

PRODUCT CATALOGUE / 2026

High Performance Insulation.

Delivering High Performance at Lower Cost —
across six product families and 58 grades, from
−200 °C through +1,800 °C.



FEATURES & BENEFITS

Engineered to outperform
— and to fit your budget.

- 01 Higher insulation performance across the full thermal range
- 02 Wide application range: −200 °C to +1,800 °C
- 03 Thin, lightweight, ready-to-use designs
- 04 Fire resistant & flame retardant — A / A1 classified
- 05 Strength range from 0.2 MPa to 85 MPa
- 06 Low to high density formulations to spec
- 07 Excellent after-sales engineering support

FAMILY 01 — WEDGEL · AEROGEL INSULATION

Aerogel

Nano-porous silica aerogel blankets, panels, powders, coatings & composites — the lowest thermal conductivity of any known solid, in service from cryogenic $-200\text{ }^{\circ}\text{C}$ through $1,200\text{ }^{\circ}\text{C}$.

TEMPERATURE RANGE	CONDUCTIVITY	PRODUCTS	STANDARDS
$-200 \rightarrow 1,200\text{ }^{\circ}\text{C}$	$0.013 \rightarrow 0.069\text{ W/m}\cdot\text{K}$	8	ASTM C1728

IN THIS FAMILY

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Aerogel Insulation — Family Overview

Blankets · panels · powders · coatings · composites — the WedGel range

WedGel aerogel insulation utilises nano-porous silica aerogel to deliver thermal conductivities 2–4× lower than fibreglass or foam. Available as blankets, panels, powders, coatings and composites, it is hydrophobic, fire-resistant and supplied in thicknesses from 1 mm to 50 mm to suit cryogenic, industrial-process, building and EV-battery applications.

RANGE −200 → 1,200 °C	λ AT 25 °C 0.013 – 0.029 W/m·K	FIRE CLASS A / A1 Non-combustible
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FEATURES & ADVANTAGES

- Lowest thermal conductivity of any commercial insulation
- Hydrophobic ≥ 99 % — moisture resilience under wet plant
- Thin profile reclaims space in dense piping and vessels
- Fire resistant — A / A1 non-combustible classification
- Flexible blanket forms cleanly around small radii
- Service from cryogenic −200 °C to high-temperature 1,200 °C

APPLICATIONS

- Cryogenic LNG / LIN / LOX systems and cold boxes
- Petrochemical, refinery and process-plant insulation
- Building envelopes, façades and acoustic packages
- EV battery cell, module and pack thermal barriers
- Aerospace and shipboard low-temperature pipelines
- Space-constrained retrofits where thickness is the constraint

TECHNICAL PROPERTIES

Property	Value
Form factors	Blanket · Panel · Powder · Coating · Composite
Carrier options	Glass cloth · Aluminium foil · PE · Silica cloth
Standards	ASTM C1728 · C795 · C1617 · E84 · EN 13501-1

THICKNESS EQUIVALENCE · SAME R-VALUE



10 MM
WedGel WAG 650 blanket



30 MM
Calcium silicate board



45 MM
Fibreglass wrap



60 MM
Mineral wool blanket



Cold & Cryogenic Aerogel Insulation

ASTM C1728 Type 1, Grade 1B · seven grades — 125A · 125LD · 125B · 150AL · 200 · 200HP · VIP

WedGel cold and cryogenic blankets and VIP panels combine silica aerogel with reinforcing carriers to deliver the lowest thermal conductivity in the industry across the full cryogenic range. Service from –200 °C to +200 °C, hydrophobic to 99 %+, with verified ASTM C795 stress-corrosion and C1617 corrosiveness pass. The seven grades let specifiers tune for density, thickness, and short-term temperature excursion without changing system geometry.

