+357 96 030922
info@marketpublishers.com

CCUS Materials Market Forecasts to 2034 – Global Analysis By Material Type (Absorbents, Adsorbents, Membranes, Catalysts, Sorbents, and Metal-Organic Frameworks (MOFs)), Source of CO?, Service Model, Technology, Application, End User, and By Geography

https://marketpublishers.com/r/C1013B2A3288EN.html
Date: March 2026
Pages: 200
Price: US$ 4,150.00 (Single User License)
ID: C1013B2A3288EN

Abstracts

According to Stratistics MRC, the Global CCUS Materials Market is accounted for $4.8 billion in 2026 and is expected to reach $7.6 billion by 2034 growing at a CAGR of 5.9% during the forecast period. CCUS materials are specialized substances including absorbents, adsorbents, membranes, catalysts, and sorbents used in carbon capture, utilization, and storage processes to separate and process carbon dioxide from industrial emissions. These materials form the functional core of carbon capture systems, enabling efficient CO2 separation from flue gases produced by power plants, cement factories, and other heavy industrial sources. Advanced CCUS materials such as metal-organic frameworks and amine-based solvents are driving improvements in capture efficiency, energy consumption reduction, and overall system economics.

Market Dynamics:

Driver:

Government mandates for carbon emission reduction

Governments across major economies including the European Union, United States, and China have established legally binding net-zero emission commitments that require carbon capture, utilization, and storage as a critical tool for decarbonizing industrial

+357 96 030922
info@marketpublishers.com

sectors. Mandatory carbon pricing mechanisms, emissions trading systems, and carbon border adjustment policies create direct financial incentives for heavy industry to deploy carbon capture technology, generating substantial and growing demand for the specialized absorbents, membranes, and catalysts that form the functional core.

Restraint:

High capital investment requirements for projects

Construction and operation of commercial-scale carbon capture facilities requires enormous capital investment, including specialized material procurement, engineering of capture systems, development of CO2 compression and transport infrastructure, and establishment of geological storage sites. These costs remain prohibitive for many industrial operators, especially in sectors with tight margins such as cement and steel. Without sustained government subsidies or carbon pricing at levels sufficient to make capture projects financially attractive, the high capital barrier continues to slow.

Opportunity:

Expanding industrial decarbonization commitments globally

Industrial sectors including steel, cement, chemicals, and power generation face mounting decarbonization pressure from regulators, investors, and customers but lack readily available alternatives to combustion-based processes. For these hard-to-abate industries, CCUS represents the most commercially viable near-term pathway to reducing emissions without restructuring production. Growing corporate net-zero commitments and expanding government funding for industrial CCUS demonstration projects are creating a broad and deepening market for advanced capture materials across diverse industrial applications globally.

Threat:

High energy penalty of current capture technologies

The dominant post-combustion carbon capture technologies based on amine solvent absorption impose a significant energy penalty on facilities where deployed, typically reducing net energy output by a meaningful percentage. This energy cost increases operational expenses and reduces the overall climate benefit by requiring additional fuel

+357 96 030922
info@marketpublishers.com

consumption to run the capture process. The challenge of developing next-generation capture materials that deliver high selectivity and capacity at substantially lower regeneration energy requirements remains a critical technical barrier.

Covid-19 Impact:

The CCUS Materials Market experienced strategic momentum during the COVID-19 period as governments and industries reinforced long-term decarbonization commitments. Spurred by green recovery initiatives and sustainability-focused stimulus packages, investments in carbon capture infrastructure accelerated. Fueled by heightened emphasis on industrial emission control and climate resilience, research activities surrounding advanced absorbents, membranes, and catalytic materials expanded. Additionally, collaborations between energy producers and technology developers strengthened commercialization pathways, reinforcing steady market advancement in the post-pandemic landscape.

The absorbents segment is expected to be the largest during the forecast period

The absorbents segment is expected to account for the largest market share during the forecast period, due to its high carbon capture efficiency and broad applicability across industrial facilities and power generation plants. Propelled by continuous innovation in solid sorbents, amine-based solutions, and metal-organic frameworks, absorbent materials demonstrate superior CO? selectivity and regeneration performance. Furthermore, scalability, cost optimization advancements, and compatibility with existing capture systems strengthen their dominant adoption across large-scale CCUS installations.

