

# **Polylactic Acid Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, By Raw Material (Corn, Cassava, Sugarcane/Sugar Beet), By Application (Rigid Thermoforms, Films & Sheets, Bottles), By End-Use Industry (Packaging, Consumer Goods, Agriculture, Textile, Bio-Medical, Others (Automotive & Transportation, Electronics)), By Region and Competition, 2019-2029F**

<https://marketpublishers.com/r/P576EF07D446EN.html>

Date: July 2024

Pages: 190

Price: US\$ 4,900.00 (Single User License)

ID: P576EF07D446EN

## **Abstracts**

Global Polylactic Acid Market was valued at USD 1228.03 million in 2023 and is anticipated to project robust growth in the forecast period with a CAGR of 39.73% through 2029. The polymer of polylactic acid (PLA) differs from the commonly available thermoplastic polymers. It is predominantly composed of renewable resources such as sugarcane. PLA is a popular material because it is relatively inexpensive and possesses various beneficial mechanical properties compared to other biodegradable polymers. PLA is primarily derived from plant-based sources, including sugarcane, cassava, corn, and potato. Alternative feedstocks such as agricultural by-products, cellulosic materials, and greenhouse gases have also been explored. However, the process is still under development, and agricultural products are expected to remain the primary source for starch blends and PLA in the foreseeable future. The growth of the PLA market is primarily driven by the increasing demand in end-use sectors such as textiles, packaging, and agriculture. Additionally, the lower carbon emissions associated with polylactic acid compared to traditional polymers contribute to global demand. Moreover, the rising demand for flexible packaging products further fuels market growth. The packaging industry is experiencing a surge due to the growing demand for packaged foods, snacks, ready-to-eat (RTE) meals, and other consumer goods. Consequently,

the demand for PLA is expected to rise in the forecast period due to the rapid expansion of the packaging industry.

## Key Market Drivers

### Growing Demand of Polylactic Acid in Automotive Industry

Polylactic Acid (PLA), a biodegradable and bio-based polymer derived from renewable resources such as corn starch or sugarcane, represents a highly attractive alternative to traditional petroleum-based plastics within the automotive industry. PLA's inherent advantages, including its relatively low density, make it particularly well-suited for use in vehicle lightweighting. As automotive manufacturers increasingly focus on enhancing fuel efficiency and reducing carbon emissions, the incorporation of PLA into various vehicle components is instrumental in achieving these objectives.

The lightweight nature of PLA significantly contributes to the overall reduction of vehicle weight, which is a critical factor in improving fuel efficiency. By replacing conventional materials with PLA in components such as interior panels and non-structural parts, automakers can enhance the vehicle's performance while also advancing their sustainability goals. This shift not only helps in lowering the vehicle's overall carbon footprint but also aligns with the growing consumer and regulatory demand for eco-friendly automotive solutions. PLA's pliability and its compatibility with various shading agents enable manufacturers to create versatile and visually appealing components. This is particularly valuable for interior design elements and non-structural parts, where aesthetic appeal and customization are paramount. PLA's flexibility allows for the production of intricately designed parts that meet both functional and design requirements, enhancing the overall driving experience.

In practical terms, PLA is increasingly used to manufacture a range of interior components, including door panels, dashboard trims, and center console parts. These components benefit from PLA's lightweight properties, which contribute to vehicle efficiency, as well as its ability to be tailored for diverse design specifications. The sustainable appeal of PLA further adds to its attractiveness, offering a compelling solution for manufacturers aiming to balance performance, design, and environmental considerations. The adoption of PLA in the automotive sector not only supports the industry's push towards more sustainable practices but also provides a means to innovate in vehicle design and functionality, meeting both operational and environmental objectives effectively.

