

Hygroscopic Building Material Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented, By Material Type (Silica Gel, Activated Clay, Zeolites, Natural Fibers, Synthetic Fibers, By Application (Moisture Control in Indoor Environments, Humidity Regulation in Libraries & Museums, Packaging & Storage, Food & Pharmaceutical Industry, Electronics & Automotive Industry), By Form (Desiccant Bags & Cartridges, Desiccant Packets, Desiccant Panels & Sheets, Desiccant Beads, Desiccant Powders), By Region, By Competition, 2020-2030F

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Abstracts

Market Overview

The Global Hygroscopic Building Material Market was valued at USD 55.09 billion in 2024 and is projected to reach USD 107.68 billion by 2030, growing at a CAGR of 11.65%. This market encompasses construction materials capable of naturally absorbing and releasing moisture from the surrounding environment. Materials such as wood, clay, gypsum, and various bio-based composites contribute to indoor humidity regulation, offering improved air quality, occupant comfort, and energy efficiency. These materials function passively to buffer humidity changes, reducing dependence on mechanical systems. Their integration into modern construction aligns with sustainable design trends, enhancing thermal performance and supporting eco-friendly practices.

As demand for healthier, more energy-efficient buildings grows globally—driven by regulations and green certification requirements—hygroscopic materials are gaining traction among developers, architects, and engineers. Their applications span both new construction and renovation, across residential, commercial, and institutional sectors.

Key Market Drivers

Growing Demand for Energy-Efficient and Passive Buildings

The increasing emphasis on energy-efficient and passive building design is a key driver accelerating growth in the hygroscopic building material market. With stricter energy regulations and rising sustainability benchmarks, the construction sector is under pressure to reduce environmental impact. Hygroscopic materials contribute significantly by passively regulating indoor humidity—absorbing and releasing moisture in response to atmospheric conditions—thereby reducing reliance on mechanical HVAC systems. This leads to lower energy consumption and supports compliance with green building certifications such as LEED, BREEAM, and WELL. Consequently, architects, builders, and developers are turning to materials like clay, lime, wood, and hempcrete for their dual benefits of performance and sustainability. These materials not only improve thermal comfort but also provide long-term operational cost savings, aligning with the growing preference for eco-conscious construction practices.

Key Market Challenges

Limited Consumer Awareness and Market Education

A major barrier to the widespread adoption of hygroscopic building materials is the limited awareness and understanding among consumers, construction professionals, and architects regarding their benefits and functionality. Despite their proven ability to regulate indoor air quality and enhance occupant comfort, hygroscopic materials remain underutilized due to insufficient market education. Many stakeholders default to traditional building materials, which are more familiar, accessible, and appear cost-effective in the short term. The long-term advantages of energy savings and health improvements are often overlooked or inadequately communicated. Additionally, construction education and professional training programs seldom cover hygroscopic material science in depth, leading to a knowledge gap that hinders their inclusion in design and planning stages. This challenge is particularly pronounced in developing regions, where awareness of sustainable practices is still emerging and price sensitivity tends to outweigh environmental considerations.

Key Market Trends

Integration of Hygroscopic Materials in Sustainable and Green Building Practices

A significant trend in the hygroscopic building material market is their growing integration into environmentally sustainable building practices. As energy-efficient construction becomes a priority worldwide, materials like wood, clay plasters, lime-based products, and natural fibers are being incorporated into green building designs. These materials offer passive moisture regulation, improving indoor air quality and reducing the burden on HVAC systems. Their use aligns well with certifications like LEED and BREEAM, making them increasingly attractive to builders and architects focused on sustainable development. By enhancing thermal stability and humidity buffering, hygroscopic materials help create healthier and more energy-efficient indoor environments. This trend is further supported by innovations in eco-friendly construction techniques and a growing consumer demand for buildings that promote well-being and environmental responsibility.

Key Market Players

Compagnie de Saint-Gobain S.A.

Rockwool A/S

Knauf Insulation GmbH

Owens Corning

BASF SE

Kingspan Group plc

Gutex Holzfaserplattenwerk H. Henselmann GmbH & Co. KG

Thermo-Hanf Vertriebs GmbH

Havelock Wool LLC

Soprema S.A.S.

