

The Global Market for Aerogels 2024-2034

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Abstracts

Aerogels are lightweight, nanostructured porous materials derived from gel in which the liquid component is replaced with air. They exhibit properties like low thermal conductivity, low density, high surface area (>150 m²/g) and open porosity (typically 95–99.99 %). Their high porosities and low densities make aerogels excellent lightweight insulators of heat, sound, and electricity, and their high specific surface areas make them good absorbers of both active materials for controlled release, and of pollutants. Key end-use markets are in construction, oil & gas, automotive, aerospace, and coatings. Construction is the largest segment, but the the EV battery pack market (thermal insulation & fire protection) is growing fast.

Silica aerogels account for the largest market share, combining high insulation with cost-effectiveness. Polymer and carbon aerogels are gaining market share. Key players include Aspen Aerogels, Cabot Corporation, BASF, Armacell, JIOS Aerogel Corporation, and Enersens. Market growth drivers include demand from the Electric Vehicle battery market, building insulation demand, and the need for high performance, lightweight materials to meet environmental targets.

Report contents include:

Production methods for aerogels.

Aerogel markets and applications.

Aerogel analysis including:

Silica aerogels.

Silica composite aerogels.

Organic aerogels.

Hybrid aerogels.

3D printed aerogels.

Bio-based and sustainable aerogels.

Market drivers, trends and challenges.

Competitive landscape.

Aerogel Manufacturer Capacities.

Manufacturing in China.

Market developments 2020-2023.

Market analysis. Markets covered include:

Oil and Gas

Refineries.

Pipelines.

Building and construction.

Panels and blankets

Coatings and paints

Plaster, concrete and bricks

Window insulation

Automotive

EV battery pack thermal insulation & fire protection

Sound dampening coatings

Cabin noise insulation

Engine compartment insulation

Paint additives

Thermal management components

Catalytic converter substrates

Thermal insulation in fuel systems

Energy storage

Silicon anodes

Li-S batteries

Electrodes

Supercapacitors

Hydrogen

Solar energy collection

Biomedical

Drug delivery

Tissue engineering

Medical implants

Wound care

Cold-Chain packaging

Electronics

EMI shielding

Thermal insulation

Low loss materials for 5G

Filtration, separation, and sorption

Air filtration

Water filtration

Oil-spill remediation

Apparel and footwear

Thermal insulation

Waterproofing

Flame resistance

Anti-microbial

Ballistic protection

Food.

Packaging

Biosensors

Nutrient carriers

Catalysts.

Aerospace.

Cosmetics.

Thermoelectric generators.

Sporting goods.

Knudsen pumps.

Patent analysis.

Global aerogel revenues 2018-2034, By market, By form, By aerogel type, By region.

Profiles of 49 companies including products, aerogel types, production capacities, and end-use markets targeted. Companies profiled include Aerogel Core Ltd., Aeroshield, Armacell, Aspen Aerogels, Cabot Corporation, JIOS Aerogel, Krosslinker, Liatris, and SUMTEQ.

Contents

1 INTRODUCTION

- 1.1 Description
- 1.2 Origin of Aerogels
- 1.3 Classification
- 1.4 Aerogel applications
- 1.5 Commercially available aerogels
- 1.6 Production methods for aerogels
 - 1.6.1 Sol-gel process
 - 1.6.2 Aging
 - 1.6.3 Hydrophobization/surface modification
 - 1.6.4 Drying methods
 - 1.6.4.1 Overview of drying methods
 - 1.6.4.1.1 Supercritical drying process analysis
 - 1.6.4.1.1.1 Closed loop
 - 1.6.4.1.2 Recent drying advancements for supercritical drying
 - 1.6.4.1.3 Ambient pressure drying
- 1.7 SILICA AEROGELS
 - 1.7.1 Properties
 - 1.7.1.1 Thermal conductivity
 - 1.7.1.2 Mechanical
 - 1.7.2 Silica aerogel precursors
 - 1.7.3 Products
 - 1.7.3.1 Monoliths
 - 1.7.3.1.1 Properties
 - 1.7.3.1.2 Applications
 - 1.7.3.1.3 SWOT analysis
 - 1.7.3.2 Powder
 - 1.7.3.2.1 Properties
 - 1.7.3.2.2 Applications
 - 1.7.3.2.3 SWOT analysis
 - 1.7.3.3 Granules
 - 1.7.3.3.1 Properties
 - 1.7.3.3.2 Applications
 - 1.7.3.3.3 SWOT analysis
 - 1.7.3.4 Blankets
 - 1.7.3.4.1 Properties

