

Certification Data



Aerogel Vacuum Insulated Panels were manufactured in our facility in Richmond, VA and sent for independent verification of the thermal properties.

Architectural Testing, Inc (Intertek) of Lancaster, PA and TA Waters Instruments of New Castle, DE carried out **ASTM C518**: Heat Flow Meter Testing on five 305mm x 305mm x 22mm VIP samples in April 2024. The results verify that ThermaGel's Fortico vacuum insulated panels have:

Avg Heat Flux (W/m ²)	10.61
Avg. Thermal Conductance (C) (W/m ² ·K)	0.382
Avg Thermal Resistivity (r) (W/m ² ·K)	124.99
Apparent Thermal Conductivity (k) (W/m ² ·K)	0.0079
Specimen Avg. Density (kg/m ³)	200.72
R-Value per inch	~18

Additional testing carried out by Capital Testing, Washington DC confirmed that according to **ASTM E1354** - Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter our aerogel core material is flame retardant (self-extinguishes after ~12mins) or after treatment with our proprietary non-toxic material, it does not ignite at all.

Capital Testing also carried out **ISO 21397**, FTIR Analysis of Fire Effluents in Cone Calorimeter Tests analyzing any effluents released during combustion. All effluents detected were at concentrations well below the concentrations suggested in NIOSH 2014 publications.

In-house mechanical testing has determined that the material has mechanical strength of >1.25MPa which is very close that of common paper backed gypsum board.



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