

Plastic Vials Market Forecasts to 2032 – Global Analysis By Material Type (Polyethylene Terephthalate, Polypropylene, Polyethylene and Other Material Types), Closure Type (Screw Caps, Snap-on Caps, Crimp Caps and Other Closure Types), Capacity, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Plastic Vials Market is accounted for \$4.9 billion in 2025 and is expected to reach \$7.9 billion by 2032 growing at a CAGR of 7.1% during the forecast period. Plastic vials are small, cylindrical containers typically made from polymers like polyethylene, polypropylene, or PET. They are designed to securely store, transport, and dispense liquids, powders, or small solid samples. Commonly used in pharmaceuticals, laboratories, cosmetics, and diagnostics, plastic vials offer lightweight, shatter-resistant, and cost-effective alternatives to glass vials. They often feature screw caps, snap-on lids, or dropper tops to ensure product safety, prevent contamination, and provide ease of use.

According to data from the Institute of Environmental Management Assessment (IEMA), since the 1950s, approximately 8.3 billion metric tons of plastic have been produced globally.

Market Dynamics:

Driver:

Growing pharmaceutical and biopharmaceutical industry

Increasing demand for vaccines, injectable medications, and diagnostic solutions has accelerated the need for reliable packaging, with plastic vials offering advantages such as chemical resistance, lightweight handling, and cost-effectiveness. Furthermore, the rise in chronic diseases and the aging global population have led to higher consumption of pharmaceuticals, compelling manufacturers to adopt advanced plastic vial solutions to ensure product safety and integrity. This ongoing growth in healthcare infrastructure continues to propel the market forward.

Restraint:

Price fluctuations of raw materials

Price volatility in raw materials, particularly polymers like polypropylene and polyethylene, poses a significant restraint for the plastic vials market. These fluctuations are influenced by changes in crude oil prices, supply chain disruptions, and evolving environmental regulations. Additionally, the increasing emphasis on sustainable packaging and recycling policies can impact raw material availability and cost structures. Such unpredictability in input costs challenges manufacturers' ability to maintain stable pricing and profitability, potentially limiting market expansion.

Opportunity:

Rising healthcare expenditure in emerging markets

Countries in Asia Pacific, Latin America, and Africa invest in expanding healthcare infrastructure and improving access to medical treatments, and the demand for pharmaceutical packaging, including plastic vials, is surging. Moreover, government initiatives to enhance immunization programs and the proliferation of local pharmaceutical manufacturing further amplify this trend. The growing middle-class population and increasing awareness about healthcare drive sustained demand, enabling market players to capitalize on these emerging opportunities.

Threat:

Substitution by glass vials

Glass vials are traditionally preferred for their superior barrier properties, chemical inertness, and established regulatory acceptance, especially for sensitive biologics and high-value drugs. Additionally, concerns over plastic leachables and environmental

sustainability may encourage a shift back to glass alternatives. Furthermore, advancements in lightweight and shatter-resistant glass technologies could erode the competitive advantages of plastic vials, compelling manufacturers to innovate and differentiate their product offerings.

Covid-19 Impact:

The Covid-19 pandemic had a profound impact on the plastic vials market, driving unprecedented demand due to the surge in vaccine production and distribution. The urgent need for safe, sterile packaging for vaccines and diagnostic reagents accelerated the adoption of plastic vials, especially in mass immunization campaigns. Additionally, supply chain disruptions and increased use of single-use plastics in healthcare heightened market growth. However, the pandemic also intensified concerns over plastic waste management, prompting renewed focus on sustainable packaging solutions within the industry.

The polypropylene (PP) segment is expected to be the largest during the forecast period

The polypropylene (PP) segment is expected to account for the largest market share during the forecast period. Polypropylene's dominance stems from its excellent chemical resistance, durability, and cost-effectiveness, making it a preferred material for pharmaceutical packaging. Moreover, PP vials are lightweight, shatterproof, and compatible with a wide range of drugs, including acidic and alkaline formulations. Its recyclability further enhances its appeal amid growing environmental concerns. The versatility and reliability of PP in ensuring product safety and integrity make it the material of choice for manufacturers and end-users alike, sustaining its market leadership.