SERVICE TEMPERATURE –200 → +200 °C	λ AT 25 °C 0.005 – 0.023 W/m·K	FIRE CLASSIFICATION Class A FSI ≤ 25 · SDI ≤ 50
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FEATURES & ADVANTAGES

- Lowest thermal conductivity of any insulation in cryogenic service
- Hydrophobic ≥ 99 % — performance holds in wet & humid plant
- Thin profile reclaims space on dense piping & vessel insulation
- Flexible blanket forms cleanly around small-radius fittings
- Pass ASTM C795 stress-corrosion; < 5 ppm Cl on steel
- VIP grade delivers conductivity down to 0.002 W/m·K

APPLICATIONS

- LNG, LPG, LIN/LOX, ethylene & ammonia cryogenic systems
- Cold boxes, vessels, piping and valve insulation
- Chilled-water and brine refrigeration distribution
- Aerospace and shipboard low-temperature pipelines
- Building cold-bridge mitigation and acoustic envelopes
- Space-constrained retrofits where thickness is the constraint

TECHNICAL PROPERTIES · 7 GRADES

Property	125A	125LD	125B	150AL	200	200HP	VIP
Service temperature °C	–200/+125	–200/+125	–180/+125	–195/+150	–200/+200	–200/+200	–100/+80
Colour	White	White	Grey	White	Grey	White	Silver
Thickness mm	10	8–25	5–20	5–20	10–20	5, 10	20–50
Short-term temp. resistance °C	1,000	300	650	1,200	400	1,000	1,000
Density kg/m³	160 ± 30	70	185	160–200	170	160	200 ± 30
Compression strength @ 10 % kPa	60	—	60	35	60	60	35
THERMAL CONDUCTIVITY (W/M·K)							
at –129 °C	0.014	0.013	0.015	0.015	—	0.014	—
at –73 °C	0.016	—	0.018	0.017	—	0.015	0.002
at –17 °C	0.017	0.019	0.020	0.018	—	0.016	0.004
at 24 °C	0.018	0.023	0.021	0.021	—	0.017	0.005
at 100 °C	0.021	0.032	0.023	—	0.022	0.019	—
SAFETY & COMPLIANCE							
Hydrophobicity %	99	99	99	99	99	99	100
Stress corrosion ASTM C795	Pass	Pass	Pass	Pass	Pass	Pass	—
Corrosiveness of steel ppm Cl	<5	<5	<5	<5	<5	<5	—
Flame spread ASTM E84 FSI	≤ 25	≤ 25	≤ 25	≤ 25	≤ 25	≤ 25	—
Fire classification	A	A	A	A	A	A	—



WedGel high-temperature blankets combine silica aerogel with refractory carrier matrices for continuous service to 650 °C and short-term excursions to 1,400 °C. All grades are non-combustible, hydrophobic, ROHS-compliant and pass ASTM C795 stress-corrosion. Available with aluminium foil, PE or silica-cloth coverings.

SERVICE TEMPERATURE -50 → 650 °C	λ AT 200 °C 0.026 – 0.049 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

- Service to 650 °C with short-term to 1,400 °C
- Hydrophobic ≥ 99 % — wet and humid plant tolerant
- Flexible blanket — small-radius fittings without crushing
- FSI ≤ 5, SDI ≤ 10 — among the lowest in the industry
- Multiple covering options — aluminium foil, PE, silica cloth
- ROHS compliant; pass ASTM C795 and C1617

APPLICATIONS

- Process piping in refining, petrochemical and chemical plant
- Steam piping, exhaust manifolds and turbine cladding
- Pressure vessels, reactors and heat exchangers
- High-temperature ducting and combustion equipment
- Personnel-protection wrap on hot surfaces
- Industrial furnace and kiln backup insulation