Report Scope:

In this report, the Global Hygroscopic Building Material Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Hygroscopic Building Material Market, By Material Type:

Silica Gel

Activated Clay

Zeolites

Natural Fibers

Synthetic Fibers

Hygroscopic Building Material Market, By Application:

Moisture Control in Indoor Environments

Humidity Regulation in Libraries & Museums

Packaging & Storage

Food & Pharmaceutical Industry

Electronics & Automotive Industry

Hygroscopic Building Material Market, By Form:

Desiccant Bags & Cartridges

Desiccant Packets

Desiccant Panels & Sheets

Desiccant Beads

Desiccant Powders

Hygroscopic Building Material Market, By Region:

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia-Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Kuwait

Turkey

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the Global Hygroscopic Building Material Market.

Available Customizations:

Global Hygroscopic Building Material Market report with the given Market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional Market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
- 1.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Formulation of the Scope
- 2.4. Assumptions and Limitations
- 2.5. Sources of Research
 - 2.5.1. Secondary Research
 - 2.5.2. Primary Research
- 2.6. Approach for the Market Study
 - 2.6.1. The Bottom-Up Approach
 - 2.6.2. The Top-Down Approach
- 2.7. Methodology Followed for Calculation of Market Size & Market Shares
- 2.8. Forecasting Methodology
 - 2.8.1. Data Triangulation & Validation

3. EXECUTIVE SUMMARY

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, and Trends

4. VOICE OF CUSTOMER

5. GLOBAL HYGROSCOPIC BUILDING MATERIAL MARKET OUTLOOK

- 5.1. Market Size & Forecast

- 5.1.1. By Value
- 5.2. Market Share & Forecast
 - 5.2.1. By Material Type (Silica Gel, Activated Clay, Zeolites, Natural Fibers, Synthetic Fibers)
 - 5.2.2. By Application (Moisture Control in Indoor Environments, Humidity Regulation in Libraries & Museums, Packaging & Storage, Food & Pharmaceutical Industry, Electronics & Automotive Industry)
 - 5.2.3. By Form (Desiccant Bags & Cartridges, Desiccant Packets, Desiccant Panels & Sheets, Desiccant Beads, Desiccant Powders)
 - 5.2.4. By Region
- 5.3. By Company (2024)
- 5.4. Market Map

6. NORTH AMERICA HYGROSCOPIC BUILDING MATERIAL MARKET OUTLOOK

- 6.1. Market Size & Forecast
 - 6.1.1. By Value
- 6.2. Market Share & Forecast
 - 6.2.1. By Material Type
 - 6.2.2. By Application
 - 6.2.3. By Form
 - 6.2.4. By Country
- 6.3. North America: Country Analysis
 - 6.3.1. United States Hygroscopic Building Material Market Outlook
 - 6.3.1.1. Market Size & Forecast
 - 6.3.1.1.1. By Value
 - 6.3.1.2. Market Share & Forecast
 - 6.3.1.2.1. By Material Type
 - 6.3.1.2.2. By Application
 - 6.3.1.2.3. By Form
 - 6.3.2. Canada Hygroscopic Building Material Market Outlook
 - 6.3.2.1. Market Size & Forecast
 - 6.3.2.1.1. By Value
 - 6.3.2.2. Market Share & Forecast
 - 6.3.2.2.1. By Material Type
 - 6.3.2.2.2. By Application
 - 6.3.2.2.3. By Form
 - 6.3.3. Mexico Hygroscopic Building Material Market Outlook
 - 6.3.3.1. Market Size & Forecast

- 6.3.3.1.1. By Value
- 6.3.3.2. Market Share & Forecast
 - 6.3.3.2.1. By Material Type
 - 6.3.3.2.2. By Application
 - 6.3.3.2.3. By Form