## Increasing Demand of Polylactic Acid in Packaging Industry

As consumer demand for greener and more responsible packaging solutions intensifies, the industry is increasingly compelled to adopt materials that align with sustainability objectives. Polylactic Acid (PLA), a biopolymer derived from renewable resources such as corn starch or sugarcane, has emerged as a highly attractive option in response to this growing demand for eco-friendly packaging. PLA's biodegradability and compostability position it as a viable alternative to conventional petroleum-based plastics, catering to the rising consumer preference for environmentally responsible products.

The shift in consumer behavior toward purchasing items with sustainable packaging reflects a heightened awareness of environmental issues. Consumers are now more inclined to support brands that demonstrate a commitment to reducing their environmental impact. Consequently, brands that incorporate PLA into their packaging strategies can gain a competitive advantage by appealing to these environmentally conscious consumers. PLA's role in enhancing a brand's sustainability profile can drive consumer loyalty and differentiate products in a crowded market. PLA's contribution to the circular economy is particularly significant. As composting infrastructure continues to advance, PLA packaging can be efficiently collected, processed, and returned to the earth, completing a sustainable materials cycle. This closed-loop system supports the reduction of waste and minimizes the environmental footprint of packaging materials. As the infrastructure for composting and waste management evolves, PLA's role in achieving sustainability goals becomes increasingly prominent. In the food industry, PLA is gaining traction for applications ranging from food containers to wraps and films. Its suitability for direct contact with edible items makes it an excellent choice for packaging that maintains the freshness of perishable goods while providing a more sustainable alternative to traditional plastics. PLA's ability to offer both functionality and environmental benefits positions it as a valuable material for food packaging solutions.

The cosmetics industry is transitioning towards PLA packaging for products such as creams, lotions, and shampoos. PLA's aesthetic appeal, along with its customizable nature, aligns well with the visual and branding requirements of cosmetic products. By adopting PLA, cosmetics brands not only enhance the visual appeal of their packaging but also reinforce their commitment to sustainability, resonating with consumers who prioritize eco-friendly products. The adoption of PLA in packaging is indicative of a broader trend towards sustainability across various industries. As consumer preferences shift towards environmentally responsible solutions, PLA provides a compelling option that supports both functional and ecological objectives. Brands that

embrace PLA packaging stand to benefit from enhanced market positioning, improved consumer perception, and a stronger alignment with global sustainability goals.

### Growing Demand of Polylactic Acid in Electronic Industry

Polylactic Acid (PLA), a biodegradable and bio-based polymer, has emerged as a transformative material in the electronics industry, significantly influencing the global PLA market. PLA's increasing adoption in this sector highlights its critical role in driving innovation and sustainability within electronics manufacturing. PLA's most notable attributes is its lightweight nature, which makes it an ideal choice for electronic applications. The reduced weight of PLA contributes to the overall compactness and portability of electronic devices, enhancing user convenience and comfort. Additionally, the lightweight properties of PLA help lower transportation emissions, aligning with broader environmental goals and supporting the electronics industry's push towards more sustainable practices. PLA's strength and mechanical properties further enhance its utility in the electronics sector. The material's durability enables it to withstand the rigors of daily use, making it suitable for various electronic components that require resilience and reliability. PLA's ability to be molded into different shapes and forms provides manufacturers with the flexibility to create custom-fit parts for diverse electronic devices, meeting specific design and functionality requirements.

In terms of thermal management, PLA's thermal properties make it a viable option for applications where components generate heat, such as printed circuit boards (PCBs). Its capability to endure elevated temperatures positions PLA as a compatible material with emerging technologies, including 5G networks and the Internet of Things (IoT). As these technologies advance and demand more robust and heat-resistant materials, PLA's performance in high-temperature environments becomes increasingly valuable. PLA's combination of lightweight, durable, and thermally stable properties makes it a compelling material for the electronics industry. Its versatility not only supports the development of more efficient and sustainable electronic devices but also aligns with the industry's evolving needs and technological advancements. As PLA continues to gain traction in this sector, it drives innovation and contributes to the global shift towards more sustainable and eco-friendly manufacturing practices.