TECHNICAL PROPERTIES · 4 GRADES

Property	WAG 400	WAG 650	650HP	ECO
Service temperature °C	-50 / +400	-50 / +650	-10 / +650	+650
Colour	White / Grey	Light Brown / White	Grey	Light Grey
Thickness mm	3–20	3–50	5–20	5–20
Short-term temp. resistance °C	1,000	1,400	1,400	1,200
Density kg/m³	180	200 ± 40	200	170 ± 20
Compression strength @ 10 % kPa	60	80	35	20
THERMAL CONDUCTIVITY (W/M·K)				
at 25 °C	0.018	0.018	—	0.029
at 100 °C	0.023	0.023	0.024	0.039
at 200 °C	0.026	0.028	0.028	0.049
at 300 °C	0.035	0.035	0.033	0.061
at 400 °C	—	0.047	0.040	—
at 500 °C	—	0.058	0.049	—
at 600 °C	—	0.068	0.062	—
SAFETY & COMPLIANCE				
Hydrophobicity %	99	99	99	99
Flexibility ASTM C1101	Flexible	Flexible	Flexible	Flexible
Fire classification	A1	A1	A1	A
Linear shrinkage 24 h %	< 2	< 2	< 2	< 2



WedGel BL20 and BL50 are aerogel blankets tuned for the building envelope. BL20 handles cold-side insulation from −170 °C to 100 °C; BL50 covers warm and fire-rated work from 25 °C to 1,200 °C. Both are hydrophobic, non-combustible, A / A1 classified and ROHS-compliant — appropriate for façades, roofs, partitions and refurbishment.

SERVICE RANGE −170 → +1,200 °C	λ AT 25 °C 0.021 W/m·K (both grades)	FIRE CLASSIFICATION A1 / A Non-combustible
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FEATURES & ADVANTAGES

- Two grades cover both cold-side and fire-side building applications
- Hydrophobic 99 % — performance retained in damp envelopes
- Thin profile — high R per millimetre of wall depth
- Non-combustible A1 (BL20) / Class A (BL50)
- Pass ASTM C692 stress-corrosion cracking
- Flexible blanket — easy to cut, friction-fit between studs

APPLICATIONS

- External wall and façade insulation
- Roof and floor thermal upgrades
- Cold-side insulation in chilled-water and refrigeration plants
- Heat-side and fire-resistant partitions
- Acoustic and thermal lining in renovations
- Cold-bridge mitigation around windows and balconies

TECHNICAL PROPERTIES · 2 GRADES

Property	BL20	BL50
Application	Building cold insulation	Building heat & fire insulation
Service temperature °C	−170 / +100	+25 / +1,200
Colour	Grey / White	White
Thickness mm	5, 10, 25, 50	10, 20, 25, 30, 50
Short-term temp. resistance °C	1,000	1,400
Density kg/m³	150	180
Compression strength @ 10 % kPa	80	37
THERMAL CONDUCTIVITY (W/M·K)		
at 25 °C	0.021	0.021
at 100 °C	0.023	0.024
at 200 °C	—	0.029
at 300 °C	—	0.036
SAFETY & COMPLIANCE		
Hydrophobicity %	99	99
Stress corrosion ASTM C692	Pass	Pass
Flame spread ASTM E84 FSI	≤ 25	≤ 25
Fire classification	A1	A
Water absorption %	< 5	< 5



WedGel · CAC350

Carbon Aerogel Composite

Single grade — carbon-fibre reinforced SiO₂ aerogel composite for EV batteries & fire protection

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FAMILY 01 / 06

WedGel CAC350 is a flexible carbon-fibre reinforced silica aerogel composite, manufactured by an innovative nano-composite process from oxidised polyacrylonitrile (PAN) felts and SiO₂ aerogel. Ultra-low conductivity, excellent hydrophobicity, flame-resistant and easy to cut — ideal for EV battery thermal-runaway barriers, welding drapes and arc-resistant apparel.

