilizing various chemical processes, such as hydrolysis, enzymolysis, methanolysis, and glycolysis, to break down polymers into their constituent monomers for reuse.

For each technology, the report provides a technical overview, market forecasts, SWOT analysis, and the leading industry players and their current and planned capacities. Additionally, the report explores emerging advanced recycling approaches, including hydrothermal cracking, microwave-assisted pyrolysis, plasma technologies, and the recycling of thermoset materials and carbon fibers, highlighting the continued innovation in this dynamic market.

The report projects the global demand for chemically recycled plastics to grow significantly, outpacing the growth of mechanically recycled plastics in key applications. This trajectory is driven by the increasing adoption of advanced recycling technologies, the need for higher-quality recycled content, and the rising demand for sustainable materials across diverse industries.

The global demand for chemically recycled plastics is analyzed across key regions, including Europe, North America, South America, Asia, Oceania, and Africa. The report provides detailed forecasts of polymer demand by recycling technology for each region, equipping stakeholders with a comprehensive understanding of the geographic

dynamics shaping the industry.

The report examines the life cycle assessments of advanced chemical recycling processes, comparing the environmental impacts and resource efficiency with traditional virgin plastic production and mechanical recycling. This analysis empowers stakeholders to make informed decisions and communicate the sustainability benefits of their products. The report also addresses the key challenges facing the advanced chemical recycling market, including technological limitations, feedstock availability, regulatory hurdles, and economic barriers, providing a balanced perspective on the industry's growth trajectory.

The report concludes with an extensive company profiling section, featuring over 160 leading players in the chemical recycling and dissolution market. This comprehensive industry landscape covers the technology developers, equipment manufacturers, chemical producers, and waste management companies driving the transformation of the plastics value chain. Each company profile provides detailed information on the organization's technology, capacity, strategic initiatives, and market positioning, equipping stakeholders with the necessary insights to identify potential partners, competitors, and investment opportunities. Companies profiled include Agilyx, APK?AG, Aquafil, Carbios, Eastman, Extractive, Fych Technologies, Garbo, gr3n SA, Hyundai Chemical Ioniqa, Itero, Licella, Mura Technology, revalyu Resources GmbH, Plastogaz SA, Plastic Energy, Polystyvert, Pyrowave, RePEaT Co., Ltd., Synova and SABIC (full list of companies profiled in table of contents).

Contents

1 CLASSIFICATION OF RECYCLING TECHNOLOGIES

2 RESEARCH METHODOLOGY

3 INTRODUCTION

- 3.1 Global production of plastics
- 3.2 The importance of plastic
- 3.3 Issues with plastics use
- 3.4 Bio-based or renewable plastics
 - 3.4.1 Drop-in bio-based plastics
 - 3.4.2 Novel bio-based plastics
- 3.5 Biodegradable and compostable plastics
 - 3.5.1 Biodegradability
 - 3.5.2 Compostability
- 3.6 Plastic pollution
- 3.7 Policy and regulations
- 3.8 The circular economy
- 3.9 Plastic recycling
 - 3.9.1 Mechanical recycling
 - 3.9.1.1 Closed-loop mechanical recycling
 - 3.9.1.2 Open-loop mechanical recycling
 - 3.9.1.3 Polymer types, use, and recovery
 - 3.9.2 Advanced recycling (molecular recycling, chemical recycling)
 - 3.9.2.1 Main streams of plastic waste
 - 3.9.2.2 Comparison of mechanical and advanced chemical recycling
- 3.10 Life cycle assessment

4 CHEMICAL RECYCLING MARKET

- 4.1 Market drivers and trends
- 4.2 Industry news, funding and developments 2020-2024
- 4.3 Capacities
- 4.4 Mechanical vs. Chemical Recycling
- 4.5 Global polymer demand 2022-2040, segmented by recycling technology
 - 4.5.1 PE
 - 4.5.2 PP