- 1.7.3.4.2 Applications
- 1.7.3.4.3 SWOT analysis
- 1.7.3.5 Aerogel boards
 - 1.7.3.5.1 Properties
 - 1.7.3.5.2 Applications
- 1.7.3.6 Aerogel renders
 - 1.7.3.6.1 Properties
- 1.7.3.7 3D printing of aerogels
- 1.7.3.8 Silica aerogel from sustainable feedstocks
- 1.7.4 Silica composite aerogels
 - 1.7.4.1 Organic crosslinkers
- 1.7.5 Cost of silica aerogels
- 1.7.6 Main players
- 1.8 AEROGELS-LIKE POLYMER FOAMS
 - 1.8.1 Materials
 - 1.8.2 Properties
 - 1.8.3 Applications
- 1.9 METAL OXIDE AEROGELS
- 1.10 ORGANIC AEROGELS
 - 1.10.1 Polymer aerogels
 - 1.10.1.1 Description
 - 1.10.1.1.1 Properties
 - 1.10.1.1.2 Applications
 - 1.10.1.1.3 Graphene
 - 1.10.1.2 Companies
 - 1.10.2 Biobased and sustainable aerogels (bio-aerogels)
 - 1.10.2.1 Cellulose aerogels
 - 1.10.2.1.1 Properties
 - 1.10.2.1.2 Applications
 - 1.10.2.1.3 Cellulose nanofiber (CNF) aerogels
 - 1.10.2.1.4 Cellulose nanocrystal aerogels
 - 1.10.2.1.5 Bacterial nanocellulose aerogels
 - 1.10.2.2 Lignin aerogels
 - 1.10.2.3 Alginate aerogels
 - 1.10.2.4 Starch aerogels
 - 1.10.2.5 Chitosan aerogels
 - 1.10.2.6 Protein aerogels
 - 1.10.2.6.1 Albumin aerogels
 - 1.10.2.6.2 Casein aerogels

- 1.10.2.6.3 Gelatin aerogels
- 1.10.2.7 Silk fiber
- 1.10.3 Carbon aerogels
 - 1.10.3.1 Description
 - 1.10.3.2 Properties
 - 1.10.3.3 Manufacturing
 - 1.10.3.4 Applications
 - 1.10.3.5 Companies
- 1.10.4 Carbon nanotube aerogels
- 1.10.5 Graphene and graphite aerogels
 - 1.10.5.1 Description
 - 1.10.5.2 Properties
- 1.10.6 Additive manufacturing (3D printing)
 - 1.10.6.1 Description
 - 1.10.6.2 Graphene oxide
 - 1.10.6.3 Carbon nitride
 - 1.10.6.4 Gold
 - 1.10.6.5 Cellulose
- 1.11 HYBRID AEROGELS
 - 1.11.1 Mixed oxide aerogels
 - 1.11.2 Metal oxide aerogel composites
 - 1.11.3 Carbon-based aerogel composites

2 TECHNOLOGY READINESS LEVEL (TRL)

3 THE GLOBAL MARKET FOR AEROGELS

- 3.1 Market drivers and trends
- 3.2 Market and technology challenges
- 3.3 Competitive landscape
- 3.4 Aerogel Manufacturer Capacities
- 3.5 Manufacturing process by producer
- 3.6 Manufacturing in China
- 3.7 Market developments 2020-2023
- 3.8 Markets
 - 3.8.1 Oil and Gas
 - 3.8.1.1 Market overview
 - 3.8.1.2 Applications
 - 3.8.1.2.1 Refineries

