FAMILY 03 — REFRACTORY & CERAMIC FIBRE

Refractory & Ceramic Fibre

Alumina-silicate, polycrystalline and alkaline-earth-silicate fibres in blanket, board, paper, felt and module form — for furnace linings, kilns and high-temperature backup, plus refractory glues.

TEMPERATURE RANGE	CONDUCTIVITY	PRODUCTS	STANDARDS
450 → 1,900 °C	**0.05 → 0.41 W/m·K**	**16**	**ISO 9001 / 14001**

IN THIS FAMILY

HDSP450

Calcium Silicate Sandwich Panel

Single grade — CalSil HD450 cement-bonded sandwich panel, asbestos-free mineral

CalSil HD450 insulating boards are produced with special cement technology, calcium-silicate based and purely mineral, asbestos-free. Large-sized for mechanically strong, self-supporting constructions combining thermal insulation, drying, ventilation, fire protection and noise control without classification.

CLASSIFICATION TEMP.	λ	COMPRESSIVE STRENGTH
450 °C continuous	**0.16** W/m·K	**9.3** N/mm²

FEATURES & ADVANTAGES

- Harmless in terms of working hygiene
- Large-sized, self-supporting boards
- Minimum thermal bridges; vibration-proof
- Corrosion- and rot-resistant
- Good chemical resistance; diffusion-open
- Variable surface coatings possible

APPLICATIONS

- Industrial dryers and apparatus construction
- Industrial furnaces and apparatus enclosures
- Hospital partition insulation
- Fire-protection walls and partitions
- Heat-shield barriers; interior heat insulation
- Acoustic insulation and noise reduction

TECHNICAL PROPERTIES

Property	Value
Colour	Light Grey / White
Classification temperature °C	450
Shrinkage @ 400 °C, 24 h %	0.25
Bulk density kg/m³	870
Compressive strength N/mm²	9.3
Thermal conductivity λ W/m·K	0.16
STANDARD SIZES	
Length × Width mm	2,440 × 1,220
Thickness mm	6, 8, 9, 10, 12, 15, 20, 25

ALESI · 350–1450

Alkaline Earth Silicate Boards

Four grades — ALESI 350 · 400 · 1000 · 1450 — alkaline-earth silicate wool boards

ALESI boards are alkaline-earth silicate-wool boards manufactured by wet forming with ceramic-fibre bulk and binders. A unique shot-removal and vacuum-forming process delivers low thermal conductivity, high temperature stability, uniform density and excellent thermal-shock and chemical-attack resistance — for furnace lining, blast-furnace insulation and high-temperature gasketing.

CLASSIFICATION TEMP.	λ @ 600 °C	COMPRESSIVE STRENGTH
1,100 – 1,450 °C	**0.14 – 0.18** W/m·K	**3 – 10** MPa

FEATURES & ADVANTAGES

- High thermal-shock resistance and heat resistance
- Suitable for very high-temperature application
- Low thermal conductivity at temperature
- Very low linear shrinkage; very low shot content
- Excellent chemical stability
- Low heat storage; high tensile strength

APPLICATIONS

- Industrial furnace lining
- Blast-furnace insulation
- Steel reheating furnaces
- Heat-treatment furnaces & kilns
- Forging furnaces and ceramics kilns
- Heat-resistant sealing gaskets; high-temperature filter media

TECHNICAL PROPERTIES · 4 GRADES

Property	ALESI 350	ALESI 400	ALESI 1000	ALESI 1450
Classification temperature °C	1,260	1,260	1,100	1,450
Bulk density kg/m³	300–350	400–450	1,000	350–400
Cold compressive strength MPa	3	3	10	3
Bending strength MPa	1	1	8	1
Shrinkage after 24 h	< 4 @ 1,200	< 4 @ 1,200	< 2 @ 1,000	< 4 @ 1,200
THERMAL CONDUCTIVITY (W/M·K)				
at 200 °C	0.10	0.10	0.10	0.14
at 400 °C	0.12	0.12	0.12	0.16
at 600 °C	0.14	0.14	0.16	0.18
at 800 °C	0.16	0.16	0.20	0.20

