

## **Vacuum Insulation Panels (VIPs) - A Global Market Overview**

Market Report | 2026-01-30 | 286 pages | Industry Experts

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### **Report description:**

Global Vacuum Insulation Panels (VIPs) Market Trends and Outlook

Vacuum Insulation Panels (VIPs) are among the most advanced high-performance thermal insulation solutions currently available, delivering extremely low thermal conductivity typically in the range of 0.002-0.008 W/m.K. This exceptional insulation capability, combined with their thin profile and design flexibility, has enabled VIPs to gain traction across demanding applications such as commercial and domestic refrigeration, temperature-controlled transportation systems, insulated shipping containers, and selected building and construction uses. By enabling thinner insulation layers without sacrificing thermal performance, VIPs support reduced package size and weight, longer temperature hold times for sensitive goods, and higher energy efficiency in appliances, making them especially valuable in applications where space constraints and performance requirements are critical.

The global Vacuum Insulation Panels (VIPs) market is primarily driven by increasingly stringent energy-efficiency regulations for appliances and buildings, along with rising demand for reliable thermal protection in pharmaceutical and biotech cold chain logistics. Appliance manufacturers remain the largest adopters as they work to meet tightening efficiency standards, while stricter regulatory oversight of pharmaceutical cold chains continues to reinforce demand for high-performance insulation solutions. Although adoption in the construction sector has historically been constrained by higher costs, VIPs usage is gradually increasing in space-constrained buildings and high-performance retrofit projects, particularly across Asia-Pacific and Europe. In 2025, global VIPs demand reached about US\$1.5 billion. The market is expected to expand at a 13.6% CAGR in volume and a 9.8% CAGR in value during 2025-2032, reaching roughly 157 million square meters and US\$2.8 billion by 2032, supported by accelerating appliance adoption, steady growth in pharmaceutical cold chains, and the gradual transition of VIPs from pilot-scale to broader commercial use in building applications.

Vacuum Insulation Panels (VIPs) Regional Market Analysis

Asia-Pacific dominates the global VIPs volume market, accounting for 65.6% share in 2025, followed by Europe and North America. The region's leadership is underpinned by large-scale appliance manufacturing, rapid cold chain infrastructure expansion, and increasing experimentation with VIPs in energy-efficient buildings. Looking ahead, Asia-Pacific is projected to record the fastest CAGR of 14.9% during 2025-2032, with volume demand expected to reach 112 million square meters by 2032. Growth will be

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driven by sustained demand from appliance manufacturers, continued expansion of pharmaceutical and food cold chains, and pilot-to-commercial scale adoption of VIPs in building applications, particularly in China, Japan, and South Korea, where space constraints and energy-efficiency standards favor ultra-thin insulation solutions.

#### Vacuum Insulation Panels (VIPs) Market Analysis by Core Material

At the global level, fiberglass remained the dominant VIP core material in 2025, accounting for about 69.7% of total volume, followed by fumed silica, while other core materials together represented a small share. During 2022-2025, other core materials recorded the fastest expansion at a 12.7% CAGR, albeit from a very small base, reflecting early-stage adoption rather than large-scale substitution. Over the 2025-2032 period, growth rates are expected to converge, with other core materials projected to grow the fastest at a 15.1% CAGR, closely followed by fumed silica. This faster growth of alternative cores is being driven by recent innovations such as recycled rigid PU foam powder cores that improve circularity, bio-based cellulose aerogel cores that offer lightweight and sustainable performance comparable to fumed silica, and continued optimization of traditional fiberglass and fumed silica formulations. Despite these advances, fiberglass is expected to retain clear leadership, supported by its cost efficiency, manufacturing maturity, and broad adoption in appliance and cold-chain applications.

