

Global Phase Change Materials Market 2024

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Abstracts

The phase change materials (PCMs) market is experiencing growth due to various factors such as increased building and construction activities, a focus on energy conservation, urbanization trends, and advancements in phase change material technology. The market is expected to benefit from the emphasis on green construction practices, as phase change materials are used in buildings to achieve energy efficiency.

The paraffin phase change materials market, valued at USD 1,045 million in 2023, is projected to reach USD 2,813 million by 2029 with a compound annual growth rate (CAGR) of 15.2% during the forecast period. Paraffin-based PCMs are widely utilized due to their advantageous properties, including chemical stability over multiple heating and freezing cycles, high heat of fusion, compatibility with most materials, and non-reactivity with encapsulation materials. Paraffin's ability to operate across a wide range of temperatures makes it suitable as an energy storage medium. Waxy solid paraffins, often used as paraffin-based PCMs, are known for their reliability, safety, and cost-effectiveness.

The construction phase change materials market, valued at USD 715 million in 2023, is expected to reach USD 1,866 million by 2029, exhibiting a CAGR of 14.7% during the forecast period. The construction sector is a prominent user of phase change materials, and their adoption rate is anticipated to rise over time. In residential and commercial buildings, PCMs assist in regulating internal temperature by absorbing or releasing significant amounts of heat energy during the transition between solid and liquid states. The growing use of PCMs in building and construction applications is driven by their ability to store large amounts of energy as latent heat at a constant temperature, thereby minimizing temperature fluctuations. Additionally, the utilization of efficient energy materials like PCMs is crucial in reducing dependency on traditional energy sources, further driving market growth.

Europe currently leads the phase change materials market and is expected to maintain its dominance throughout the forecast period. This is primarily due to the presence of numerous phase change materials manufacturers in the region, including Henkel AG & Co. KGaA, Climator Sweden AB, and Rubitherm Technologies GmbH, among others. The European market is driven by increased demand from diverse end-use applications, technological advancements, and stricter environmental regulations aimed at reducing greenhouse gas emissions. These factors are anticipated to fuel the growth of the phase change materials market in Europe, which is estimated to reach USD 1,954 million by 2029, with a CAGR of 14.5% during the forecast period (2024-2029).

This comprehensive industry report provides market estimates and forecasts, accompanied by a detailed examination of the type, application, and region aspects. It delivers a quantitative analysis of the market, empowering stakeholders to leverage existing market opportunities. Furthermore, the report identifies key segments for potential opportunities and strategies, drawing insights from market trends and the approaches of leading competitors.

The global baby bottle market has been extensively analyzed by categorizing it according to various sub-segments in order to provide accurate forecasts of industry size and assess trends within specific areas.

The global market for phase change materials can be segmented by type: paraffin, salt hydrates, eutectics, non-paraffin, others. Paraffin held the highest share in the global phase change materials market. However, the non-paraffin segment is forecast to register the highest CAGR during the forecast period 2024 %li%2030.

Phase change materials market is further segmented by application: construction, HVAC, energy, refrigeration, packaging, textiles, others. Construction held the highest share in the global phase change materials market. However, the packaging segment is forecast to register the highest CAGR during the forecast period 2024 %li%2030.

Based on region, the phase change materials market is segmented into: North America, Europe, Asia-Pacific, MEA (Middle East and Africa), Latin America. Europe is estimated to account for the largest share of the global phase change materials market, representing more than 33.5% of the total market.

The report also provides analysis of the key companies of the industry and their detailed company profiles including Henkel AG & Co. KGaA, Shin-Etsu Chemicals Co., Ltd.,

Honeywell International Inc., Croda International plc, Phase Change Products Pty Ltd., PCM Products Ltd., Rubitherm Technologies GmbH, Climator Sweden AB, PureTemp LLC, Sasol Limited, Microtek Laboratories Inc, DuPont de Nemours, Inc., Axiotherm GmbH, among others. In this report, key players and their strategies are thoroughly analyzed to understand the competitive outlook of the market.

Why Choose This Report

Gain a reliable outlook of the global phase change materials market forecasts from 2024 to 2030 across scenarios.

Identify growth segments for investment.

Stay ahead of competitors through company profiles and market data.

The market estimate for ease of analysis across scenarios in Excel format.

Strategy consulting and research support for three months.

Print authentication provided for the single-user license.

Market Segments Covered in Global Phase Change Materials Industry Analysis:

i.) Type

Paraffin

Salt hydrates

Eutectics

Non-paraffin

Others

ii.) Application

Construction

HVAC

Energy

Refrigeration

Packaging

Textiles

Others

iii.) Region

North America

Europe

Asia-Pacific

MEA (Middle East and Africa)

Latin America

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8.13 Axiotherm GmbH

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