BA · 90 – 99HP

Alumina Ceramic Insulating Boards

Four grades — BA90 · BA95 · BA99 · BA99HP — high-purity alumina bubble brick

Wedge BA series are high-temperature lightweight refractory bricks made using insulated alumina with hollow spherical Al_2O_3 bubbles. Capable of service to 1,800–1,900 °C with extremely low thermal conductivity, high purity and excellent thermal-shock, erosion and chemical-attack resistance — for furnace, kiln and refractory lining at the highest temperatures.

CLASSIFICATION TEMP.	Λ @ 1,000 °C	AL_2O_3 CONTENT
1,760 – 1,800 °C	**0.9** W/m·K	**92 – 99.2** %

FEATURES & ADVANTAGES

- High-purity alumina ≥ 92 % up to 99.2 %
- Excellent thermal-shock resistance
- Very low thermal conductivity at high temperatures
- High porosity from hollow alumina bubble structure
- Resistant to erosion and chemical attack
- Low reversible linear thermal expansion

APPLICATIONS

- Lining of furnaces, kilns and high-temperature equipment
- Refractory backup insulation at 1,500 °C and above
- Glass tank furnace crown insulation
- Petrochemical reformer and reactor linings
- Refractory laboratory ware and equipment
- Aerospace and rocket-engine thermal protection

TECHNICAL PROPERTIES · 4 GRADES

Property	BA90	BA95	BA99	BA99HP
Classification temperature °C	1,760	1,760	1,800	1,800
Density kg/m³	1,400–1,600	1,400–1,600	1,400–1,600	1,400–1,600
Flexural strength MPa	6	4.5	3.5	3.5
Cold crushing strength MPa	18	15	10	10
Reversible linear expansion % max	1.2	1.2	1.3	1.3
Linear shrinkage @ 1,600 °C / 5 h %	−0.3	−0.3	−0.2	−0.2
COMPOSITION (%)				
Al_2O_3	92	97	99	99.2
SiO_2	7	2	0.3	0.2
THERMAL CONDUCTIVITY (W/M·K)				
at 200 °C	0.68	0.68	0.69	0.69
at 600 °C	0.8	0.8	0.8	0.8
at 1,000 °C	0.9	0.9	0.9	0.9

AISi · 1500 – 1650

High Alumina Refractory Fibre Blanket

Four grades — AlSi 1500 · 1550 · 1600 · 1650-128M — polycrystalline wool

Wedge AlSi 1600 series is polycrystalline wool refractory fibre insulation for continuous service to 1,600 °C. High alumina content delivers extremely low shrinkage and stable thermal-mechanical properties at high temperature. Mullite-corundum structure with chromia and zirconia variants for specific chemistries.

SERVICE TEMPERATURE	Λ @ 1,000 °C	DENSITY
1,500 – 1,650 °C	**0.24 – 0.32** W/m·K	**96 – 128** kg/m³

FEATURES & ADVANTAGES

- Continuous service to 1,600 °C and short term 1,650 °C
- Extremely low shrinkage from high alumina content
- Excellent thermal-shock and chemical stability
- Suitable for very high-temperature application
- Very low shot content
- Low heat storage; high tensile strength

APPLICATIONS

- High-temperature industrial furnace lining
- Blast-furnace and reheating-furnace insulation
- Heat-treatment furnaces and kilns
- Forging-furnace and ceramic-kiln insulation
- Heat-resistant sealing gaskets
- High-temperature filter materials

