

Microporous Insulation Market Report by Material (Alumina Silica, Calcium Magnesium Silicate, and Others), Product (Rigid Boards and Panels, Flexible Panels, and Others), Application (Industrial, Energy and Power, Oil and Gas, Aerospace and Defense, and Others), and Region 2025-2033

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Report description:

The global microporous insulation market size reached USD 167.8 Million in 2024. Looking forward, IMARC Group expects the market to reach USD 235.5 Million by 2033, exhibiting a growth rate (CAGR) of 3.65% during 2025-2033. The market is majorly driven by the increasing demand for energy-efficient solutions, the significant growth in the oil and gas industry, rapid product utilization in aerospace applications, expansion in the construction sector, the implementation of stringent environmental regulations, and continual advancements in microporous insulation materials.

Microporous Insulation Market Trends:

Expanding aerospace industry

The aerospace sector is growing in several regions, including Europe, North America, Latin America, and Asia Pacific. According to the International Trade Administration (ITA), in 2018, US aerospace exports to Germany were \$8.92 billion, with a trade surplus of USD 6.36 billion, a 67 percent increase over 2016. In 2018, the turnover of the U.K. civil aerospace industry was around \$44.6 billion, and it held a 17% global market share. This growth in the aerospace industry is driving demand for advanced materials, including microporous insulation, which is essential for high-performance thermal management and maintaining a stable operating temperature in aircraft. Additionally, the increasing focus on lightweight materials to enhance fuel efficiency in the aerospace sector is contributing to the overall microporous insulation demand.

Growing oil & gas industries

Microporous insulations are being widely used in the oil and gas industry for various applications such as cracking furnaces, furnace linings, and more due to their excellent properties such as resistance to abrasion and burner gas flows, lightweight

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materials, and stabilized chemical composition, among others. According to ITA, Mexico is one of the largest oil producers (with 1.6 million barrels produced daily in 2022), and also the fourth largest in the Americas after the USA, Canada, and Brazil. The growing demand for oil and gas will accelerate demand for new oil and gas plant facilities, which acts as a major driver for the market during the forecast period and creates a positive microporous insulation market outlook. Furthermore, the ongoing exploration and production activities in offshore environments, where extreme temperatures and harsh conditions prevail, are further bolstering the demand for high-performance insulation solutions, including microporous insulation.

Growth in the power generation industry

The global market is being greatly influenced by the growth in the power generation sector. The demand for advanced insulation solutions is increasing as power generation facilities, such as thermal power plants and renewable energy installations, aim to enhance efficiency and decrease energy losses. These materials are perfect for high-temperature environments such as power generation systems as they provide exceptional thermal resistance and high thermal conductivity. The use of these materials is increasing due to the necessity to improve energy efficiency and comply with strict regulations in power plants. As a result, the increasing power generation industry drives the need for insulation, promoting market expansion and advancements in insulation technology.

Microporous Insulation Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global, regional, and country levels for 2025-2033. Our report has categorized the market based on material, product, and application.

Breakup by Material:

- Alumina Silica
- Calcium Magnesium Silicate
- Others

Calcium magnesium silicate dominates the market

The report has provided a detailed breakup and analysis of the market based on the material. This includes alumina silica, calcium magnesium silicate, and others. According to the report, calcium magnesium silicate represented the largest segment.

According to the microporous insulation market research report, calcium magnesium silicate (CMS) is dominating the market due to its superior thermal performance and environmental benefits. CMS provides exceptional thermal resistance and fire protection, making it an ideal choice for high-temperature applications in industries such as aerospace, automotive, and power generation. Its lightweight and compact nature contributes to energy efficiency and space savings in various applications. Additionally, CMS is environmentally friendly, often produced from natural, non-toxic materials, aligning with global sustainability trends. As industries increasingly focus on reducing energy consumption and adhering to stringent environmental regulations, the demand for CMS-based solutions continues to rise, bolstering the growth of the segment.

