

High Vacuum Insulation Panels

Four grades — FSKW · PSV · STFG · VQFS — microporous fumed-silica core, vacuum-sealed

WedgeVac panels are very high performance vacuum insulation panels built around a fire-class A1 fumed-silica core with infrared opacifier, encapsulated in impermeable high gas-barrier film under vacuum. They deliver the lowest practical thermal conductivity of any commercial insulation — down to 0.0019 W/m·K — and the thinnest cross-section for a given R-value. Supplied as ready-to-use, fixed-size panels for refrigeration, thermal packaging, building façades and transportation.

SERVICE TEMPERATURE -100 → +100 °C	λ AT 10 °C 0.0019 – 0.0045 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible core
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FEATURES & ADVANTAGES

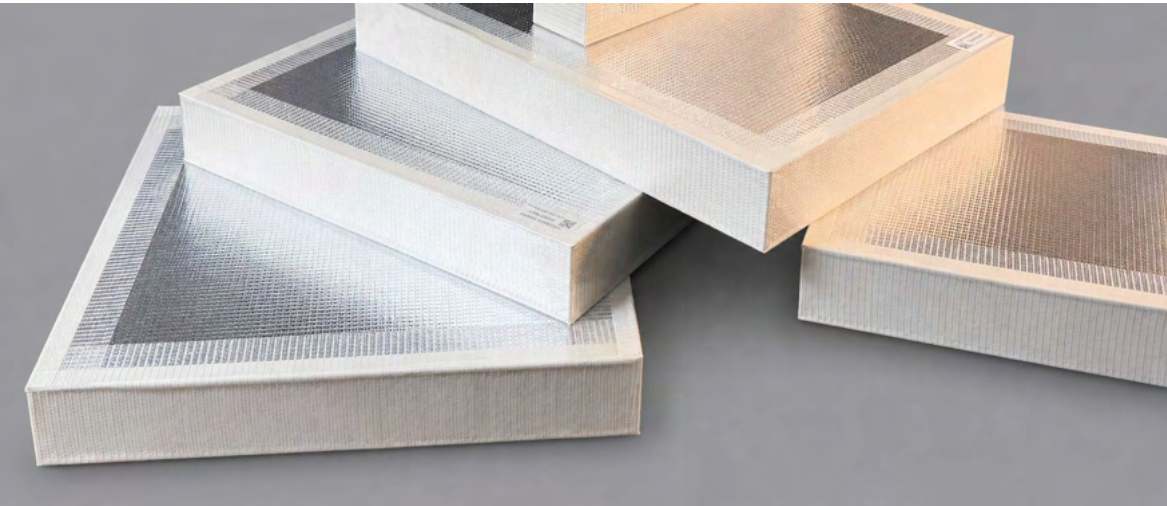
- Highest insulation performance available — λ < 0.004 W/m·K
- R-value 4.8 m²·K/W per 20 mm — 5–10× conventional foam
- Thinnest cross-section reclaims interior & cargo volume
- Lightweight; no respirable fibres; environmentally safe
- Fumed-silica core is fire class A1 non-combustible
- Service life up to 45–60 years in protected installation

APPLICATIONS

- Domestic & commercial refrigerators, freezers, vacuum flasks
- Thermal & medicine cold-chain packaging
- Water boilers, appliances and white goods
- Automotive, rail, marine and aerospace cabins
- Building façades, walls, floor & roof, doors & windows
- Cold rooms, cold storage and pharmaceutical clean rooms

TECHNICAL PROPERTIES · 4 GRADES

Property	FSKW	PSV	STFG	VQFS
Application temperature °C	-100 / +60	-50 / +80	-70 / +80	-75 / +100
Density kg/m³	160–260	160–260	240–300	160–230
λ @ 10 °C W/m·K	0.0045	0.0045	0.0019	0.0035
R-Value @ 25.4 mm m²·K/W	6	6	13	7
R-Value @ 1 in hr·ft²·°F/Btu	32	32	76	41
Compressive strength MPa	0.19	0.15	0.20	0.12
STANDARD SIZES				
Length mm	100–1,500	275–1,100	80–1,800	100–1,500
Width mm	100–1,000	350–700	80–800	100–1,000
Thickness mm	5–50	5–30	4–40	5–50
SERVICE & APPEARANCE				
Insulation performance	High	High	Very High	High
Service life years	45	45	45	45



— CLOSE

Specify Wedge.

Request a sample, an engineering review, or a heat-loss calculation. A Wedge engineer will respond within 48 hours.

HEADQUARTERS

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