

Thermal Management Solutions Market by Type (Water, Gas/Steam, Alkyl Benzenes, Mineral Oils, Synthetic Fluids, Silicon Polymer, Glycol, Molten Salts), Form, Temperature Class, Package Type, End-Use Industry, and Region - Global Forecast to 2028

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Abstracts

The global thermal management solutions market is projected to reach USD 6.1 billion by 2028, at a CAGR of 5.9% from USD 4.3 billion in 2022. The market is expected to experience significant growth opportunities due to rising demand from emerging markets and growing consumer awareness, which will benefit thermal management solutions manufacturers.

“The Energy & Power accounted for the largest share in the end-use industry segment of thermal management solutions market in terms of value.”

Thermal management solutions play a crucial role in the energy and power sector, as they help in maintaining the optimal temperature for various systems. They are widely used in thermal power plants, nuclear power plants, solar power plants, and oil and gas refineries. These solutions facilitate the transfer and control of heat, enabling the systems to function efficiently. The demand for renewable energy sources and sustainable heat transfer solutions has contributed to the growth of the thermal management solutions market in the energy and power sector. The adoption of environmentally friendly solutions has become increasingly necessary to mitigate the impact of industrial activities on the environment.

“Glycol accounted for the third largest share in the type segment of thermal management solutions market, in terms of value.”

Glycol-based thermal management solutions are frequently utilized in a variety of industrial applications due to their exceptional thermal characteristics and adaptability. These fluids are typically composed of glycol, which is a type of organic compound that can be derived from ethylene or propylene. These fluids are known for their high thermal stability, low toxicity, and excellent heat transfer efficiency. They are commonly used in systems that require freeze protection, such as HVAC systems, refrigeration systems, solar thermal systems, and geothermal systems. Glycol-based thermal management solutions are capable of operating over a wide temperature range, making them suitable for both heating and cooling applications.

“South America is estimated to be the second-largest market for thermal management solutions.”

South America's varying climate conditions, ranging from tropical to subpolar, make it necessary to use thermal management solutions in various applications, including space and district heating, and industrial processes. The region's significant agricultural sector, which produces crops like sugarcane, coffee, and soybeans, requires thermal management solutions for processing and preservation. Additionally, the growing industrial base, including sectors like petrochemicals, food and beverage, and pharmaceuticals, relies on thermal management solutions for efficient heat transfer in manufacturing processes. The increasing focus on renewable energy sources such as solar and biomass in South America has driven the demand for thermal management solutions in solar thermal systems and bioenergy production. Favourable government policies, growing investments in infrastructure, and technological advancements are also contributing to the growth of the thermal management solutions market in South America.

To determine and verify the market size of various segments, in-depth interviews were conducted with CEOs, marketing directors, innovation and technology directors, and executives from key organizations in the thermal management solutions market. The information gathered from these interviews was combined with secondary research.

By Company Type: Tier 1 – 35%, Tier 2 – 45%, and Tier 3 – 20%

By Designation: C Level Executives– 35%, Directors – 25%, and Others – 40%

By Region: APAC – 40%, Europe – 20%, North America – 30%, the Middle East & Africa –5%, and South America- 5%

The key players in this market are The Dow Chemical Company (US), Eastman Chemical Company (US), ExxonMobil (US), Chevron (US), Huntsman Corporation (US), Shell PLC (UK), Lanxess (Germany), Clariant AG (Germany), Wacker Chemie (AG), and Dupont (US).

Research Coverage

The report provides a comprehensive segmentation of the thermal management solutions market based on form, type, temperature, package type, end-use industry, and region. It also includes estimations of the overall market value in various regions. In addition, the report offers a detailed analysis of key industry players, their business profiles, product and service offerings, key strategies, new product launches, expansion plans, and mergers and acquisitions related to the thermal management solutions market. This analysis provides insights into the competitive landscape and helps in identifying opportunities for growth and expansion in the market.

Key benefits of buying this report

This research report is focused on various levels of analysis — industry analysis (industry trends), market ranking analysis of top players, and company profiles, which together provide an overall view on the competitive landscape; emerging and high-growth segments of the thermal management solutions market; high-growth regions; and market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:

Analysis of drivers (Rapid industrialization & renewable energy policies In Asia Pacific, Growing number of solar projects, increased use of heat transfer fluids to reduce operating costs and save energy), restraints (Volatile raw material prices), opportunities (increasing need for energy conservation and clean energy, Government schemes focused on energy efficiency & renewable energy) and challenges (Fire & explosion hazards related to heat transfer fluids) influencing the growth of thermal management solutions market.

Market Penetration: Comprehensive information on thermal management solutions market offered by top players in the global market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the thermal

management solutions market.

Market Development: Comprehensive information about lucrative emerging markets — the report analyzes the markets for thermal management solutions market across regions.

Market Capacity: Production capacities of companies producing thermal management solutions are provided wherever available with upcoming capacities for the market.

Competitive Assessment: In-depth assessment of market shares, strategies, products, and manufacturing capabilities of leading players in the thermal management solutions market

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*Details on Business Overview, Products/Solutions/Services offered, Recent Developments, Product launches, Deals, MnM view, Right to win, Strategic made, Weakness and competitive threats might not be captured in case of unlisted companies.

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