Breakup by Product:

- Rigid Boards and Panels
- Flexible Panels
- Others

Rigid boards and panels hold the largest share in the market

A detailed breakup and analysis of the market based on the product have also been provided in the report. This includes rigid boards and panels, flexible panels, and others. According to the report, rigid boards and panels accounted for the largest market share.

The major market share is held by the rigid boards and panels segment due to their widespread use in commercial and industrial applications where durable and high-performance insulation is essential. These products offer excellent thermal resistance, structural integrity, and ease of installation, making them ideal for applications in high-temperature environments such as industrial furnaces, power plants, and the aerospace sector. Their ability to withstand mechanical stress and provide consistent insulation performance are further contributing to their dominance in the market.

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Breakup by Application:

- Industrial
- Energy and Power
- Oil and Gas
- Aerospace and Defense
- Others

Industrial holds the maximum share in the market

A detailed breakup and analysis of the market based on the application have also been provided in the report. This includes industrial, energy and power, oil and gas, aerospace and defense, and others. According to the report, industrial accounted for the largest market share.

The industrial sector held the largest share of the market and is growing at a faster CAGR during the microporous insulation market forecast period, due to the high demand for these insulations in the industrial sector. This is due to the increasing use of insulation in various segments of industrial applications such as furnaces, bakes, ladles, boilers, non-ferrous metal, cement, and glass industries. The insulation material provides excellent performance and has fire protection characteristics due to which it is widely utilized in the production of iron & steel, nonferrous metals, and ceramic fiber materials. Therefore, the increasing need for insulation in the industrial sector is anticipated to drive the market during the forecast period.

Breakup by Region:

- North America
 - o□United States
 - o□Canada
- Asia-Pacific
 - o□China
 - o□Japan
 - o□India
 - o□South Korea
 - o□Australia
 - o□Indonesia
 - o□Others
- Europe
 - o□Germany
 - o□France
 - o□United Kingdom
 - o□Italy
 - o□Spain
 - o□Russia
 - o□Others
- Latin America
 - o□Brazil
 - o□Mexico
 - o□Others
- Middle East and Africa

Asia Pacific leads the market, accounting for the largest microporous insulation market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the

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Middle East and Africa. According to the report, Asia Pacific represents the largest regional market for microporous insulation. Asia Pacific is dominating the market due to the rising demand for aircraft in the region. The aerospace sector is expanding in nations, such as India and China. These insulations are commonly utilized in aerospace components like insulating engine nacelles and enclosures to avoid heat dissipation from the engine. Additionally, the growing focus on energy efficiency and environmental regulations in these countries drives the adoption of advanced insulation solutions. The expansion of the aerospace and automotive industries in the region also contributes to the increased demand for microporous insulation, further solidifying Asia Pacific's position as the largest market and contributing to the microporous insulation market revenue.

The International Trade Administration (ITA) reported that China held the position of being the second-largest market for civil aerospace and aviation services in 2023, and it was also one of the markets experiencing rapid growth. At the end of 2018, China boasted over 59 airlines and 3,615 civil aircraft, marking a 10% rise from the previous year. According to the International Air Transport Association (IATA), India is predicted to overtake China and the United States as the world's third-largest air passenger market within the next decade, by 2030. As the aerospace industry continues to expand in the region, the demand for insulation is expected to rise significantly, leading to the microporous insulation market growth in the near future.

Competitive Landscape:

-□The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include Elmelin Ltd., Etex Group, Isoleika S. Coop, Johns Manville Corporation (Berkshire Hathaway Inc.), Kingspan Group Plc, Morgan Advanced Materials plc, NICHIAS Corporation, Siltherm Group Holdings Limited, TECHNO-PHYSIK Engineering GmbH, Unicorn Insulations Limited, and Unifrax LLC.