7. EUROPE HYGROSCOPIC BUILDING MATERIAL MARKET OUTLOOK

- 7.1. Market Size & Forecast
 - 7.1.1. By Value
- 7.2. Market Share & Forecast
 - 7.2.1. By Material Type
 - 7.2.2. By Application
 - 7.2.3. By Form
 - 7.2.4. By Country
- 7.3. Europe: Country Analysis
 - 7.3.1. Germany Hygroscopic Building Material Market Outlook
 - 7.3.1.1. Market Size & Forecast
 - 7.3.1.1.1. By Value
 - 7.3.1.2. Market Share & Forecast
 - 7.3.1.2.1. By Material Type
 - 7.3.1.2.2. By Application
 - 7.3.1.2.3. By Form
 - 7.3.2. United Kingdom Hygroscopic Building Material Market Outlook
 - 7.3.2.1. Market Size & Forecast
 - 7.3.2.1.1. By Value
 - 7.3.2.2. Market Share & Forecast
 - 7.3.2.2.1. By Material Type
 - 7.3.2.2.2. By Application
 - 7.3.2.2.3. By Form
 - 7.3.3. Italy Hygroscopic Building Material Market Outlook
 - 7.3.3.1. Market Size & Forecast
 - 7.3.3.1.1. By Value
 - 7.3.3.2. Market Share & Forecast
 - 7.3.3.2.1. By Material Type
 - 7.3.3.2.2. By Application
 - 7.3.3.2.3. By Form
 - 7.3.4. France Hygroscopic Building Material Market Outlook
 - 7.3.4.1. Market Size & Forecast

- 7.3.4.1.1. By Value
- 7.3.4.2. Market Share & Forecast
 - 7.3.4.2.1. By Material Type
 - 7.3.4.2.2. By Application
 - 7.3.4.2.3. By Form
- 7.3.5. Spain Hygroscopic Building Material Market Outlook
 - 7.3.5.1. Market Size & Forecast
 - 7.3.5.1.1. By Value
 - 7.3.5.2. Market Share & Forecast
 - 7.3.5.2.1. By Material Type
 - 7.3.5.2.2. By Application
 - 7.3.5.2.3. By Form

8. ASIA-PACIFIC HYGROSCOPIC BUILDING MATERIAL MARKET OUTLOOK

- 8.1. Market Size & Forecast
 - 8.1.1. By Value
- 8.2. Market Share & Forecast
 - 8.2.1. By Material Type
 - 8.2.2. By Application
 - 8.2.3. By Form
 - 8.2.4. By Country
- 8.3. Asia-Pacific: Country Analysis
 - 8.3.1. China Hygroscopic Building Material Market Outlook
 - 8.3.1.1. Market Size & Forecast
 - 8.3.1.1.1. By Value
 - 8.3.1.2. Market Share & Forecast
 - 8.3.1.2.1. By Material Type
 - 8.3.1.2.2. By Application
 - 8.3.1.2.3. By Form
 - 8.3.2. India Hygroscopic Building Material Market Outlook
 - 8.3.2.1. Market Size & Forecast
 - 8.3.2.1.1. By Value
 - 8.3.2.2. Market Share & Forecast
 - 8.3.2.2.1. By Material Type
 - 8.3.2.2.2. By Application
 - 8.3.2.2.3. By Form
 - 8.3.3. Japan Hygroscopic Building Material Market Outlook
 - 8.3.3.1. Market Size & Forecast

- 8.3.3.1.1. By Value
- 8.3.3.2. Market Share & Forecast
 - 8.3.3.2.1. By Material Type
 - 8.3.3.2.2. By Application
 - 8.3.3.2.3. By Form
- 8.3.4. South Korea Hygroscopic Building Material Market Outlook
 - 8.3.4.1. Market Size & Forecast
 - 8.3.4.1.1. By Value
 - 8.3.4.2. Market Share & Forecast
 - 8.3.4.2.1. By Material Type
 - 8.3.4.2.2. By Application
 - 8.3.4.2.3. By Form
- 8.3.5. Australia Hygroscopic Building Material Market Outlook
 - 8.3.5.1. Market Size & Forecast
 - 8.3.5.1.1. By Value
 - 8.3.5.2. Market Share & Forecast
 - 8.3.5.2.1. By Material Type
 - 8.3.5.2.2. By Application
 - 8.3.5.2.3. By Form

9. SOUTH AMERICA HYGROSCOPIC BUILDING MATERIAL MARKET OUTLOOK

- 9.1. Market Size & Forecast
 - 9.1.1. By Value
- 9.2. Market Share & Forecast
 - 9.2.1. By Material Type
 - 9.2.2. By Application
 - 9.2.3. By Form
 - 9.2.4. By Country
- 9.3. South America: Country Analysis
 - 9.3.1. Brazil Hygroscopic Building Material Market Outlook
 - 9.3.1.1. Market Size & Forecast
 - 9.3.1.1.1. By Value
 - 9.3.1.2. Market Share & Forecast
 - 9.3.1.2.1. By Material Type
 - 9.3.1.2.2. By Application
 - 9.3.1.2.3. By Form
 - 9.3.2. Argentina Hygroscopic Building Material Market Outlook
 - 9.3.2.1. Market Size & Forecast

