



# Aerogel Insulation Coating



RS Aerogel insulation coating is a high-performance thermal insulation coating that combines silica aerogel—currently the solid material with the lowest known thermal conductivity—with water-based resins or inorganic binders. At extremely thin thicknesses (typically 1–5 millimeters), it achieves thermal insulation performance several times greater than that of traditional materials. Its thickness is only 1/2 to 1/5 that of traditional materials.

## Product properties in accordance with ASTM C518

Property	Performance	Test standard
Thermal conductivity	≤ 0.015 - 0.032 W/m.K	ASTM C518 / EN 1266
Maximum use temperature	200°C 650°C	ASTM C411
Sag resistance	Excellent / No sagging	ASTM C203
Linear shrinkage	≤1%	GB/T 8811
Reaction to Fire	A1/A2	GB 8624 / EN 13501
Compressive Strength	≥150 kPa (Density-dependent)	ASTM D1621
Water Vapor Permeability	≤3.0ng/(Pa·s·m)	ASTM E96
Water Repellency	≥99 %	GB/T 10299
Water Absorption	≤0.5%	ISO 2896
Density <sup>6)</sup>	180-220kg/m <sup>3</sup>	ASTM D1622

All values are nominal values for standard industrial production. Standard industrial production tolerances applicable.

## Compliance

- Excellent Workability: Features outstanding sag resistance (no sagging), ensuring uniform coverage across various surfaces.
- Ultimate Thermal & Fire Performance: The nanoporous structure provides world-leading low thermal conductivity, while its non-combustible nature ensures Class A fire safety for high-temperature applications.
- Ultimate Thermal Performance: Utilizing a nanoporous structure, it achieves a world-leading low thermal conductivity of ≤ 0.015 - 0.023 W/m.K.

## Disclaimer

As RS has no control over insulation design, workmanship, or application conditions, RS does not warranty the performance or result of any installation containing RS products. Liability is limited by our general terms and conditions of sale. Technical specifications are subject to change without notice.