### Growth in Technological Advancements

Technological advancements have significantly enhanced the development of Polylactic Acid (PLA) and its various blends, allowing for the customization of its properties to suit specific applications. By incorporating different polymers or additives such as fibers,

nanoparticles, or fire retardants, manufacturers can engineer PLA materials with a broad range of properties. These innovations have expanded PLA's applicability across diverse sectors, including electronics, automotive, and medical devices, underscoring its versatility and adaptability in meeting industry-specific demands. One notable advancement is the integration of PLA in 3D printing, also known as additive manufacturing. PLA's inherent biodegradability and ease of processing make it particularly well-suited for 3D printing applications. This technology enables the creation of complex and customized designs, facilitating rapid prototyping and product personalization. The use of PLA in 3D printing not only accelerates the development cycle but also helps in reducing material waste, contributing to more sustainable manufacturing practices.

Also, traditional plastic recycling facilities are often ill-equipped to handle PLA, and improper disposal can impede its biodegradation process. To address these challenges, technological innovations are focusing on the development of specialized recycling and composting facilities designed specifically for PLA. These advancements aim to improve the efficiency of PLA recycling and ensure its effective integration into the circular economy. By creating dedicated systems for PLA waste management, the industry can better support the material's environmental benefits and enhance its sustainability profile. Ongoing technological progress in PLA blends and 3D printing, coupled with developments in recycling and composting infrastructure, is driving the material's evolution and application across various industries. These advancements not only expand PLA's utility but also support its role in promoting sustainable and innovative manufacturing solutions.

## Key Market Challenges

### Lack of Composting Infrastructure

PLA products tossed into conventional waste streams often end up in landfills or incinerators, where they decompose at a much slower rate than they would in an industrial composting facility. This defeats the purpose of using a biodegradable material, as the intended environmental benefits are not realized. When PLA products enter recycling streams, they can contaminate conventional plastic recycling processes, leading to issues with recycling and exacerbating the plastic pollution problem. Sorting PLA from traditional plastics is challenging, and the lack of awareness among consumers about proper disposal worsens the problem. Moreover, the absence of easily accessible composting facilities discourages consumers from choosing PLA products, as they are uncertain about how to dispose of them responsibly. This limits

the market's growth potential and inhibits the positive environmental impact that PLA can have.

### Complex Production Process

PLA's feedstock, primarily corn and sugarcane, compete with other essential industries such as food and energy. As global populations rise, the demand for food crops and biofuels increases, potentially leading to competition for resources. Balancing the need for bio-based materials like PLA with food security and energy production is a significant challenge that requires careful resource management and sustainable agricultural practices. PLA production requires significant amounts of resources, including water, energy, and land. The process of converting feedstocks into lactic acid and eventually PLA involves various energy-intensive steps such as fermentation, distillation, and polymerization. The production of PLA involves intricate chemical reactions, precise control of reaction conditions, and the use of specialized equipment. Developing and maintaining these technologies requires a substantial investment in research and development.

### Key Market Trends

#### Growing Evolution of Bioplastics

PLA is made from plant-based feedstocks and has garnered significant attention due to its biodegradability and reduced carbon footprint compared to petroleum-based plastics. The concept of a circular economy, where materials are used, reused, and recycled in a closed loop, aligns seamlessly with PLA's biodegradability. PLA's ability to compost under controlled conditions supports the concept of returning materials to the environment in a way that enriches rather than pollutes. As circular economy initiatives gain traction, PLA is poised to play a pivotal role in creating a sustainable materials ecosystem.