SERVICE TEMPERATURE 350 °C continuous	λ AT 25 °C 0.021 W/m·K	FIRE PERFORMANCE UL94 V-0 + short-term 1,200 °C
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FEATURES & ADVANTAGES

- Flexible composite — easy to cut, form and apply
- Ultra-low thermal conductivity 0.021 W/m·K at 25 °C
- UL94 V-0 flame retardant, halogen-free
- Hydrophobic > 93 %, ROHS compliant
- Insulation resistance ≥ 500 MΩ @ 2,500 V DC
- Flashover withstand 3,820 V DC without breakdown

APPLICATIONS

- EV battery cell-to-cell and module-to-module fire barriers
- Automotive noise, heat and vibration liners
- Welding drapes and heat-insulating blankets
- Flame and electric-arc resistant apparel
- Cold-chain and refrigerated transport insulation
- Phase-change-material thermal protection systems

TECHNICAL PROPERTIES

Property	Value
Type	Roll · Sheet
Service temperature °C	350
Short-term temp. resistance °C	1,200
Colour	Black
Thickness mm	1–25
Density kg/m³	150–210
Compression strength MPa	1.75
THERMAL CONDUCTIVITY (W/M·K)	
at 25 °C	0.021
at 100 °C	0.023
at 200 °C	0.028
at 300 °C	0.035
at 350 °C	< 0.04
ELECTRICAL & COMPLIANCE	
Hydrophobicity %	> 93
Flammability UL94	V-0
Halogen content	None
Insulation resistance @ 2,500 V DC, 60 s MΩ	≥ 500



Aerogel Powder & Granules

Five grades — silica aerogel granules for coatings, slurries, fillers & composites

WedGel aerogel powders are nano-porous silica granules with conductivity below 0.018 W/m·K and porosity up to 95 %. Hydrophobic, lightweight and fine-particle, they are easily dispersed into paints, coatings, slurries and composite matrices to deliver thermal-insulation, fire-resistance and acoustic-damping properties.

λ AT 25 °C 0.016 – 0.023 W/m·K	POROSITY 80 – 98 %	SURFACE AREA 300 – 800 m²/g
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FEATURES & ADVANTAGES

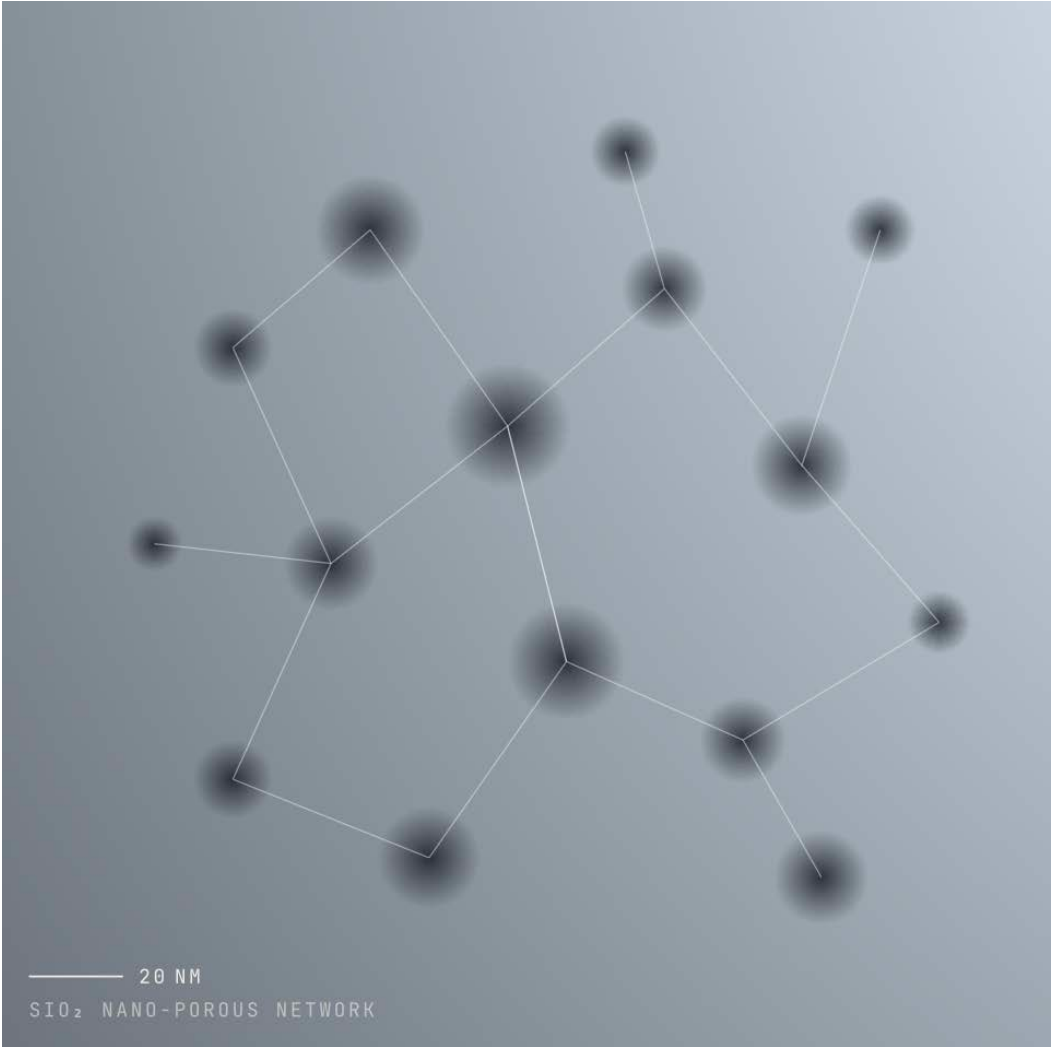
- Conductivity < 0.018 W/m·K — lower than still air
- Porosity up to 95 % — ultra-low density carrier filler
- Highly processable into liquid and solid matrices
- Hydrophobic; water-repellence rate ≥ 90 %
- Inorganic, non-toxic and environmentally safe
- Available in 1 µm to 6 mm grades

