

Polycaprolactone Market Report by Form (Pellets, Nanosphere, Microsphere), Production Method (Ring Opening Polymerization, Polycondensation of Carboxylic Acid), Application (Coating and Thermoplastic Polyurethane, Healthcare, and Others), and Region 2024-2032

<https://marketpublishers.com/r/P91E6A278054EN.html>

Date: August 2024

Pages: 135

Price: US\$ 3,899.00 (Single User License)

ID: P91E6A278054EN

Abstracts

The global polycaprolactone market size reached US\$ 613.2 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 1,361.8 Million by 2032, exhibiting a growth rate (CAGR) of 9% during 2024-2032.

Polycaprolactone (PCL) is a fossil-based, biodegradable and semicrystalline polyester used for thermal processing and 3-Dimensional bioprinting. It is commonly available in the form of pellets, nanospheres and microspheres, which are non-toxic in nature and breaks down into organic components upon exposed to heat, moisture and microorganisms. It is produced using ring-opening polymerization and polycondensation of carboxylic acid methods and exhibit high solubility in organic solvents and low melting point. PCL is commonly used as an additive in resins and for manufacturing jewelry and models and prototypes of products, medical devices, automotive components and construction materials. It is also widely utilized for the production of coatings, adhesives, sealants and elastomers.

Polycaprolactone Market Trends:

Significant growth in the medical industry across the globe is one of the key factors creating a positive outlook for the market. PCL is widely used for the manufacturing of medical-grade orthopedic, dental and surgical implants, drug delivery devices, wound

dressing tapes, tissue engineering and regenerative medicine systems. Moreover, the widespread adoption of PCL in the formulation of thermoplastic polyurethane is providing a thrust to the market growth. It exhibits superior hydrophobic properties, resistance to oil, chemical and ultraviolet (UV) rays. It is also used as a polymeric plasticizer to polyvinyl chloride (PVC) to increase its elasticity. Additionally, various product innovations and the utilization of PCL in the construction industry as a noise insulation material for walls, roofs, doors and windows are acting as other growth-inducing factors. In line with this, the rising demand for environment-friendly and cost-effective materials for sealing and encapsulating pressure-sensitive microelectronic components is anticipated to drive the market toward growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global polycaprolactone market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on form, production method and application.

Breakup by Form:

Pellets

Nanosphere

Microsphere

Breakup by Production Method:

Ring Opening Polymerization

Polycondensation of Carboxylic Acid

Breakup by Application:

Coating and Thermoplastic Polyurethane

Healthcare

Others

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being BASF SE, Corbion N.V., Daicel Corporation, Haihang Industry, Merck KGaA, Perstorp Holding AB, Polysciences Inc, Shenzhen Esun Industrial Co.Ltd and Shenzhen Polymtek Biomaterial Co. Ltd.

Key Questions Answered in This Report

1. How big is the global polycaprolactone market?
2. What is the expected growth rate of the global polycaprolactone market during 2024-2032?
3. What are the key factors driving the global polycaprolactone market?
4. What has been the impact of COVID-19 on the global polycaprolactone market?
5. What is the breakup of the global polycaprolactone market based on the form?
6. What is the breakup of the global polycaprolactone market based on the production method?

7. What is the breakup of the global polycaprolactone market based on the application?
8. What are the key regions in the global polycaprolactone market?
9. Who are the key players/companies in the global polycaprolactone market?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL POLYCAPROLACTONE MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY FORM

- 6.1 Pellets
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 Nanosphere
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
- 6.3 Microsphere