#### Use of PLA in 3D Printing

PLA's popularity in 3D printing is on the rise due to its eco-friendly nature. It is ideally suited for such applications, boasting exceptional printability features like minimal shrinkage and warping while also yielding superior prints with sleek surface finishes. Its compatibility with a broad spectrum of 3D printers, encompassing both FDM and SLA types, further bolsters its appeal within the 3D printing community. Manufacturers are innovating reinforced PLA compositions to augment its mechanical characteristics, such

as strength, resilience, and thermal endurance. These enhanced PLA filaments broaden the horizons of PLA's applications in 3D printing, facilitating the creation of sturdier and more functional components across diverse sectors. In April 2024, Filamentive, a UK-based manufacturer of 3D printing filament, launched a new service for recycling PLA 3D printing waste, which is offered free of charge. In December 2023, researchers at MIT employed 3D printing to develop self-heating microfluidic devices. Utilizing a multimaterial 3D printer, the team created a heating resistor using copper-infused PLA, and then proceeded to print the microfluidic device, complete with microscopic channels for fluid flow, directly on top in a single printing operation.

### Technological Advancement

Technological advancements enhance PLA's properties by integrating bio-based additives like nucleating agents and plasticizers, enabling customization for specific applications. Functional additives such as antimicrobial agents and UV stabilizers broaden PLA's use across industries. Advancements in recycling and composting improve PLA's sustainability. These innovations drive growth and innovation in the PLA industry.

### Segmental Insights

#### Raw Material Insights

In 2023, the polylactic acid market was dominated by Corn segment and is predicted to continue expanding over the coming years. Corn is one of the most abundantly grown crops worldwide, providing a readily available and sustainable source of starch, the primary raw material for PLA. The extensive cultivation of corn, especially in major agricultural regions such as the United States, China, and Brazil, ensures a consistent and reliable supply chain for PLA manufacturers. The established agricultural infrastructure and efficient corn production processes contribute to the cost-effectiveness and scalability of PLA production. Corn's high starch content makes it an ideal feedstock for PLA production. The process of converting corn starch into lactic acid, and subsequently into PLA, is well-optimized and yields high efficiency. This high conversion rate minimizes waste and maximizes the output of PLA, making it a preferred choice for manufacturers seeking to optimize production costs and environmental impact.

The economic viability of using corn as a feedstock for PLA is a significant factor driving its dominance in the market. Corn-derived PLA benefits from economies of scale, as the

large-scale cultivation and processing of corn reduce raw material costs. This cost advantage is crucial in making PLA competitive with traditional petroleum-based plastics and other bioplastics. Additionally, the use of corn for PLA production supports the agricultural economy, providing farmers with a stable market for their crops. Technological advancements in corn processing and biorefinery techniques have further bolstered the dominance of the corn segment in the PLA market. Innovations in enzymatic hydrolysis and fermentation processes have improved the efficiency and sustainability of converting corn starch into lactic acid. These advancements enhance the overall environmental profile of PLA, making it an even more attractive option for environmentally conscious consumers and industries.

### End-Use Industry Insights

In 2023, the polylactic acid market was dominated by the packaging and is predicted to continue expanding over the coming years. The increasing consumer preference for eco-friendly products is a primary driver of PLA's dominance in the packaging sector. As environmental concerns and awareness of plastic pollution grow, there is a significant shift towards sustainable packaging alternatives. PLA, being biodegradable and derived from renewable resources, offers a compelling solution for reducing the environmental impact associated with traditional petroleum-based plastics. Packaging companies are increasingly adopting PLA to align with consumer expectations and regulatory pressures for more sustainable packaging options. PLA's versatility in application is a crucial factor in its dominance within the packaging sub-segment. PLA films can be engineered to offer various barrier properties, such as moisture resistance and gas permeability, which are essential for preserving the freshness and extending the shelf life of packaged goods. This adaptability allows PLA to be used in a wide range of packaging formats, including food containers, beverage bottles, and flexible packaging. The ability to tailor PLA's properties to meet specific packaging needs enhances its appeal and drives its widespread adoption across diverse packaging applications.