- 4.5.3 PET
- 4.5.4 PS
- 4.5.5 Nylon
- 4.5.6 Others
- 4.6 Mechanical vs chemical recycled packaging consumption by material, 2024-2040
 - 4.6.1 PET
 - 4.6.2 HDPE
 - 4.6.3 LDPE
 - 4.6.4 PP
 - 4.6.5 PS
- 4.7 Global polymer demand 2022-2040, segmented by recycling technology, by region
 - 4.7.1 Europe
 - 4.7.2 North America
 - 4.7.3 South America
 - 4.7.4 Asia
 - 4.7.5 Oceania
 - 4.7.6 Africa
- 4.8 Chemically recycled plastic products
- 4.9 Market map
- 4.10 Value chain
- 4.11 Life Cycle Assessments (LCA) of advanced plastics recycling processes
 - 4.11.1 PE
 - 4.11.2 PP
 - 4.11.3 PET
- 4.12 Recycled plastic yield and cost
 - 4.12.1 Plastic yield of each chemical recycling technologies
 - 4.12.2 Prices
- 4.13 Market challenges

5 CHEMICAL RECYCLING TECHNOLOGIES

- 5.1 Applications
- 5.2 Pyrolysis
 - 5.2.1 Feedstocks
 - 5.2.2 Non-catalytic
 - 5.2.3 Catalytic
 - 5.2.3.1 Polystyrene pyrolysis
 - 5.2.3.2 Pyrolysis for production of bio fuel
 - 5.2.3.3 Used tires pyrolysis

- 5.2.3.3.1 Conversion to biofuel
- 5.2.3.4 Co-pyrolysis of biomass and plastic wastes
- 5.2.4 SWOT analysis
- 5.2.5 Market forecast by polymer type
- 5.2.6 Companies and capacities
- 5.3 Gasification
 - 5.3.1 Technology overview
 - 5.3.1.1 Syngas conversion to methanol
 - 5.3.1.2 Biomass gasification and syngas fermentation
 - 5.3.1.3 Biomass gasification and syngas thermochemical conversion
 - 5.3.2 Market forecast by polymer type
 - 5.3.3 SWOT analysis
 - 5.3.4 Companies and capacities (current and planned)
- 5.4 Dissolution
 - 5.4.1 Technology overview
 - 5.4.2 SWOT analysis
 - 5.4.3 Market forecast by polymer type
 - 5.4.4 Companies and capacities (current and planned)
- 5.5 Depolymerisation
 - 5.5.1 Hydrolysis
 - 5.5.1.1 Technology overview
 - 5.5.1.2 SWOT analysis
 - 5.5.2 Enzymolysis
 - 5.5.2.1 Technology overview
 - 5.5.2.2 SWOT analysis
 - 5.5.3 Methanolysis
 - 5.5.3.1 Technology overview
 - 5.5.3.2 SWOT analysis
 - 5.5.4 Glycolysis
 - 5.5.4.1 Technology overview
 - 5.5.4.2 SWOT analysis
 - 5.5.5 Aminolysis
 - 5.5.5.1 Technology overview
 - 5.5.5.2 SWOT analysis
 - 5.5.6 Market forecast by polymer type
 - 5.5.7 Companies and capacities (current and planned)
- 5.6 Other advanced chemical recycling technologies
 - 5.6.1 Hydrothermal cracking
 - 5.6.2 Pyrolysis with in-line reforming

- 5.6.3 Microwave-assisted pyrolysis
- 5.6.4 Plasma pyrolysis
- 5.6.5 Plasma gasification
- 5.6.6 Supercritical fluids
- 5.6.7 Carbon fiber recycling
 - 5.6.7.1 Processes
 - 5.6.7.2 Companies
- 5.6.8 PHA chemical recycling
- 5.7 Advanced recycling of thermoset materials
 - 5.7.1 Thermal recycling
 - 5.7.1.1 Energy Recovery Combustion
 - 5.7.1.2 Anaerobic Digestion
 - 5.7.1.3 Pyrolysis Processing
 - 5.7.1.4 Microwave Pyrolysis
 - 5.7.2 Solvolysis
 - 5.7.3 Catalyzed Glycolysis
 - 5.7.4 Alcoholysis and Hydrolysis
 - 5.7.5 Ionic liquids
 - 5.7.6 Supercritical fluids
 - 5.7.7 Plasma
 - 5.7.8 Companies
- 5.8 Chemical recycling of textiles
 - 5.8.1 Overview
 - 5.8.2 Commercial activity