- 3.8.1.2.2 Pipelines
- 3.8.2 Building and construction
 - 3.8.2.1 Market overview
 - 3.8.2.2 Applications
 - 3.8.2.2.1 Panels and blankets
 - 3.8.2.2.2 Coatings and paints
 - 3.8.2.2.3 Plaster, concrete and bricks
 - 3.8.2.2.4 Window insulation
- 3.8.3 Automotive
 - 3.8.3.1 Market overview
 - 3.8.3.2 Applications
 - 3.8.3.2.1 EV battery pack thermal insulation & fire protection
 - 3.8.3.2.2 Sound dampening coatings
 - 3.8.3.2.3 Cabin noise insulation
 - 3.8.3.2.4 Engine compartment insulation
 - 3.8.3.2.5 Paint additives
 - 3.8.3.2.6 Thermal management components
 - 3.8.3.2.7 Catalytic converter substrates
 - 3.8.3.2.8 Thermal insulation in fuel systems
- 3.8.4 Energy storage
 - 3.8.4.1 Market overview
 - 3.8.4.2 Applications
 - 3.8.4.2.1 Silicon anodes
 - 3.8.4.2.2 Li-S batteries
 - 3.8.4.2.3 Electrodes
 - 3.8.4.2.4 Supercapacitors
 - 3.8.4.2.5 Hydrogen
 - 3.8.4.2.6 Solar energy collection
- 3.8.5 Biomedical
 - 3.8.5.1 Market overview
 - 3.8.5.2 Applications
 - 3.8.5.2.1 Drug delivery
 - 3.8.5.2.2 Tissue engineering
 - 3.8.5.2.3 Medical implants
 - 3.8.5.2.4 Wound care
- 3.8.6 Cold-Chain packaging
 - 3.8.6.1 Market overview
 - 3.8.6.2 Applications
- 3.8.7 Electronics

- 3.8.7.1 Market overview
- 3.8.7.2 Applications
 - 3.8.7.2.1 EMI shielding
 - 3.8.7.2.2 Thermal insulation
 - 3.8.7.2.3 Low loss materials for 5G
- 3.8.8 Filtration, separation, and sorption
 - 3.8.8.1 Market overview
 - 3.8.8.2 Applications
 - 3.8.8.2.1 Air filtration
 - 3.8.8.2.2 Water filtration
 - 3.8.8.2.3 Oil-spill remediation
- 3.8.9 Apparel and footwear
 - 3.8.9.1 Market overview
 - 3.8.9.2 Applications
 - 3.8.9.2.1 Thermal insulation
 - 3.8.9.2.2 Waterproofing
 - 3.8.9.2.3 Flame resistance
 - 3.8.9.2.4 Anti-microbial
 - 3.8.9.2.5 Ballistic protection
- 3.8.10 Food
 - 3.8.10.1 Market overview
 - 3.8.10.2 Applications
 - 3.8.10.2.1 Packaging
 - 3.8.10.2.2 Biosensors
 - 3.8.10.2.3 Nutrient carriers
- 3.8.11 Catalysts
 - 3.8.11.1 Market overview
 - 3.8.11.2 Applications
- 3.8.12 Aerospace
 - 3.8.12.1 Market overview
 - 3.8.12.2 Applications
- 3.8.13 Cosmetics
 - 3.8.13.1 Market overview
 - 3.8.13.2 Applications
- 3.8.14 Knudsen pumps
- 3.8.15 Sporting goods
- 3.8.16 Thermoelectric generators

4 AEROGEL PATENTS

5 GLOBAL AEROGELS REVENUES

- 5.1 Total, 2018-2034
- 5.2 By market, 2018-2034
- 5.3 By form, 2018-2034
- 5.4 By aerogel type, 2018-2034
- 5.5 By region, 2018-2034

6 AEROGEL COMPANY PROFILES 142 (49 COMPANY PROFILES)

7 OTHER COMPANIES WITH AEROGEL ACTIVITIES

8 EX-PRODUCERS

9 RESEARCH SCOPE AND METHODOLOGY

- 9.1 Report scope
- 9.2 Research methodology

10 REFERENCES

LIST OF TABLES

- Table 1. General properties and value of aerogels.
- Table 2. Synthesis methods-Aerogels synthesised, advantages and disadvantages.
- Table 3. Comparative analysis of different drying methods for producing aerogels.
- Table 4. Drying methods for aerogel production.
- Table 5. Advantages and disadvantages of drying methods.
- Table 6. Key properties of silica aerogels.
- Table 7. Chemical precursors used to synthesize silica aerogels.
- Table 8. Commercially available aerogel-enhanced blankets.
- Table 9. Main manufacturers of silica aerogels and product offerings.
- Table 10. Typical structural properties of metal oxide aerogels.
- Table 11. Polymer aerogels companies.
- Table 12. Types of biobased aerogels.
- Table 13. Carbon aerogel companies.
- Table 14. Technology Readiness Level (TRL) Examples.
- Table 15. Market drivers and trends for aerogels.

Table 16. Market and technology challenges in aerogels.