Technological advancements in PLA production and processing have further bolstered its position in the packaging market. Innovations in PLA formulation and manufacturing techniques have improved its performance characteristics, such as strength, transparency, and heat resistance. These enhancements make PLA suitable for high-performance packaging applications, including those requiring durability and aesthetic appeal. Additionally, improvements in the efficiency of PLA production processes have reduced costs, making PLA a more competitive option compared to traditional packaging materials. Regulatory frameworks and government incentives supporting the use of sustainable materials have also played a significant role in driving PLA's



dominance in packaging. Many countries and regions have implemented regulations that restrict the use of single-use plastics and promote the adoption of biodegradable alternatives. These regulations create a favorable environment for PLA packaging solutions, as companies seek to comply with environmental standards and benefit from incentives such as tax breaks or subsidies for using sustainable materials.

## Regional Insights

The Asia Pacific region has established itself as the leader in the Global Polylactic Acid Market. The Asia-Pacific (APAC) region is establishing itself as a dominant force in the global polylactic acid (PLA) market due to several pivotal factors. The region's robust industrial and manufacturing infrastructure, particularly in countries like China, India, and Japan, has led to significant investments in PLA production facilities. This expansion has markedly increased manufacturing capacity, enabling APAC to meet the growing global demand for PLA and reinforce its position as a leading supplier. Additionally, the cost-effective availability of raw materials and efficient production processes in APAC translates to lower production costs, making PLA more affordable and driving higher adoption rates.

The growing emphasis on environmental sustainability within APAC aligns with global trends towards reducing plastic waste and adopting eco-friendly alternatives. Increased consumer awareness and preference for sustainable products are driving demand for PLA, which is valued for its biodegradability and environmental benefits. Supportive regulatory environments in APAC countries, which include stricter plastic use regulations and incentives for biodegradable materials, further bolster the region's dominance in the PLA market. APAC is at the forefront of PLA technology innovation, with significant investments in research and development aimed at enhancing PLA properties and expanding its applications. The development of advanced PLA formulations and production techniques, such as high-performance blends and improved processing methods, is broadening PLA's functionality across various industries, including packaging, textiles, and automotive. Strategic collaborations and partnerships among industry players, research organizations, and academic institutions in APAC facilitate knowledge exchange and accelerate the development of new PLA technologies, strengthening the region's market leadership.

## Key Market Players

NatureWorks LLC

Futero PLA

TotalEnergies Corbion bv

Zhejiang Hisun Biomaterials Co., Ltd

Jiangxi Keyuan Bio-Material Co., Ltd

Shanghai Tong-jie-liang Biomaterials Co.,LTD

Jilin COFCO biomaterials Co., Ltd., etc.

Mitsubishi Chemical America, Inc

Danimer Scientific, Inc.

BASF SE

UNITIKA LTD

Galactic S.A

#### Report Scope:

In this report, the Global Polylactic Acid Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

#### Polylactic Acid Market, By Raw Material:

Corn starch

Sugarcane

Cassava

Others

#### Polylactic Acid Market, By Application:

Rigid thermoform

Film & sheets

Bottles

Polylactic Acid Market, By End Use Industry:

Packaging

Agriculture

Automotive & transportation

Electronics

Textile

Consumer goods

Bio-medical

Others

Polylactic Acid Market, By Region:

Asia Pacific

China

Thailand

South Korea

India

Japan

Australia

Europe

France

United Kingdom

Italy

Germany

Spain

North America

United States

Canada

Mexico

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

## Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Polylactic Acid Market.

## Available Customizations:

Global Polylactic Acid Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## Company Information

Detailed analysis and profiling of additional market players (up to five).

## Contents

### **1. PRODUCT OVERVIEW**

- 1.1. Market Definition
- 1.2. Scope of the Market
  - 1.2.1. Markets Covered
  - 1.2.2. Years Considered for Study
  - 1.2.3. Key Market Segmentations

### **2. RESEARCH METHODOLOGY**

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Key Industry Partners
- 2.4. Major Association and Secondary Sources
- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations

### **3. EXECUTIVE SUMMARY**

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, Trends

### **4. IMPACT OF COVID-19 ON GLOBAL POLYLACTIC ACID MARKET**

### **5. VOICE OF CUSTOMER**

### **6. GLOBAL POLYLACTIC ACID MARKET OUTLOOK**

- 6.1. Market Size & Forecast
  - 6.1.1. By Value
- 6.2. Market Share & Forecast
  - 6.2.1. By Raw Material (Corn, Cassava, Sugarcane/Sugar Beet)
  - 6.2.2. By Application (Rigid Thermoforms, Films & Sheets, Bottles)

6.2.3. By End-Use Industry (Packaging, Consumer Goods, Agriculture, Textile, Bio-Medical, Others (Automotive & Transportation, Electronics))

6.2.4. By Region

6.2.5. By Company (2023)

6.3. Market Map

## **7. ASIA PACIFIC POLYLACTIC ACID MARKET OUTLOOK**

7.1. Market Size & Forecast

7.1.1. By Value

7.2. Market Share & Forecast

7.2.1. By Raw Material

7.2.2. By Application

7.2.3. By End-Use Industry

7.2.4. By Country

7.3. Asia Pacific: Country Analysis

7.3.1. China Polylactic Acid Market Outlook

7.3.1.1. Market Size & Forecast

7.3.1.1.1. By Value

7.3.1.2. Market Share & Forecast

7.3.1.2.1. By Raw Material

7.3.1.2.2. By Application

7.3.1.2.3. By End-Use Industry

7.3.2. Thailand Polylactic Acid Market Outlook

7.3.2.1. Market Size & Forecast

7.3.2.1.1. By Value

7.3.2.2. Market Share & Forecast

7.3.2.2.1. By Raw Material

7.3.2.2.2. By Application

7.3.2.2.3. By End-Use Industry

7.3.3. South Korea Polylactic Acid Market Outlook

7.3.3.1. Market Size & Forecast

7.3.3.1.1. By Value

7.3.3.2. Market Share & Forecast

7.3.3.2.1. By Raw Material

7.3.3.2.2. By Application

7.3.3.2.3. By End-Use Industry

7.3.4. India Polylactic Acid Market Outlook

7.3.4.1. Market Size & Forecast

- 7.3.4.1.1. By Value
- 7.3.4.2. Market Share & Forecast
  - 7.3.4.2.1. By Raw Material
  - 7.3.4.2.2. By Application
  - 7.3.4.2.3. By End-Use Industry
- 7.3.5. Japan Polylactic Acid Market Outlook
  - 7.3.5.1. Market Size & Forecast
    - 7.3.5.1.1. By Value
  - 7.3.5.2. Market Share & Forecast
    - 7.3.5.2.1. By Raw Material
    - 7.3.5.2.2. By Application
    - 7.3.5.2.3. By End-Use Industry
- 7.3.6. Australia Polylactic Acid Market Outlook
  - 7.3.6.1. Market Size & Forecast
    - 7.3.6.1.1. By Value
  - 7.3.6.2. Market Share & Forecast
    - 7.3.6.2.1. By Raw Material
    - 7.3.6.2.2. By Application
    - 7.3.6.2.3. By End-Use Industry

## **8. EUROPE POLYLACTIC ACID MARKET OUTLOOK**

- 8.1. Market Size & Forecast
  - 8.1.1. By Value
- 8.2. Market Share & Forecast
  - 8.2.1. By Raw Material
  - 8.2.2. By Application
  - 8.2.3. By End-Use Industry
  - 8.2.4. By Country
- 8.3. Europe: Country Analysis
  - 8.3.1. Germany Polylactic Acid Market Outlook
    - 8.3.1.1. Market Size & Forecast
      - 8.3.1.1.1. By Value
    - 8.3.1.2. Market Share & Forecast
      - 8.3.1.2.1. By Raw Material
      - 8.3.1.2.2. By Application
      - 8.3.1.2.3. By End-Use Industry
  - 8.3.2. Italy Polylactic Acid Market Outlook
    - 8.3.2.1. Market Size & Forecast