- 9.3.2.1.1. By Value
- 9.3.2.2. Market Share & Forecast
 - 9.3.2.2.1. By Material Type
 - 9.3.2.2.2. By Application
 - 9.3.2.2.3. By Form
- 9.3.3. Colombia Hygroscopic Building Material Market Outlook
 - 9.3.3.1. Market Size & Forecast
 - 9.3.3.1.1. By Value
 - 9.3.3.2. Market Share & Forecast
 - 9.3.3.2.1. By Material Type
 - 9.3.3.2.2. By Application
 - 9.3.3.2.3. By Form

10. MIDDLE EAST AND AFRICA HYGROSCOPIC BUILDING MATERIAL MARKET OUTLOOK

- 10.1. Market Size & Forecast
 - 10.1.1. By Value
- 10.2. Market Share & Forecast
 - 10.2.1. By Material Type
 - 10.2.2. By Application
 - 10.2.3. By Form
 - 10.2.4. By Country
- 10.3. Middle East and Africa: Country Analysis
 - 10.3.1. South Africa Hygroscopic Building Material Market Outlook
 - 10.3.1.1. Market Size & Forecast
 - 10.3.1.1.1. By Value
 - 10.3.1.2. Market Share & Forecast
 - 10.3.1.2.1. By Material Type
 - 10.3.1.2.2. By Application
 - 10.3.1.2.3. By Form
 - 10.3.2. Saudi Arabia Hygroscopic Building Material Market Outlook
 - 10.3.2.1. Market Size & Forecast
 - 10.3.2.1.1. By Value
 - 10.3.2.2. Market Share & Forecast
 - 10.3.2.2.1. By Material Type
 - 10.3.2.2.2. By Application
 - 10.3.2.2.3. By Form
 - 10.3.3. UAE Hygroscopic Building Material Market Outlook

- 10.3.3.1. Market Size & Forecast
 - 10.3.3.1.1. By Value
- 10.3.3.2. Market Share & Forecast
 - 10.3.3.2.1. By Material Type
 - 10.3.3.2.2. By Application
 - 10.3.3.2.3. By Form
- 10.3.4. Kuwait Hygroscopic Building Material Market Outlook
 - 10.3.4.1. Market Size & Forecast
 - 10.3.4.1.1. By Value
 - 10.3.4.2. Market Share & Forecast
 - 10.3.4.2.1. By Material Type
 - 10.3.4.2.2. By Application
 - 10.3.4.2.3. By Form
- 10.3.5. Turkey Hygroscopic Building Material Market Outlook
 - 10.3.5.1. Market Size & Forecast
 - 10.3.5.1.1. By Value
 - 10.3.5.2. Market Share & Forecast
 - 10.3.5.2.1. By Material Type
 - 10.3.5.2.2. By Application
 - 10.3.5.2.3. By Form

11. MARKET DYNAMICS

- 11.1. Drivers
- 11.2. Challenges

12. MARKET TRENDS & DEVELOPMENTS

- 12.1. Merger & Acquisition (If Any)
- 12.2. Product Launches (If Any)
- 12.3. Recent Developments

13. COMPANY PROFILES

- 13.1. Compagnie de Saint-Gobain S.A.
 - 13.1.1. Business Overview
 - 13.1.2. Key Revenue and Financials
 - 13.1.3. Recent Developments
 - 13.1.4. Key Personnel/Key Contact Person

- 13.1.5. Key Product/Services Offered
- 13.2. Rockwool A/S
- 13.3. Knauf Insulation GmbH
- 13.4. Owens Corning
- 13.5. BASF SE
- 13.6. Kingspan Group plc
- 13.7. Gutex Holzfaserplattenwerk H. Henselmann GmbH & Co. KG
- 13.8. Thermo-Hanf Vertriebs GmbH
- 13.9. Havelock Wool LLC
- 13.10. Soprema S.A.S.

14. STRATEGIC RECOMMENDATIONS

15. ABOUT US & DISCLAIMER

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