APPLICATIONS

- Insulation coatings and water-based aerogel slurries
- Polyester slice and functional polyester film fillers
- Insulation foam sheet filler
- Purification and adsorption packing
- Fire-resistance enhancement of gypsum boards
- Thermal-insulation augmentation of composite materials

TECHNICAL PROPERTIES · 5 GRADES

Property	WAP20	WAP60	FSMP1000	WAPM19	AG Bead
Colour	White	White	Grey	White	White
λ at 25 °C W/m·K	0.016–0.018	0.019	0.023	0.019	0.016–0.019
Specific surface area m²/g	600–800	360	350–450	600–800	300–500
Bulk density kg/m³	20–100	60	220	60	100–200
Particle size	15–50 µm	11 µm	2–20 µm	2–20 µm	1–6 mm
Pore diameter nm	20–50	30	20–40	20–40	20–25
Porosity %	90–95	95	90–98	90–98	80
Surface	Hydrophobic	Hydrophobic	—	Hydrophobic	Hydrophobic



WedGel WJ120 and WJ400 are water-based aerogel coatings applied by brush, spray, scrape or trowel. WJ120 is a building-grade insulation paint for service to 120 °C; WJ400 is an industrial-grade coating for hot surfaces and process equipment to 400 °C. Both are fire-retardant Class A / A2 and free of volatile organics.

SERVICE RANGE -40 → +400 °C	λ AT 25 °C 0.038 W/m·K (both grades)	FIRE REACTION A2 / A Water-based, VOC-free
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FEATURES & ADVANTAGES

- Water-based — no volatile organic content
- Apply by brush, spray, scrape, batch or smear
- Curing 30 min at 50–85 °C / 3 hrs at NTP per 0.5 mm
- Decorative finish — pigment compatible
- Fire and flame retardant, Class A combustion
- Service life up to 10 years on building substrates

APPLICATIONS

- Insulation coating on hot pipes, vessels and ducts
- Building façades, roofs and partition walls
- Industrial process equipment exterior insulation
- Personnel-protection coating on high-temperature surfaces
- Cold-side condensation control on chilled lines
- Acoustic damping in combination with water-proof topcoats