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)

-□Key players are significantly influencing the market through innovative product development and strategic collaborations. Microporous insulation companies like Elmelin Ltd., Etex Group, and Kingspan Group Plc are investing heavily in research and development to enhance the performance and efficiency of their products. They are focusing on improving the thermal insulation properties and durability of microporous materials, meeting the increasing demand for energy-efficient solutions. In addition, these players are expanding their market presence through strategic partnerships and acquisitions. They are also implementing eco-friendly manufacturing processes and using recycled materials to appeal to environmentally conscious consumers. The microporous insulation overview reveals that the major companies are also working towards reducing production costs through technological advancements and process optimizations. As a result, they are investing heavily in research and development (R&D) activities to stay ahead of competitors by continuously improving product performance and introducing new technologies. This approach enhances their competitive edge as well as makes advanced insulation solutions more accessible to a wider range of industries. Their continued investment in these areas ensures that they remain at the forefront of industry developments.

Key Questions Answered in This Report

- 1.How big is the microporous insulation market?
- 2.What is the future outlook of the microporous insulation market?
- 3.What are the key factors driving the microporous insulation market?
- 4.Which region accounts for the largest microporous insulation market share?
- 5.Which are the leading companies in the global microporous insulation market?

Table of Contents:

- 1 Preface
- 2 Scope and Methodology
 - 2.1 Objectives of the Study
 - 2.2 Stakeholders

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- 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 Microporous Insulation Market
 - 5.1 Market Overview
 - 5.2 Market Performance
 - 5.3 Impact of COVID-19
 - 5.4 Market Forecast
- 6 Market Breakup by Material
 - 6.1 Alumina Silica
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
 - 6.2 Calcium Magnesium Silicate
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
 - 6.3 Others
 - 6.3.1 Market Trends
 - 6.3.2 Market Forecast
- 7 Market Breakup by Product
 - 7.1 Rigid Boards and Panels
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
 - 7.2 Flexible Panels
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast
 - 7.3 Others
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast
- 8 Market Breakup by Application
 - 8.1 Industrial
 - 8.1.1 Market Trends
 - 8.1.2 Market Forecast
 - 8.2 Energy and Power
 - 8.2.1 Market Trends
 - 8.2.2 Market Forecast
 - 8.3 Oil and Gas
 - 8.3.1 Market Trends
 - 8.3.2 Market Forecast
 - 8.4 Aerospace and Defense

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- 8.4.1 Market Trends
- 8.4.2 Market Forecast
- 8.5 Others
 - 8.5.1 Market Trends
 - 8.5.2 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

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- 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 Elmelin Ltd.
 - 14.3.1.1 Company Overview
 - 14.3.1.2 Product Portfolio
 - 14.3.2 Etex Group

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- 14.3.2.1 Company Overview
- 14.3.2.2 Product Portfolio
- 14.3.3 Isoleika S. Coop
 - 14.3.3.1 Company Overview
 - 14.3.3.2 Product Portfolio
- 14.3.4 Johns Manville Corporation (Berkshire Hathaway Inc.)
 - 14.3.4.1 Company Overview
 - 14.3.4.2 Product Portfolio
- 14.3.5 Kingspan Group Plc
 - 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 Morgan Advanced Materials plc
 - 14.3.6.1 Company Overview
 - 14.3.6.2 Product Portfolio
 - 14.3.6.3 Financials
- 14.3.7 NICHIAS Corporation
 - 14.3.7.1 Company Overview
 - 14.3.7.2 Product Portfolio
 - 14.3.7.3 Financials
 - 14.3.7.4 SWOT Analysis
- 14.3.8 Siltherm Group Holdings Limited
 - 14.3.8.1 Company Overview
 - 14.3.8.2 Product Portfolio
- 14.3.9 TECHNO-PHYSIK Engineering GmbH
 - 14.3.9.1 Company Overview
 - 14.3.9.2 Product Portfolio
- 14.3.10 Unicorn Insulations Limited
 - 14.3.10.1 Company Overview
 - 14.3.10.2 Product Portfolio
- 14.3.11 Unifrax LLC
 - 14.3.11.1 Company Overview
 - 14.3.11.2 Product Portfolio

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