The screw caps segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the screw caps segment is predicted to witness the highest growth rate. Screw caps are favored for their secure sealing, ease of use, and tamper-evident features, which are crucial for maintaining the sterility and safety of pharmaceutical products. Additionally, their compatibility with automation and mass production processes enhances operational efficiency for manufacturers. The increasing demand for user-friendly, resealable, and contamination-resistant closures in both pharmaceutical and consumer applications is driving the rapid adoption of screw

caps, positioning this segment for robust expansion.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share. This dominance is attributed to the region's vast population, rapid urbanization, and expanding pharmaceutical and healthcare sectors. Countries such as China and India are major contributors, benefiting from robust manufacturing capabilities, cost-effective production, and rising healthcare investments. Furthermore, the growing demand for packaged medicines and the proliferation of local pharmaceutical manufacturers reinforce Asia Pacific's leadership, making it a pivotal hub for both production and consumption of plastic vials.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. This remarkable growth is driven by surging healthcare expenditure, increasing adoption of advanced pharmaceutical packaging, and government initiatives promoting local manufacturing. Moreover, the region's dynamic economic development, burgeoning middle-class population, and heightened focus on healthcare accessibility fuel sustained demand. Innovations in sustainable packaging and the rapid expansion of e-commerce further accelerate market growth.

Key players in the market

Some of the key players in Plastic Vials Market include Amcor, Berry Global, Gerresheimer, AptarGroup, ALPLA Group, Stevanato Group, Schott, SGD Pharma, DWK Life Sciences, Origin Pharma Packaging, West Pharmaceutical Services, Bormioli Pharma, Pacific Vial Manufacturing, O.Berk Company, Comar, Alpha Packaging, Silgan Holdings and Corning.

Key Developments:

In February 2025, Berry Global is introducing a high-quality post-consumer recycled (PCR) plastic polymer for non-contact-sensitive packaging, specifically aimed at the homecare and industrial sectors. Utilising many of the same processes used to produce Berry's proprietary contact-sensitive PCR, CleanStream® Home and Industrial is suitable for a wide variety of applications with exacting technical specifications. The purity degree of the recycled polymer enables it to be included in greater percentages in

all types of packs and in areas which demand a high degree of functional performance, for example trigger spray heads and the lid, ring and handle of paint containers.

In December 2024, Gerresheimer, an innovative systems and solutions provider and global partner for the pharma, biotech and cosmetics industries, has successfully completed the acquisition of Blitz LuxCo Sarl, the holding company of the Bormioli Pharma Group announced in May 2024. The closing was preceded by the fulfillment of customary closing conditions.

In October 2023, Gerresheimer, innovative system and solution provider and global partner for the pharma and biotech industry launches with COP (Cyclic Olefin Polymer) vials a particularly satisfactory solution for the filling and storage of highly sensitive biologics. They are suitable for mRNA active ingredients at -80°C and cryogenic temperatures. Gerresheimer is expanding its RTF portfolio of glass vials in various qualities with a product made of high-quality polymer which combines the best material properties of glass and plastic.

Material Types Covered:

Polyethylene Terephthalate (PET)

Polypropylene (PP)

Polyethylene (PE)

Other Material Types

Closure Types Covered:

Screw Caps

Snap-on Caps

Crimp Caps

Other Closure Types

Capacities Covered:

Small Capacity (Up to 10 ml)

Medium Capacity (10 ml to 50 ml)

Large Capacity (Above 50 ml)

Applications Covered:

Pharmaceutical Packaging

Diagnostic Reagents & Samples

Cosmetics & Personal Care

Chemicals & Laboratory Use

Other Applications

End Users Covered:

Pharmaceutical & Biopharmaceutical Companies

Contract Manufacturing Organizations (CMOs) / Contract Development and Manufacturing Organizations (CDMOs)

Diagnostic Laboratories & Research Institutes

Hospitals & Clinics

Cosmetic & Personal Care Companies

Chemical Companies

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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 2024, 2025, 2026, 2028, and 2032
- 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

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