TECHNICAL PROPERTIES · 4 GRADES

Property	AlSi1600	AlSi1550	AlSi1500	AlSi-1650-128M
Maximum service temperature °C	1,600	1,550	1,500	1,650
Density kg/m³	96, 128	128	128	128
Al_2O_3 %	80	45	40	74
Thermal shrinkage @ 24 h	@1,500°C <0.8	@1,400°C <3	@1,400°C <3	—
THERMAL CONDUCTIVITY (W/M·K)				
at 400 °C	0.09	0.05	0.05	0.08
at 500 °C	0.11	0.12	0.11	0.09
at 800 °C	0.21	0.18	0.15	0.17
at 1,000 °C	0.32	0.27	0.24	0.24
at 1,200 °C	0.41	0.32	0.38	0.33
STANDARD SIZES				
Thickness mm	12.5 / 25	12.5 / 25	12.5 / 25	6 / 12.5 / 25
Length × Width mm	620 × 7,200	620 × 7,200	610 × 3,600	610 × 3,600

AISi · 1100 – 1450

Aluminium Silicate Flexible Insulation

Three grades — AlSi 1100 · 1260 · 1450 — ASZ blanket with multiple densities

Wedge AlSi flexible insulation is aluminium-silicate-fibre based, suitable for fire-door infill, partition walls, pipe insulation and ceramic-kiln linings. Available in mattress and semi-rigid board form, combining low heat storage with complete thermal-shock resistance and high fire resistance.

CLASSIFICATION TEMP.	Λ @ 500 °C	DENSITY
1,100 – 1,450 °C	**0.12 – 0.18** W/m·K	**65 – 160** kg/m³

FEATURES & ADVANTAGES

- High thermal-shock resistance, heat resistance
- Suitable for making fire doors and fire walls
- Low thermal conductivity, excellent chemical stability
- Low shot content, low heat storage
- High tensile strength for fire-wrap applications
- Customisable thickness 6 – 100 mm

APPLICATIONS

- Industrial furnace lining and ceramic kilns
- Fire-wrap and infill material in fire doors
- Fire-resistant wall and partition assemblies
- High-temperature pipe heat preservation
- Heat-resistant sealing gaskets
- Power-boiler and nuclear heat insulation

TECHNICAL PROPERTIES · 3 GRADES

Property	AISi 1100	AISi 1260	AISi 1450
Classification temperature °C	1,100	1,260	1,450
Density (3 ranges) kg/m³	65 / 100 / 130	100 / 130 / 160	100 / 130 / 160
Al_2O_3 %	44	≥ 45	≥ 34
$Al_2O_3 + SiO_2$ %	≥ 96	≥ 98	≥ 85
ZrO_2 %	—	—	≥ 15
Shot content % max	≤ 15	≤ 15	≤ 12
Permanent linear change	1,100 °C / 24 h ≤ −2.5	—	1,350 °C / 24 h ≤ −2.5
THERMAL CONDUCTIVITY (W/M·K) — DENSEST GRADE			
at 400 °C	0.095	0.101	0.118
at 500 °C	0.123	0.120	0.145
at 600 °C	0.158	0.175	0.172
Tensile strength MPa	0.040–0.050	0.050–0.075	0.050–0.075
Standard sizes	14,400 / 7,200 / 3,600 × 1,220 / 610 mm × 6–100 mm thick		

CaSiF · 800 – 1260

Calcium Silicate Fibre Ceramic Blanket

Four grades — CaSiF 800 · 1050 · 1150 · 1260 — bio-grade fibre blanket

Wedge CaSiF is a high-temperature bio-grade fibre blanket manufactured from calcium silicate, silica and magnesium for industrial applications to 1,200 °C. Flexible, lightweight, needled — used for refractory back lining and general thermal insulation where bio-soluble fibres are required by EU REACH and other regulations.