The point source segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the point source segment is predicted to witness the highest growth rate, driven by increasing implementation of carbon capture technologies at concentrated emission sites such as cement plants, refineries, and thermal power stations. Spurred by stringent emission reduction targets and industrial decarbonization mandates, point source capture solutions enable measurable and immediate carbon mitigation. Additionally, integration with enhanced oil recovery and industrial utilization pathways is accelerating deployment across high-emission sectors.

Region with largest share:

+357 96 030922
info@marketpublishers.com

During the forecast period, the North America region is expected to hold the largest market share, owing to substantial federal funding, tax incentives, and established CCUS infrastructure. Propelled by advanced research ecosystems and strong collaboration between energy companies and technology providers, the region demonstrates early commercialization of innovative capture materials. Moreover, supportive regulatory frameworks and active carbon storage projects reinforce North America's leadership in CCUS materials deployment.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, due to expanding industrial output and rising commitment toward carbon neutrality targets. Spurred by government-backed decarbonization programs and increasing investments in low-carbon technologies, industries across China, Japan, South Korea, and India are actively adopting CCUS solutions. Furthermore, growing public-private partnerships and infrastructure expansion are accelerating material innovation and large-scale project implementation across the region.

Key players in the market

Some of the key players in CCUS Materials Market include Exxon Mobil Corporation, Shell plc, BP plc, TotalEnergies SE, Chevron Corporation, Schlumberger Limited, Baker Hughes Company, Honeywell International Inc., Linde plc, Air Liquide, Mitsubishi Heavy Industries, Ltd., Siemens Energy AG, Aker Solutions ASA, Halliburton Company, BASF SE and Dow Inc.

Key Developments:

In February 2026, TotalEnergies outlined 2026 objectives, emphasizing relentless emissions reduction. The company reinforced CCUS deployment, focusing on materials innovation and partnerships to strengthen resilience and accelerate carbon management across industrial and power sectors.

In January 2026, Shell published its Energy Security Scenarios, highlighting CCUS as critical for balancing energy security and decarbonization. The company reinforced investment in carbon management technologies, including capture materials, to support global climate goals.

+357 96 030922
info@marketpublishers.com

In December 2025, ExxonMobil updated its 2030 plan, accelerating emissions?intensity targets to 2026. The company emphasized CCUS materials innovation, leveraging advantaged assets and cost savings to strengthen competitiveness in carbon capture and storage projects.

Material Types Covered:

- Absorbents
- Adsorbents
- Membranes
- Catalysts
- Sorbents
- Metal-Organic Frameworks (MOFs)

Source of CO2 Covered:

- Point Source
- Ambient Air

Service Models Covered:

- Capture-as-a-Service
- Technology Licensing
- Engineering, Procurement & Construction (EPC)

Technologies Covered:

- Pre-Combustion Capture

+357 96 030922
info@marketpublishers.com

- Post-Combustion Capture
- Oxy-Fuel Combustion
- Direct Air Capture

Applications Covered:

- Power Generation
- Oil & Gas
- Chemical Processing
- Cement
- Steel

End Users Covered:

- Energy Companies
- Industrial Manufacturers
- Oilfield Service Providers
- Government Projects

Regions Covered:

- North America
  - United States
  - Canada

+357 96 030922
info@marketpublishers.com

- Mexico

Europe

- United Kingdom
- Germany
- France
- Italy
- Spain
- Netherlands
- Belgium
- Sweden
- Switzerland
- Poland
- Rest of Europe

Asia Pacific

- China
- Japan
- India
- South Korea
- Australia

+357 96 030922
info@marketpublishers.com

- Indonesia
- Thailand
- Malaysia
- Singapore
- Vietnam
- Rest of Asia Pacific

South America

- Brazil
- Argentina
- Colombia
- Chile
- Peru
- Rest of South America

Rest of the World (RoW)

- Middle East
  - Saudi Arabia
  - United Arab Emirates
  - Qatar
  - Israel
  - Rest of Middle East

+357 96 030922
info@marketpublishers.com

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as

+357 96 030922
info@marketpublishers.com

per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

10 GLOBAL CCUS MATERIALS MARKET, BY END USER

11 GLOBAL CCUS MATERIALS MARKET, BY GEOGRAPHY

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: CCUS Materials Market Forecasts to 2034 – Global Analysis By Material Type (Absorbents, Adsorbents, Membranes, Catalysts, Sorbents, and Metal-Organic Frameworks (MOFs)), Source of CO?, Service Model, Technology, Application, End User, and By Geography

Product link: https://marketpublishers.com/r/C1013B2A3288EN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/C1013B2A3288EN.html