TECHNICAL PROPERTIES · 2 GRADES

Property	WJ120	WJ400
Application	Building paint	Industrial paint
Colour	White	White / Grey
Application temperature °C	-40 / +120	-40 / +400
λ at 25 °C W/m·K	0.038	0.038
Solid content %	32–35	32–35
WFT per coat (max) μm	500	500
DFT per coat (max) μm	175	175
CURING & PERFORMANCE		
Cure @ 50–85 °C	30 min / 0.5 mm	30 min / 0.5 mm
Cure @ NTP (20–30 °C)	3 h / 0.5 mm WFT	3 h / 0.5 mm WFT
Dry density kg/m³	280–320	380–450
Dry SiO₂ content %	90–92	90–92
Fire reaction	A2	A
Coverage kg/m²	0.7–1.5	8–10 (10 mm)
Shelf life months	6	6



WedGel EV thermal barriers are lightweight, ultra-thin, thermally- and electrically-insulating, flame-retardant pads designed to prevent cell-to-cell thermal runaway in lithium-ion battery packs. Four grades trade off flexibility, temperature ceiling and electrical strength — from 650EV high-conductivity aerogel to AISi 250EV high-flex composite. All pass UL94 V-0 and ISO 1182 / EN 13501-1 Class A1.

SERVICE RANGE -50 → +1,300 °C across grades	λ AT 25 °C 0.018 – 0.04 W/m·K	FIRE PERFORMANCE A1 · V-0 Short-term ≥ 1,200 °C
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FEATURES & ADVANTAGES

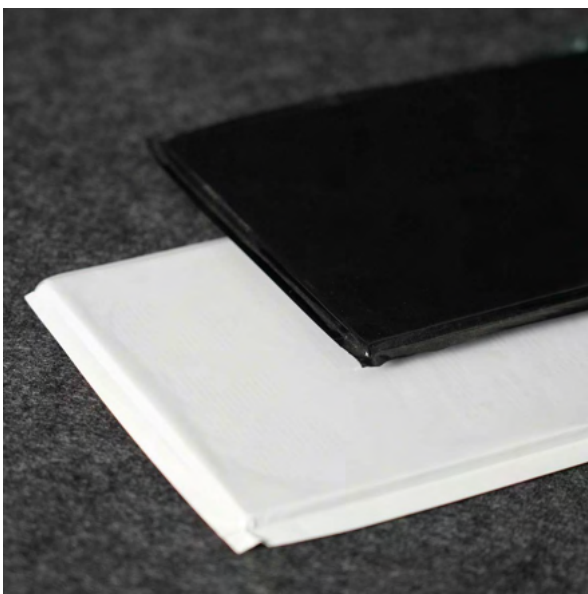
- Lowest λ among insulation pads — 0.018 W/m·K at 25 °C
- Prevents cell-to-cell thermal runaway propagation
- Lightweight — minimal impact on pack energy density
- Self-adhesive options — ≥ 50 N/100 mm peel strength
- Breakdown voltage ≥ 10 kV/mm; volume resistivity ≥ 10¹³ Ω·cm
- Conforms to cell contours; cuts cleanly with shears

APPLICATIONS

- Cell-to-cell wrap inside lithium-ion modules
- Module-to-module barriers inside battery packs
- Top-of-pack heat shields under upper covers
- Gap fillers between cells and structural ribs
- BMS and busbar thermal isolation
- Phase-change-material substrate carrier

TECHNICAL PROPERTIES · 4 GRADES

Property	650EV	AISi 250EV	FSMP 1000EV	OXF
Aerogel / SiO ₂ content %	≥ 90	> 50	> 75	≥ 90
Service temperature °C	-50 / +700	-10 / +1,300	+6 / +1,000	-50 / +700
Short-term temperature °C	1,400	≥ 1,500	≥ 1,400	1,400
Thickness mm	0.24–10	0.8–10	2–10	0.3–10
Density kg/m³	210 ± 42	240–300	260–320	210 ± 42
Flexibility	Low–Medium	High	Low	Very High
THERMAL CONDUCTIVITY (W/M·K)				
at 25 °C	0.018	0.04	0.021	0.023
at 100 °C	0.023	0.05	0.022	0.028
at 200 °C	0.028	0.06	0.023	0.031
at 400 °C	0.047	0.08	0.024	0.047
ELECTRICAL & COMPLIANCE				
Breakdown voltage kV/mm	≥ 10	2–8	≥ 10	≥ 10
Tensile strength MPa	≥ 1.0	1.0	≥ 1.0	≥ 1.0
Compression strength kPa	85 @10%	35 @10%	330	38 @10%
UL94 flame retardant	Pass	Pass	Pass	Pass
Fire reaction EN 13501-1	A1	A1	A1	A1



