

Advanced Phase Change Materials Market by Type (Organic, Inorganic and Bio-based), Application (Building & Construction, Energy Storage, HVAC, Shipping & Transportation, Electronics, Textiles, and Others) - Global Opportunity Analysis and Industry Forecast, 2014-2022

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Abstracts

The global advanced phase change materials (PCM) market accounted \$691 million in 2015, and is expected to reach \$2,434 million by 2022, registering a CAGR of 19.8% from 2016 to 2022. Phase change materials change from one phase to another at a given temperature and are proficient in storing thermal energy in the form of latent heat by releasing the energy when needed. These materials store or release large quantities of thermal energy at a constant temperature and retain the desired ambient conditions, by changing from solid to liquid phase or vice-versa. The market is expected to register a double-digit growth rate during the forecast period, attributed to the increased demand from the construction, transportation, and energy storage industries.

Advanced phase change materials are applicable in in construction & building sector, which is one of the key factors that drives the market growth. Furthermore, increase in emphasis on energy conservation, expansion of applications of advanced phase change materials in the textile sector, rapid urbanization in developing countries, and continued technological developments in the field of advanced PCM are expected to fuel the market growth in the near future. However, the high cost of advanced PCM and the lack of awareness among the consumers about usage of phase change materials are expected to hinder market growth.

The global advanced phase change materials market has gained traction, owing to the increased use of microencapsulation and microencapsulation technologies, particularly in the construction and textile sectors. A number of manufacturers consider the use of

microencapsulated PCM as it provides improved heat transfer between the PCM and the surrounding, owing to the increased surface area. Another major trend observed is the gradual shift of manufacturers toward biodegradable, bio-based PCM as an alternative to the traditional petroleum-based PCM.

The report segments the global advanced phase change materials market on the basis of type, application, and geography. Based on type, it is classified into organic PCM, inorganic PCM, and bio-based PCM. Based on application, it is segregated into building & construction, energy storage, HVAC, shipping & transportation, electronics, textiles, and others. Geographically, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA. Asia-Pacific is expected to witness highest growth rate during the forecast period.

Key Market Players

BASF SE

Entropy Solutions

Sonoco Products Company

Outlast Technologies LLC.

Advansa B.V.

E. I. Du Pont De Nemours And Company

Phase Change Energy Solutions

Cryopak Inc.

Microtek Laboratories, Inc.

Pluss Advanced Technologies Pvt. Ltd.

The global advanced phase change materials market is highly competitive, owing to the presence of several well-established manufacturers and vendors. These companies are extensively undergoing R&D of new products for specific applications and conditions.

KEY BENEFITS FOR STAKEHOLDERS

This report provides an extensive analysis of the current trends and emerging estimations and dynamics in the global advanced phase change materials market through 2014–2022, which assists in identifying the prevailing market opportunities.

Exhaustive analysis facilitates in understanding the types of advanced phase change materials and the materials used currently along with the variants to gain prominence in the future.

Extensive analysis of end-user industry forecasts the various types of advanced phase change materials that can be used in different end-user applications.

A detailed analysis is conducted by following key product positioning and monitoring the top competitors within the market framework.

Key market players are profiled and their strategies are analyzed thoroughly, which helps understand the competitive outlook of the market.

Advanced Phase Change Materials Market Key Segments:

By Type

Organic PCM

Inorganic PCM

Bio-based PCM

By Application

Building & Construction

Energy Storage

HVAC

Shipping & Transportation

Electronics

Textiles

Others (Healthcare, Telecommunication, etc.)

By Geography

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia-Pacific

China

Japan

South Korea

India

Rest of Asia-Pacific

LAMEA

Brazil

Argentina

South Africa

Rest of LAMEA

Other prominent market players are:

Phase Change Materials Products Ltd.

Rubitherm Technologies GmbH

Ciat Group

Datum Phase Change Ltd.

Emco Klimatechnik GmbH & Co. KG

Rgees LLC.

Climator Sweden AB

Ewald Dörken AG

Laird PLC.

(The above companies are not profiled, but can be done on client's request)

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FIGURE 32. BRAZIL ADVANCED PHASE CHANGE MATERIALS MARKET SIZE, 2014-2022

FIGURE 33. ARGENTINA ADVANCED PHASE CHANGE MATERIALS MARKET SIZE, 2014-2022

FIGURE 34. SOUTH AFRICA ADVANCED PHASE CHANGE MATERIALS MARKET SIZE, 2014-2022

FIGURE 35. REST OF LAMEA ADVANCED PHASE CHANGE MATERIALS MARKET SIZE, 2014-2022

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