#### Vacuum Insulation Panels (VIPs) Market Analysis by Envelope Material

In value terms, metalized laminates dominated the global VIPs market in 2025, accounting for about 72% of total value, while aluminum foils held the remaining. Value growth during 2022-2025 was relatively subdued, with aluminum foil-based VIPs facing slight pressure and metalized laminates posting modest gains. Over 2025-2032, metalized laminates are expected to lead value expansion with a 10% CAGR, ahead of aluminum foils, supported by superior barrier performance and compatibility with advanced sealing technologies. Recent envelope material innovations, including self-healing barrier films, high-barrier multilayer laminates, and improved edge-sealing designs, are enhancing long-term vacuum stability and durability, while niche stainless steel-sealed envelopes are emerging for high-reliability applications. Together, these trends reinforce the value leadership of metalized laminate-based VIPs while sustaining aluminum foils in cost-sensitive segments.

#### Vacuum Insulation Panels (VIPs) Market Analysis by Application

Refrigerators and freezers continue to anchor global VIPs demand, accounting for around 78% of total volumes in 2025, as tightening appliance energy-efficiency standards worldwide reinforce the need for ultra-thin, high-performance insulation. After relatively uneven growth in 2022-2023, volumes accelerated from 2024 onward, supported by a recovery in appliance manufacturing, rising replacement demand, and increased penetration of VIPs in large-capacity, premium, and ultra-low-temperature refrigeration models. The trend reflects a structural shift in appliance design, where VIPs are increasingly embedded to deliver higher efficiency ratings while preserving internal storage space.

Building and construction, although smaller in absolute volume terms, stands out as the fastest-growing application, registering a 14.3% CAGR during 2025-2032. Growth in this segment is being driven by adoption in space-constrained buildings, retrofits, and high-performance envelopes where conventional insulation thickness is a limiting factor, particularly across Europe and parts of Asia-Pacific. At the overall market level, total VIPs volumes are projected to reach 156.7 thousand m<sup>2</sup> by 2032, reflecting not only continued dominance of refrigeration but also gradual diversification into buildings and other emerging applications as costs decline and material durability improves.

#### Vacuum Insulation Panels (VIPs) Market Report Scope

This global report on Feed Acidulants analyzes the market based on Type, Compound, Form, Function and Animal Type for the period 2022-2032 with forecasts from 2025 to 2032 in terms of value in US\$. In addition to providing profiles of major companies

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operating in this space, the latest corporate and industrial developments have been covered to offer a clear panorama of how and where the market is progressing.

#### Key Metrics

Historical Period: 2022-2025

Base Year: 2025

Forecast Period: 2025-2032

Units: Volume consumption in Square Meters and Value market in US\$

Companies Mentioned: 47

#### Global Vacuum Insulation Panels (VIPs) Market by Geographic Region

- North America (The United States and Mexico)
- Europe (Austria, France, Germany, Italy, Switzerland, The United Kingdom and Rest of Europe)
- Asia-Pacific (China, Japan, South Korea and Rest of Asia-Pacific)
- Rest of World (Turkey, Russia, Brazil and Other ROW)

#### Global Vacuum Insulation Panels (VIPs) Market by Core Material Type

- Fumed Silica VIPs
- Fiberglass VIPs
- Other Core Material based VIPs (Aerogel, Expanded Perlite, Hybrid and PU foam)

#### Global Vacuum Insulation Panels (VIPs) Market by Envelope Material Type

- Aluminum Foils based VIPs
- Metalized Laminates based VIPs

#### Global Vacuum Insulation Panels (VIPs) Market by Application

- Refrigerators & Freezers
- Cold Chain Logistics
- Building & Construction
- Other Applications (such as marine, automotive, aerospace, hot water storage, industrial & technical insulation etc.)