6 COMPANY PROFILES

- 6.1 Aduro Clean Technologies, Inc.
- 6.2 Aeternal Upcycling
- 6.3 Agilyx
- 6.4 Alpha Recyclage Composites
- 6.5 Alterra Energy
- 6.6 Ambercycle, Inc.
- 6.7 Anellotech, Inc.
- 6.8 Anhui Oursun Resource Technology Co., Ltd
- 6.9 APChemi Pvt. Ltd.
- 6.10 APK AG
- 6.11 Aquafil S.p.A.
- 6.12 ARCUS Greencycling GmbH

- 6.13 Arkema
- 6.14 Axens SA
- 6.15 BASF
- 6.16 Bcircular
- 6.17 BioBTX B.V.
- 6.18 Biofabrik Technologies GmbH
- 6.19 Blest (Microengineer Co., Ltd.)
- 6.20 Blue Cycle
- 6.21 BlueAlp Technology
- 6.22 Borealis AG
- 6.23 Boston Materials LLC
- 6.24 Braven Environmental, LLC
- 6.25 Brightmark
- 6.26 Cadel Deinking S.L.
- 6.27 Carbios
- 6.28 Carboliq GmbH
- 6.29 Carbon Fiber Recycling LLC
- 6.30 Cassandra Oil AB
- 6.31 CIRC
- 6.32 Chian Tianying
- 6.33 Chevron Phillips Chemical
- 6.34 Clariter
- 6.35 Clean Planet Energy
- 6.36 Corsair Group International
- 6.37 Covestro
- 6.38 CreaCycle GmbH
- 6.39 CuRe Technology BV
- 6.40 Cyclic Materials
- 6.41 Cyclize
- 6.42 DePoly SA
- 6.43 Dow Chemical Company
- 6.44 DyeRecycle
- 6.45 Eastman Chemical Company
- 6.46 Eco Fuel Technology, Inc
- 6.47 Ecopek S.A.
- 6.48 Eeden GmbH
- 6.49 Emery Oleochemicals
- 6.50 Encina Development Group, LLC
- 6.51 Enerkem, Inc.

- 6.52 Enval Ltd.
- 6.53 Environmental Solutions (Asia) Pte Ltd
- 6.54 Epoch Biodesign
- 6.55 Equipolymers GmbH
- 6.56 Evonik Industries AG
- 6.57 Evrnu
- 6.58 Extractive
- 6.59 ExxonMobil
- 6.60 Fairmat
- 6.61 Fulcrum BioEnergy
- 6.62 Futerro
- 6.63 Fych Technologies
- 6.64 Garbo S.r.l.
- 6.65 GreenMantra Technologies
- 6.66 Gr3n SA
- 6.67 Handerek Technologies
- 6.68 Hanwha Solutions
- 6.69 Honeywell
- 6.70 Hyundai Chemical
- 6.71 Indaver nv
- 6.72 InEnTec, Inc.
- 6.73 INEOS Styrolution
- 6.74 Infinited Fiber Company Oy
- 6.75 Ioncell Oy
- 6.76 Ioniqa Technologies B.V.
- 6.77 Itero Technologies
- 6.78 Itelyum
- 6.79 Jeplan, Inc.
- 6.80 JFE Chemical Corporation
- 6.81 Kaneka Corporation
- 6.82 Khepra
- 6.83 Klean Industries
- 6.84 Lanzatech
- 6.85 Licella
- 6.86 Loop Industries, Inc.
- 6.87 LOTTE Chemical
- 6.88 Lummus Technology LLC
- 6.89 LyondellBasell Industries Holdings B.V.
- 6.90 Metaspectral

- 6.91 Mint Innovation
- 6.92 Microwave Chemical Co. Ltd.
- 6.93 Mitsubishi Chemical
- 6.94 MolyWorks Materials
- 6.95 Mote, Inc.
- 6.96 Mura Technology
- 6.97 Nanya Plastics Corporation
- 6.98 NatureWorks
- 6.99 Neste Oyj
- 6.100 New Hope Energy
- 6.101 Nexus Circular LLC
- 6.102 Next Generation Group (NGR)
- 6.103 Novoloop
- 6.104 Olefy Technologies
- 6.105 OMV AG
- 6.106 Orlen Unipetrol Rpa S.r.o.
- 6.107 Österreichische Mineralölverwaltung (OMV)
- 6.108 PETRONAS Chemicals Group Berhad
- 6.109 Plastic Back
- 6.110 Plastic Energy Limited
- 6.111 Plastic2Oil, Inc.
- 6.112 Plastogaz SA
- 6.113 Poliloop
- 6.114 Polycycl
- 6.115 Polynate
- 6.116 PolyStyreneLoop
- 6.117 Polystyvert, Inc.
- 6.118 Poseidon Plastics
- 6.119 Premirr Plastics, Inc.
- 6.120 Protein Evolution
- 6.121 Pryme BV
- 6.122 PureCycle Technologies
- 6.123 Pyrowave
- 6.124 Qairos Energies
- 6.125 QuantaFuel ASA
- 6.126 Recenso GmbH
- 6.127 Recyc'ELIT
- 6.128 Reliance Industries Limited
- 6.129 ReNew ELP