Fire & Insulation Ceramic Tapes

Three grades — HTI 1050 · HTI 1265 · HTI 1450 — high-performance ceramic-felt tape

Wedge AlSi HTI tapes are made of high-performance ceramic felts manufactured from high-strength ceramic fibre formed into flexible rolls or sheets. Very high insulation performance, fire protection to 240 minutes, low thermal conductivity, chemical-corrosion resistance — for door fire-sealing (glass, steel, wooden), pipe insulation and ingot-mould liner protection.

CLASSIFICATION TEMP. 1,050 – 1,450 °C	FIRE PROTECTION Up to 240 minutes	MELTING POINT 1,650 – 2,000 °C
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FEATURES & ADVANTAGES

- Very high insulation and protection from heat loss
- Excellent fire protection up to 240 minutes
- High thermal-shock resistance
- Low thermal conductivity
- Excellent chemical stability
- Non-wetting to molten aluminium

APPLICATIONS

- Industrial furnace lining
- Fire sealing for glass, steel, wooden doors
- High-temperature pipe heat preservation
- High-temperature insulation gaskets
- Ingot-mould liner protection
- Hot-top lining and high-temperature seals

TECHNICAL PROPERTIES · 3 GRADES

Property	HTI 1050	HTI 1265	HTI 1450
Classification temperature °C	1,050	1,265	1,450
Melting temperature °C	1,650	1,785	2,000
Al ₂ O ₃ %	≥ 42	≥ 45	≥ 34
SiO ₂ %	≥ 52	≥ 53	≥ 50
ZrO ₂ %	—	—	≥ 15
Tensile strength MPa	≥ 0.3	≥ 0.3	≥ 0.3
Density kg/m³	190–250	190–250	190–250
Length / Width / Thickness	12,000–20,000 mm / 5–1,000 mm / 2–50 mm — custom sizes available		



WSC · 600

E-Glass / High-Silica Cloth

Single grade — 96 % SiO₂ amorphous silica fabric, asbestos-free thermal barrier

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FAMILY 06 / 06

Woven SC600 is pure E-glass cloth made from high-silica fabric with 96 % pure SiO₂ amorphous silica fibres — a health-conscious alternative to asbestos and ceramic textiles. Designed to withstand continuous 982 °C with high dielectric strength and corrosion resistance. Widely used for high-temperature insulation, welding blankets, thermal barriers and personnel safety.

CONTINUOUS TEMP. 982 °C	SIO ₂ PURITY 96 % amorphous	THICKNESS RANGE 0.25 – 1.3 mm
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FEATURES & ADVANTAGES

- 96 % pure amorphous SiO₂ — asbestos-free
- Continuous service to 982 °C
- Low thermal conductivity
- High dielectric strength
- High corrosion resistance
- Self-adhesive variant available with HT glue

APPLICATIONS

- High-temperature insulation and heat protection
- Welding blankets and curtains
- Furnace curtains and barriers
- Power generation, shipbuilding, construction
- Welding and metal-processing safety
- Thermocouple insulation wrap
- Flame-resistant barriers
- Thermal-barrier insulation

TECHNICAL PROPERTIES

Property	Value
Continuous service temperature °C	982
SiO ₂ purity %	96 amorphous
Thickness mm	0.25–1.3
Roll length m	10 / 30 / 50 (custom)
Commonly used width mm	50–1,200
Adhesive options	Self-adhesive (HT glue) or plain
Dielectric strength	High
Corrosion resistance	High



— CLOSE

Specify Wedge.

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

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