- 8.3.2.1.1. By Value
- 8.3.2.2. Market Share & Forecast
  - 8.3.2.2.1. By Raw Material
  - 8.3.2.2.2. By Application
  - 8.3.2.2.3. By End-Use Industry
- 8.3.3. France Polylactic Acid Market Outlook
  - 8.3.3.1. Market Size & Forecast
    - 8.3.3.1.1. By Value
  - 8.3.3.2. Market Share & Forecasty
    - 8.3.3.2.1. By Raw Material
    - 8.3.3.2.2. By Application
    - 8.3.3.2.3. By End-Use Industry
- 8.3.4. Spain Polylactic Acid Market Outlook
  - 8.3.4.1. Market Size & Forecast
    - 8.3.4.1.1. By Value
  - 8.3.4.2. Market Share & Forecast
    - 8.3.4.2.1. By Raw Material
    - 8.3.4.2.2. By Application
    - 8.3.4.2.3. By End-Use Industry
- 8.3.5. United Kingdom Polylactic Acid Market Outlook
  - 8.3.5.1. Market Size & Forecast
    - 8.3.5.1.1. By Value
  - 8.3.5.2. Market Share & Forecast
    - 8.3.5.2.1. By Raw Material
    - 8.3.5.2.2. By Application
    - 8.3.5.2.3. By End-Use Industry

## **9. NORTH AMERICA POLYLACTIC ACID MARKET OUTLOOK**

- 9.1. Market Size & Forecast
  - 9.1.1. By Value
- 9.2. Market Share & Forecast
  - 9.2.1. By Raw Material
  - 9.2.2. By Application
  - 9.2.3. By End-Use Industry
  - 9.2.4. By Country
- 9.3. North America: Country Analysis
  - 9.3.1. United States Polylactic Acid Market Outlook
    - 9.3.1.1. Market Size & Forecast

- 9.3.1.1.1. By Value
- 9.3.1.2. Market Share & Forecast
  - 9.3.1.2.1. By Raw Material
  - 9.3.1.2.2. By Application
  - 9.3.1.2.3. By End-Use Industry
- 9.3.2. Canada Polylactic Acid Market Outlook
  - 9.3.2.1. Market Size & Forecast
    - 9.3.2.1.1. By Value
  - 9.3.2.2. Market Share & Forecast
    - 9.3.2.2.1. By Raw Material
    - 9.3.2.2.2. By Application
    - 9.3.2.2.3. By End-Use Industry
- 9.3.3. Mexico Polylactic Acid Market Outlook
  - 9.3.3.1. Market Size & Forecast
    - 9.3.3.1.1. By Value
  - 9.3.3.2. Market Share & Forecast
    - 9.3.3.2.1. By Raw Material
    - 9.3.3.2.2. By Application
    - 9.3.3.2.3. By End-Use Industry

## **10. SOUTH AMERICA POLYLACTIC ACID MARKET OUTLOOK**

- 10.1. Market Size & Forecast
  - 10.1.1. By Value
- 10.2. Market Share & Forecast
  - 10.2.1. By Raw Material
  - 10.2.2. By Application
  - 10.2.3. By End-Use Industry
  - 10.2.4. By Country
- 10.3. South America: Country Analysis
  - 10.3.1. Brazil Polylactic Acid Market Outlook
    - 10.3.1.1. Market Size & Forecast
      - 10.3.1.1.1. By Value
    - 10.3.1.2. Market Share & Forecast
      - 10.3.1.2.1. By Raw Material
      - 10.3.1.2.2. By Application
      - 10.3.1.2.3. By End-Use Industry
  - 10.3.2. Argentina Polylactic Acid Market Outlook
    - 10.3.2.1. Market Size & Forecast

- 10.3.2.1.1. By Value
- 10.3.2.2. Market Share & Forecast
  - 10.3.2.2.1. By Raw Material
  - 10.3.2.2.2. By Application
  - 10.3.2.2.3. By End-Use Industry
- 10.3.3. Colombia Polylactic Acid Market Outlook
  - 10.3.3.1. Market Size & Forecast
    - 10.3.3.1.1. By Value
  - 10.3.3.2. Market Share & Forecast
    - 10.3.3.2.1. By Raw Material
    - 10.3.3.2.2. By Application
    - 10.3.3.2.3. By End-Use Industry