- 6.130 Re:newcell
- 6.131 Renew One
- 6.132 RePEaT Co., Ltd.
- 6.133 Repsol
- 6.134 Resiclo Oy
- 6.135 Resynergi, Inc.
- 6.136 revalyu Resources GmbH
- 6.137 ReVital Polymers, Inc.
- 6.138 Rittec Umwelttechnik GmbH
- 6.139 Sabic
- 6.140 Samsara Eco Pty Ltd.
- 6.141 Saperatec GmbH
- 6.142 Scindo
- 6.143 SCG Chemicals
- 6.144 Sekisui Chemical Co., Ltd.
- 6.145 Shell
- 6.146 Showa Denko K.K.
- 6.147 Shuye Environmental Technology
- 6.148 Sierra Energy
- 6.149 SK Geo Centric (SKGC)
- 6.150 SK Global Chemical Co., Ltd.
- 6.151 Sulzer Chemtech AG
- 6.152 Sumitomo Chemical
- 6.153 Sweet Gazoil
- 6.154 Synova
- 6.155 Synpet Technologies
- 6.156 Technisoil Industrial
- 6.157 Teijin Frontier Co., Ltd.
- 6.158 TotalEnergies
- 6.159 Toyo Styrene Co., Ltd.
- 6.160 Trinseo
- 6.161 Triple Helix
- 6.162 Uflex
- 6.163 Valoren
- 6.164 Vartega Inc.
- 6.165 Velocys
- 6.166 Versalis SpA
- 6.167 Wastefront
- 6.168 Worn Again Technologies

6.169 Xycle

7 GLOSSARY OF TERMS

8 REFERENCES

List Of Tables

LIST OF TABLES

Table 1. Types of recycling.

Table 2. Issues related to the use of plastics.

Table 3. Type of biodegradation.

Table 4. Overview of the recycling technologies.

Table 5. Polymer types, use, and recovery.

Table 6. Composition of plastic waste streams.

Table 7. Comparison of mechanical and advanced chemical recycling.

Table 8. Life cycle assessment of virgin plastic production, mechanical recycling and chemical recycling.

Table 9. Life cycle assessment of chemical recycling technologies (pyrolysis, gasification, depolymerization and dissolution).

Table 10. Market drivers and trends in the advanced chemical recycling market.

Table 11. Advanced chemical recycling industry news, funding and developments 2020-2024.

Table 12. Advanced plastics recycling capacities, by technology.

Table 13. Mechanical vs. Chemical Recycling.

Table 14. Global polymer demand 2022-2040, segmented by recycling technology for PE (million tonnes).

Table 15. Global polymer demand 2022-2040, segmented by recycling technology for PP (million tonnes).

Table 16. Global polymer demand 2022-2040, segmented by recycling technology for PET (million tonnes).

Table 17. Global polymer demand 2022-2040, segmented by recycling technology for PS (million tonnes).

Table 18. Global polymer demand 2022-2040, segmented by recycling technology for Nylon (million tonnes).

Table 19. Global polymer demand 2022-2040, segmented by recycling technology for Other types (million tonnes).*

Table 20. Mechanical vs chemical recycled packaging consumption for PET, 2024-2040 (tonnes).

Table 21. Mechanical vs chemical recycled packaging consumption for HDPE, 2024-2040 (tonnes).

Table 22. Mechanical vs chemical recycled packaging consumption for LDPE, 2024-2040 (tonnes).

Table 23. Mechanical vs chemical recycled packaging consumption for PP, 2024-2040

(tonnes).

Table 24. Mechanical vs chemical recycled packaging consumption for PS, 2024-2040 (tonnes).