6.3.1 Market Trends

6.3.2 Market Forecast

7 MARKET BREAKUP BY PRODUCTION METHOD

7.1 Ring Opening Polymerization

7.1.1 Market Trends

7.1.2 Market Forecast

7.2 Polycondensation of Carboxylic Acid

7.2.1 Market Trends

7.2.2 Market Forecast

8 MARKET BREAKUP BY APPLICATION

8.1 Coating and Thermoplastic Polyurethane

8.1.1 Market Trends

8.1.2 Market Forecast

8.2 Healthcare

8.2.1 Market Trends

8.2.2 Market Forecast

8.3 Others

8.3.1 Market Trends

8.3.2 Market Forecast

9 MARKET BREAKUP BY REGION

9.1 North America

9.1.1 United States

9.1.1.1 Market Trends

9.1.1.2 Market Forecast

9.1.2 Canada

9.1.2.1 Market Trends

9.1.2.2 Market Forecast

9.2 Asia-Pacific

9.2.1 China

9.2.1.1 Market Trends

9.2.1.2 Market Forecast

9.2.2 Japan

9.2.2.1 Market Trends

- 9.2.2.2 Market Forecast
- 9.2.3 India
 - 9.2.3.1 Market Trends
 - 9.2.3.2 Market Forecast
- 9.2.4 South Korea
 - 9.2.4.1 Market Trends
 - 9.2.4.2 Market Forecast
- 9.2.5 Australia
 - 9.2.5.1 Market Trends
 - 9.2.5.2 Market Forecast
- 9.2.6 Indonesia
 - 9.2.6.1 Market Trends
 - 9.2.6.2 Market Forecast
- 9.2.7 Others
 - 9.2.7.1 Market Trends
 - 9.2.7.2 Market Forecast
- 9.3 Europe
 - 9.3.1 Germany
 - 9.3.1.1 Market Trends
 - 9.3.1.2 Market Forecast
 - 9.3.2 France
 - 9.3.2.1 Market Trends
 - 9.3.2.2 Market Forecast
 - 9.3.3 United Kingdom
 - 9.3.3.1 Market Trends
 - 9.3.3.2 Market Forecast
 - 9.3.4 Italy
 - 9.3.4.1 Market Trends
 - 9.3.4.2 Market Forecast
 - 9.3.5 Spain
 - 9.3.5.1 Market Trends
 - 9.3.5.2 Market Forecast
 - 9.3.6 Russia
 - 9.3.6.1 Market Trends
 - 9.3.6.2 Market Forecast
 - 9.3.7 Others
 - 9.3.7.1 Market Trends
 - 9.3.7.2 Market Forecast
- 9.4 Latin America

9.4.1 Brazil

9.4.1.1 Market Trends

9.4.1.2 Market Forecast

9.4.2 Mexico

9.4.2.1 Market Trends

9.4.2.2 Market Forecast

9.4.3 Others

9.4.3.1 Market Trends

9.4.3.2 Market Forecast

9.5 Middle East and Africa

9.5.1 Market Trends

9.5.2 Market Breakup by Country

9.5.3 Market Forecast

10 SWOT ANALYSIS

10.1 Overview

10.2 Strengths

10.3 Weaknesses

10.4 Opportunities

10.5 Threats

11 VALUE CHAIN ANALYSIS

12 PORTERS FIVE FORCES ANALYSIS

12.1 Overview

12.2 Bargaining Power of Buyers

12.3 Bargaining Power of Suppliers

12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes

13 PRICE ANALYSIS

14 COMPETITIVE LANDSCAPE

14.1 Market Structure

14.2 Key Players

14.3 Profiles of Key Players

14.3.1 BASF SE

14.3.1.1 Company Overview

14.3.1.2 Product Portfolio

14.3.1.3 Financials

14.3.1.4 SWOT Analysis

14.3.2 Corbion N.V.

14.3.2.1 Company Overview

14.3.2.2 Product Portfolio

14.3.2.3 Financials

14.3.3 Daicel Corporation

14.3.3.1 Company Overview

14.3.3.2 Product Portfolio

14.3.3.3 Financials

14.3.3.4 SWOT Analysis

14.3.4 Haihang Industry

14.3.4.1 Company Overview

14.3.4.2 Product Portfolio

14.3.5 Merck KGaA

14.3.5.1 Company Overview

14.3.5.2 Product Portfolio

14.3.5.3 Financials

14.3.5.4 SWOT Analysis

14.3.6 Perstorp Holding AB

14.3.6.1 Company Overview

14.3.6.2 Product Portfolio

14.3.6.3 SWOT Analysis

14.3.7 Polysciences Inc

14.3.7.1 Company Overview

14.3.7.2 Product Portfolio

14.3.8 Shenzhen Esun Industrial Co.Ltd

14.3.8.1 Company Overview

14.3.8.2 Product Portfolio

14.3.9 Shenzhen Polymtek Biomaterial Co. Ltd

14.3.9.1 Company Overview

14.3.9.2 Product Portfolio

List Of Tables

LIST OF TABLES

Table 1: Global: Polycaprolactone Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Polycaprolactone Market Forecast: Breakup by Form (in Million US\$), 2024-2032