## **11. MIDDLE EAST AND AFRICA POLYLACTIC ACID MARKET OUTLOOK**

- 11.1. Market Size & Forecast
  - 11.1.1. By Value
- 11.2. Market Share & Forecast
  - 11.2.1. By Raw Material
  - 11.2.2. By Application
  - 11.2.3. By End-Use Industry
  - 11.2.4. By Country
- 11.3. MEA: Country Analysis
  - 11.3.1. South Africa Polylactic Acid Market Outlook
    - 11.3.1.1. Market Size & Forecast
      - 11.3.1.1.1. By Value
    - 11.3.1.2. Market Share & Forecast
      - 11.3.1.2.1. By Raw Material
      - 11.3.1.2.2. By Application
      - 11.3.1.2.3. By End-Use Industry
  - 11.3.2. Saudi Arabia Polylactic Acid Market Outlook
    - 11.3.2.1. Market Size & Forecast
      - 11.3.2.1.1. By Value
    - 11.3.2.2. Market Share & Forecast
      - 11.3.2.2.1. By Raw Material
      - 11.3.2.2.2. By Application
      - 11.3.2.2.3. By End-Use Industry
  - 11.3.3. UAE Polylactic Acid Market Outlook
    - 11.3.3.1. Market Size & Forecast

- 11.3.3.1.1. By Value
- 11.3.3.2. Market Share & Forecast
  - 11.3.3.2.1. By Raw Material
  - 11.3.3.2.2. By Application
  - 11.3.3.2.3. By End-Use Industry

## **12. MARKET DYNAMICS**

- 12.1. Drivers
- 12.2. Challenges

## **13. MARKET TRENDS & DEVELOPMENTS**

- 13.1. Recent Developments
- 13.2. Product Launches
- 13.3. Mergers & Acquisitions

## **14. GLOBAL POLYLACTIC ACID MARKET: PORTERS FIVE FORCE'S ANALYSIS**

## **15. GLOBAL POLYLACTIC ACID MARKET: SWOT ANALYSIS**

## **16. PRICING ANALYSIS**

## **17. COMPETITIVE LANDSCAPE**

- 17.1. NatureWorks LLC
  - 17.1.1. Business Overview
  - 17.1.2. Product & Service Offerings
  - 17.1.3. Financials (If Listed)
  - 17.1.4. Recent Developments
  - 17.1.5. Key Personnel
  - 17.1.6. SWOT Analysis
- 17.2. Futerro PLA
- 17.3. TotalEnergies Corbion bv
- 17.4. Zhejiang Hisun Biomaterials Co., Ltd
- 17.5. Jiangxi Keyuan Bio-Material Co., Ltd
- 17.6. Shanghai Tong-jie-liang Biomaterials Co.,LTD
- 17.7. Jilin COFCO biomaterials Co., Ltd., etc.
- 17.8. Mitsubishi Chemical America, Inc

17.9. Danimer Scientific, Inc.

17.10. BASF SE

17.11. UNITIKA LTD

17.12. Galactic S.A

## **18. STRATEGIC RECOMMENDATIONS**

## **19. ABOUT US & DISCLAIMER**

## I would like to order

Product name: Polylactic Acid Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, By Raw Material (Corn, Cassava, Sugarcane/Sugar Beet), By Application (Rigid Thermoforms, Films & Sheets, Bottles), By End-Use Industry (Packaging, Consumer Goods, Agriculture, Textile, Bio-Medical, Others (Automotive & Transportation, Electronics)), By Region and Competition, 2019-2029F

Product link: <https://marketpublishers.com/r/P576EF07D446EN.html>

Price: US\$ 4,900.00 (Single User License / Electronic Delivery)

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

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/P576EF07D446EN.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