Table 25. Global polymer demand in Europe, by recycling technology 2022-2040 (million tonnes).

Table 26. Global polymer demand in North America, by recycling technology 2022-2040 (million tonnes).

Table 27. Global polymer demand in South America, by recycling technology 2022-2040 (million tonnes).

Table 28. Global polymer demand in Asia, by recycling technology 2022-2040 (million tonnes).

Table 29. Global polymer demand in Oceania, by recycling technology 2022-2040 (million tonnes).

Table 30. Global polymer demand in Africa, by recycling technology 2022-2040 (million tonnes).

Table 31. Example chemically recycled plastic products.

Table 32. Life Cycle Assessments (LCA) of Advanced Chemical Recycling Processes.

Table 33. Life cycle assessment of mechanically versus chemically recycling polyethylene (PE).

Table 34. Life cycle assessment of mechanically versus chemically recycling polypropylene (PP).

Table 35. Life cycle assessment of mechanically versus chemically recycling polyethylene terephthalate (PET).

Table 36. Plastic yield of each chemical recycling technologies.

Table 37. Chemically recycled plastics prices in USD.

Table 38. Challenges in the advanced chemical recycling market.

Table 39. Applications of chemically recycled materials.

Table 40. Summary of non-catalytic pyrolysis technologies.

Table 41. Summary of catalytic pyrolysis technologies.

Table 42. Summary of pyrolysis technique under different operating conditions.

Table 43. Biomass materials and their bio-oil yield.

Table 44. Biofuel production cost from the biomass pyrolysis process.

Table 45. Pyrolysis market forecast by polymer type 2024-2040.

Table 46. Pyrolysis companies and plant capacities, current and planned.

Table 47. Summary of gasification technologies.

Table 48. Gasification market forecast by polymer type 2024-2040.

Table 49. Advanced recycling (Gasification) companies.

Table 50. Summary of dissolution technologies.

Table 51. Dissolution market forecast by polymer type 2024-2040.

- Table 52. Advanced recycling (Dissolution) companies
- Table 53. Depolymerisation processes for PET, PU, PC and PA, products and yields.
- Table 54. Summary of hydrolysis technologies-feedstocks, process, outputs, commercial maturity and technology developers.
- Table 55. Summary of Enzymolysis technologies-feedstocks, process, outputs, commercial maturity and technology developers.
- Table 56. Summary of methanolysis technologies-feedstocks, process, outputs, commercial maturity and technology developers.
- Table 57. Summary of glycolysis technologies-feedstocks, process, outputs, commercial maturity and technology developers.
- Table 58. Summary of aminolysis technologies.
- Table 59. Depolymerization market forecast by polymer type 2024-2040.
- Table 60. Advanced recycling (Depolymerisation) companies and capacities (current and planned).
- Table 61. Overview of hydrothermal cracking for advanced chemical recycling.
- Table 62. Overview of Pyrolysis with in-line reforming for advanced chemical recycling.
- Table 63. Overview of microwave-assisted pyrolysis for advanced chemical recycling.
- Table 64. Overview of plasma pyrolysis for advanced chemical recycling.
- Table 65. Overview of plasma gasification for advanced chemical recycling.
- Table 66. Summary of carbon fiber (CF) recycling technologies. Advantages and disadvantages.
- Table 67. Retention rate of tensile properties of recovered carbon fibres by different recycling processes.
- Table 68. Recycled carbon fiber producers, technology and capacity.
- Table 69. Current thermoset recycling routes.
- Table 70. Companies developing advanced thermoset recycling routes.
- Table 71. Companies in chemical textile recycling.

List Of Figures

LIST OF FIGURES

Figure 1. Global plastics production 1950-2021, millions of tonnes.

Figure 2. Coca-Cola PlantBottle®.

Figure 3. Interrelationship between conventional, bio-based and biodegradable plastics.

Figure 4. Global production, use, and fate of polymer resins, synthetic fibers, and additives.

Figure 5. The circular plastic economy.

Figure 6. Current management systems for waste plastics.

Figure 7. Overview of the different circular pathways for plastics.

Figure 8. Global polymer demand 2022-2040, segmented by recycling technology for PE (million tonnes).

Figure 9. Global polymer demand 2022-2040, segmented by recycling technology for PP (million tonnes).

Figure 10. Global polymer demand 2022-2040, segmented by recycling technology for PET (million tonnes).