Table 17. Aerogel producers and capacities-current and planned.

Table 18. Aerogel Manufacturing process by producer.

Table 19. Aerogel manufacturers in China.

Table 20. Aerogels market developments 2020-2023.

Table 21. Market overview of aerogels in oil and gas-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 22. Market overview of aerogels in building and construction-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 23. Market overview of aerogels in paints and coatings-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 24. Market overview of aerogels in automotive-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 25. Market overview of aerogels in energy conversion and storage-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 26. Market overview of aerogels in drug delivery-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 27. Market overview of aerogels in tissue engineering-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 28. Market overview of aerogels in medical implants-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 29. Market overview of aerogels in wound care-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 30. Market overview of aerogels in cold-chain packaging-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 31. Market overview of aerogels in electronics-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 32. Market overview of aerogels in filtration, separation, and sorption-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 33. Market overview of aerogels in textiles- market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 34. Market overview of aerogels in food- market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 35. Market overview of aerogels in catalysts-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 36. Market overview of aerogels in aerospace-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 37. Market overview of aerogels in cosmetics-market drivers, types of aerogels utilized, motivation for use of aerogels, applications, TRL.

Table 38. Global market for aerogels, 2018-2034, millions USD.

Table 39. Global market for aerogels, 2018-2034, millions USD, by market.

Table 40. Global market for aerogels, 2018-2034, millions USD, by form.

Table 41. Other companies with aerogel activities.

Table 42. Aerogel producers no longer trading.

LIST OFFIGURES

Figure 1. Main characteristics of aerogel type materials.

Figure 2. Classification of aerogels.

Figure 3. SLENTEX® thermal insulation.

Figure 4. Canada Goose luxury footwear.

Figure 5. Schematic of silica aerogels synthesis.

Figure 6. Formation of aerogels, cryogels and xerogels.

Figure 7. Aerogel engineering strategies.

Figure 8. SEM images of the microstructures of (a) alginate and (b) pectin aerogels obtained by supercritical drying, (c) cellulose aerogels by freeze-drying, and (d) silica-cellulose composite aerogels by ambient drying.

Figure 9. Methods of gel drying.

Figure 10. Flower resting on a piece of silica aerogel suspended in mid air by the flame of a bunsen burner.

Figure 11. Monolithic aerogel.

Figure 12. SWOT analysis for monolith aerogels.

Figure 13. SWOT analysis for powder aerogels.

Figure 14. Aerogel granules.

Figure 15. Internal aerogel granule applications.

Figure 16. SWOT analysis for granule aerogels.

Figure 17. SWOT analysis for aerogel blankets.

Figure 18. 3D printed aerogels.

Figure 19. Slentite.

Figure 20. Methods for producing bio-based aerogels.

Figure 21. Types of cellulose aerogel.

Figure 22. Lignin-based aerogels.

Figure 23. Fabrication routes for starch-based aerogels.

Figure 24. Schematic of silk fiber aerogel synthesis.

Figure 25. Graphene aerogel.

Figure 26. Commonly employed printing technologies for aerogels.

Figure 27. Schematic for direct ink writing of silica aerogels.

Figure 28. 3D printed aerogel.

- Figure 29. Technology Readiness Level (TRL) for aerogels.
- Figure 30. Pyrogel insulation on a heat-exchange vessel in a petrochemical plant.
- Figure 31. Aerogel construction applications.
- Figure 32. Incorporation of aerogels into textiles.
- Figure 33. Aerogel dust collector.
- Figure 34. Aerogel patents 2010-December 2021.
- Figure 35. Global market for aerogels, 2018-2034, millions USD.
- Figure 36. Global market for aerogels, 2018-2034, millions USD, by market.
- Figure 37. Global market for aerogels, 2018-2034, millions USD, by form.
- Figure 38. Global market for aerogels, 2018-2034, millions USD, by aerogel type.
- Figure 39. Global market for aerogels, 2018-2034, millions USD, by region.
- Figure 40. Lignin Aero gel plate.
- Figure 41. Thermal Conductivity Performance of ArmaGel HT.
- Figure 42. SLENTEX® roll (piece).
- Figure 43. CNF gel.
- Figure 44. Block nanocellulose material.
- Figure 45. Melodea CNC suspension.
- Figure 46. HIP AERO paint.
- Figure 47. Sunthru Aerogel pane.
- Figure 48. Quartzene®.

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