Table 3: Global: Polycaprolactone Market Forecast: Breakup by Production Method (in Million US\$), 2024-2032

Table 4: Global: Polycaprolactone Market Forecast: Breakup by Application (in Million US\$), 2024-2032

Table 5: Global: Polycaprolactone Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 6: Global: Polycaprolactone Market: Competitive Structure

Table 7: Global: Polycaprolactone Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Polycaprolactone Market: Major Drivers and Challenges

Figure 2: Global: Polycaprolactone Market: Sales Value (in Million US\$), 2018-2023

Figure 3: Global: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 4: Global: Polycaprolactone Market: Breakup by Form (in %), 2023

Figure 5: Global: Polycaprolactone Market: Breakup by Production Method (in %), 2023

Figure 6: Global: Polycaprolactone Market: Breakup by Application (in %), 2023

Figure 7: Global: Polycaprolactone Market: Breakup by Region (in %), 2023

Figure 8: Global: Polycaprolactone (Pellets) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 9: Global: Polycaprolactone (Pellets) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 10: Global: Polycaprolactone (Nanosphere) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 11: Global: Polycaprolactone (Nanosphere) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 12: Global: Polycaprolactone (Microsphere) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 13: Global: Polycaprolactone (Microsphere) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 14: Global: Polycaprolactone (Ring Opening Polymerization) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 15: Global: Polycaprolactone (Ring Opening Polymerization) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 16: Global: Polycaprolactone (Polycondensation of Carboxylic Acid) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 17: Global: Polycaprolactone (Polycondensation of Carboxylic Acid) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 18: Global: Polycaprolactone (Coating and Thermoplastic Polyurethane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 19: Global: Polycaprolactone (Coating and Thermoplastic Polyurethane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 20: Global: Polycaprolactone (Healthcare) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 21: Global: Polycaprolactone (Healthcare) Market Forecast: Sales Value (in

Million US\$), 2024-2032

Figure 22: Global: Polycaprolactone (Other Applications) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 23: Global: Polycaprolactone (Other Applications) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 24: North America: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 25: North America: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 26: United States: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 27: United States: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 28: Canada: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 29: Canada: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 30: Asia-Pacific: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 31: Asia-Pacific: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 32: China: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 33: China: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 34: Japan: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 35: Japan: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 36: India: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 37: India: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 38: South Korea: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 39: South Korea: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 40: Australia: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 41: Australia: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 42: Indonesia: Polycaprolactone Market: Sales Value (in Million US\$), 2018 &

2023

Figure 43: Indonesia: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 44: Others: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 45: Others: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 46: Europe: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 47: Europe: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 48: Germany: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 49: Germany: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 50: France: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 51: France: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 52: United Kingdom: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 53: United Kingdom: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 54: Italy: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 55: Italy: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 56: Spain: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 57: Spain: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 58: Russia: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 59: Russia: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 60: Others: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 61: Others: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 62: Latin America: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 63: Latin America: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 64: Brazil: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 65: Brazil: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 66: Mexico: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 67: Mexico: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 68: Others: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 69: Others: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 70: Middle East and Africa: Polycaprolactone Market: Sales Value (in Million US\$), 2018 & 2023

Figure 71: Middle East and Africa: Polycaprolactone Market: Breakup by Country (in %), 2023

Figure 72: Middle East and Africa: Polycaprolactone Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 73: Global: Polycaprolactone Industry: SWOT Analysis

Figure 74: Global: Polycaprolactone Industry: Value Chain Analysis

Figure 75: Global: Polycaprolactone Industry: Porter's Five Forces Analysis

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