Figure 11. Global polymer demand 2022-2040, segmented by recycling technology for PS (million tonnes).

Figure 12. Global polymer demand 2022-2040, segmented by recycling technology for Nylon (million tonnes).

Figure 13. Global polymer demand 2022-2040, segmented by recycling technology for Other types (million tonnes).

Figure 14. Table 20. Mechanical vs chemical recycled packaging consumption for PET, 2024-2040 (tonnes).

Figure 15. Table 20. Mechanical vs chemical recycled packaging consumption for HDPE, 2024-2040 (tonnes).

Figure 16. Table 20. Mechanical vs chemical recycled packaging consumption for LDPE, 2024-2040 (tonnes).

Figure 17. Table 20. Mechanical vs chemical recycled packaging consumption for PP, 2024-2040 (tonnes).

Figure 18. Table 20. Mechanical vs chemical recycled packaging consumption for PS, 2024-2040 (tonnes).

Figure 19. Global polymer demand in Europe, by recycling technology 2022-2040 (million tonnes).

Figure 20. Global polymer demand in North America, by recycling technology 2022-2040 (million tonnes).

Figure 21. Global polymer demand in South America, by recycling technology

2022-2040 (million tonnes).

Figure 22. Global polymer demand in Asia, by recycling technology 2022-2040 (million tonnes).

Figure 23. Global polymer demand in Oceania, by recycling technology 2022-2040 (million tonnes).

Figure 24. Global polymer demand in Africa, by recycling technology 2022-2040 (million tonnes).

Figure 25. Market map for advanced plastics recycling.

Figure 26. Value chain for advanced plastics recycling market.

Figure 27. Schematic layout of a pyrolysis plant.

Figure 28. Waste plastic production pathways to (A) diesel and (B) gasoline

Figure 29. Schematic for Pyrolysis of Scrap Tires.

Figure 30. Used tires conversion process.

Figure 31. SWOT analysis-pyrolysis for advanced recycling.

Figure 32. Pyrolysis market forecast by polymer type 2024-2040.

Figure 33. Total syngas market by product in MM Nm³/h of Syngas, 2021.

Figure 34. Overview of biogas utilization.

Figure 35. Biogas and biomethane pathways.

Figure 36. Gasification market forecast by polymer type 2024-2040.

Figure 37. SWOT analysis-gasification for advanced recycling.

Figure 38. SWOT analysis-dissolution for advanced recycling.

Figure 39. Dissolution market forecast by polymer type 2024-2040.

Figure 40. Products obtained through the different solvolysis pathways of PET, PU, and PA.

Figure 41. SWOT analysis-Hydrolysis for advanced chemical recycling.

Figure 42. SWOT analysis-Enzymolysis for advanced chemical recycling.

Figure 43. SWOT analysis-Methanolysis for advanced chemical recycling.

Figure 44. SWOT analysis-Glycolysis for advanced chemical recycling.

Figure 45. SWOT analysis-Aminolysis for advanced chemical recycling.

Figure 46. Depolymerization market forecast by polymer type 2024-2040.

Figure 47. NewCycling process.

Figure 48. ChemCyclingTM prototypes.

Figure 49. ChemCycling circle by BASF.

Figure 50. Recycled carbon fibers obtained through the R3FIBER process.

Figure 51. Cassandra Oil process.

Figure 52. CuRe Technology process.

Figure 53. MoReTec.

Figure 54. Chemical decomposition process of polyurethane foam.

Figure 55. OMV ReOil process.

Figure 56. Schematic Process of Plastic Energy's TAC Chemical Recycling.

Figure 57. Easy-tear film material from recycled material.

Figure 58. Polyester fabric made from recycled monomers.

Figure 59. A sheet of acrylic resin made from conventional, fossil resource-derived MMA monomer (left) and a sheet of acrylic resin made from chemically recycled MMA monomer (right).

Figure 60. Teijin Frontier Co., Ltd. Depolymerisation process.

Figure 61. The Velocys process.

Figure 62. The Proesa® Process.

Figure 63. Worn Again products.

I would like to order

Product name: The Global Market for Chemical Recycling and Dissolution of Plastics 2024-2040

Product link: <https://marketpublishers.com/r/G758E58C4E97EN.html>

Price: US\$ 1,250.00 (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/G758E58C4E97EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970