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- Expanded Perlite
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- o□Vacuum Insulation Panels Producers
- AEROPAN - AMA Advanced Materials Srl (Italy)
- AeroSafe Global (United States)
- Asahi Fiber Glass Co., Ltd. (Japan)
- Chuzhou Yinxing New Material Technology Co., Ltd. (China)
- Csafe Global (United States)
- ES Global Co., Ltd. (South Korea)

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- Etex Building Performance NV (Promat) (Belgium)
- Fujian SuperTech Advanced Material Co., Ltd. (China)
- Future Housing Co., Ltd. (South Korea)
- Hitachi Global Life Solutions, Inc. (Japan)
- Isolcore - New Zealand Company S.R.L. (Italy)
- Jiangsu Sanyou Dior Energy-Saving New Materials Co., Ltd. (China)
- Kingspan Insulation Ltd (United Kingdom)
- Knauf Insulation, d.o.o. (Slovenia)
- KyungDong One Co., Ltd. (South Korea)
- Morgan Advanced Materials plc (United Kingdom)
- Nantong Ecotherm Insulations Co., Ltd (China)
- NEVEON Holding GmbH (Austria)
- Panasonic Corporation (Japan)
- Radmat Building Products Ltd (United Kingdom)
- RuhrTech Co., Ltd. (China)
- Sealed Air Corporation (United States)
- Shenzhen Fulang Energy Saving Technology Co., Ltd. (China)
- Sichuan Micolon VIP New Material Co., Ltd. (China)
- Siltherm Int'l Group Limited (China)
- SOPREMA UK (United Kingdom)
- Tiger Corporation (Japan)
- Turvac, inovativne izolacije, d.o.o. (Slovenia)
- ALKEGEN (FORMERLY UNIFRAX I LLC) (United States)
- V21 GmbH (Germany)
- VAINSCORE Co., Ltd. (South Korea)
- Vaku-Isotherm GmbH (Germany)
- va-Q-tec AG (Germany)
- VARIOTEC GmbH & Co. KG (Germany)
- Wacon Co., Ltd. (Japan)
- Winnezone Industrial Co., Ltd. (China)
- Zhejiang Huaheng Composite Materials Co., Ltd (China)
- Zhengzhou Exceed New Technologies Co., Ltd (China)
- Zhongheng New Material Technology Co., Ltd. (China)
- o□Raw Materials Producers
- Core Materials Manufacturers
- BASF SE (Germany)
- Cabot Corporation (United States)
- Civen Metal Material (Shanghai) Co.,Ltd. (China)
- Chongqing Zaisheng Technology Co., Ltd. (China)
- Evonik Industries AG (Germany)
- Isoleika S. Coop. (Spain)
- SUMTEQ GmbH (Germany)
- Unicorn Insulations Limited (China)
- Wacker Chemie AG (Germany)
- Barrier Films Manufacturers
- Amcor plc (Switzerland)
- Anhui Tongda Packaging Material Co., Ltd. (China)

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- Avery Dennison Hanita (Israel)
- Camvac Limited (United Kingdom)
- Kuraray Co., Ltd. (Japan)
- Mitsubishi Polyester Film GmbH (Germany)
- Rexor (France)
- Getters Manufacturers
- SAES Getters S.p.A. (Italy)
- SE-JONG Materials Inc. (South Korea)

### 3. KEY BUSINESS AND PRODUCT TRENDS

o□December 2025

- Hitachi Launches Made-in-Japan Multi-Door Refrigerator in Australia Featuring Vacuum Insulation Panels

o□November 2025

- Wacon Launches Full-Scale Vacuum Insulation Panel Business with Japan's Only Fumed Silica VIP Line

o□October 2025

- Turvac Becomes Fully Owned Subsidiary of Recticel Group

o□June 2025

- Panasonic Launches VIXELL Container Services for Long-Duration, Power-Free Cold Chain Transport

o□May 2025

- Panasonic to Showcase ADVANC-R VIP at AIA 2025, Raising the Bar for Low-Slope Roofing Insulation

- Hisense Launches UltraCapacity Side-by-Side Refrigerator Using Vacuum Insulated Panel Technology

o□April 2025

- Kingspan Insulation Introduces OPTIM-R E Encapsulated Vacuum Insulation Panel for Space-Constrained Applications

- Tiger Corporation to Deploy Stainless Steel VIP-Based Reefer Containers at Expo 2025 Osaka-Kansai

o□Additional developments included in the report

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