CLASSIFICATION TEMP.	Λ @ 400 °C	DENSITY
800 – 1,260 °C	**0.05 – 0.10** W/m·K	**96 – 180** kg/m³

FEATURES & ADVANTAGES

- Bio-grade soluble fibre — REACH compliant
- High thermal-shock resistance
- Low thermal conductivity
- Very low linear shrinkage
- Excellent chemical stability
- Low heat storage; high tensile strength

APPLICATIONS

- Industrial furnace lining
- Blast-furnace and reheating-furnace insulation
- Heat-treatment furnaces and kilns
- Forging-furnace insulation
- Heat-resistant sealing gaskets
- Ceramics-kiln thermal insulation

TECHNICAL PROPERTIES · 4 GRADES

Property	CaSiF 800	CaSiF 1050	CaSiF 1150	CaSiF 1260
Classification temperature °C	800	1,050	1,150	1,260
Max service temperature °C	750	1,000	1,100	1,200
Melting temperature °C	1,400	1,400	1,400	1,400
Density kg/m³	96–180	96–180	96–180	96–180
SiO_2 %	60–70	65–72	70–75	72–80
CaO %	25–33	25–33	25–33	20–30
Shrinkage @ 1,000 °C / 24 h %	< 1.3	< 1.3	< 1.3	< 1.3
THERMAL CONDUCTIVITY (W/M·K)				
at 100 °C	0.04	0.04	0.04	0.04
at 400 °C	0.09	0.05	0.05	0.10
at 800 °C	0.26	0.26	0.26	0.26

AlSi · Felt

Aluminium Silicate Ceramic Felt

Three grades — AlSi 47 · AlSi 52 · AlZSi 15 — high-grade ceramic fibre felt sheet

Wedge AlSi felts are ceramic-fibre felts manufactured from high-grade ceramic fibre formed into flexible sheets. They deliver high temperature resistance, very low thermal conductivity, chemical-corrosion resistance and thermal-shock stability — for ingot-mould liners, refractory backup insulation and molten-metal splash protection.

CLASSIFICATION TEMP.	MELTING POINT	TENSILE STRENGTH
1,050 – 1,430 °C	1,650 – 2,000 °C	≥ 0.3 MPa

FEATURES & ADVANTAGES

- High thermal-shock resistance and heat resistance
- Low thermal conductivity
- Excellent chemical stability
- Non-wetting to molten aluminium
- Low heat storage; easy to cut and machine
- Customisable size up to 40 m length

APPLICATIONS

- Industrial furnace lining
- High-temperature pipe heat preservation
- High-temperature insulation gaskets
- Ingot-mould liner protection
- Refractory backup insulation
- Molten-metal splash and spark protection

TECHNICAL PROPERTIES · 3 GRADES

Property	AlSi 47	AlSi 52	AlZSi 15
Classification temperature °C	1,050	1,260	1,430
Melting temperature °C	1,650	1,785	2,000
Al_2O_3 %	47	≥ 52	≥ 34
SiO_2 %	≥ 52	≥ 47	≥ 50
ZrO_2 %	—	—	≥ 15
Tensile strength MPa	≥ 0.3	≥ 0.3	≥ 0.3
Density kg/m³	190–250	190–250	190–250
Standard size	40,000 / 30,000 / 20,000 / 10,000 × 1,220 / 610 mm × 2–10 mm thick		

AlSi · Flex-P

Aluminium Silicate Flexible Paper

Four grades — WedGel 650HP · FP1050 · FP1260 · FPZ1450 — high-alumina fibre paper

Wedge AlSi Flexible paper is a high-performance alumina-silicate fibre paper formed into flexible sheets. High temperature resistance, very low thermal conductivity, chemical-corrosion resistance and thermal-shock stability. Used in furnace components, gaskets, combustion-chamber and exhaust-stack liners, and molten-metal contact applications.

CLASSIFICATION TEMP.	Λ @ 400 °C	DENSITY
700 – 1,450 °C	**0.04 – 0.08** W/m·K	**190 – 280** kg/m³

FEATURES & ADVANTAGES

- High thermal-shock resistance; heat resistance
- Low thermal conductivity; excellent chemical stability
- Non-wetting to molten aluminium
- High strength; easy to cut and machine
- Available in 1–10 mm thickness up to 40 m length
- ISO 9001 / 14001 quality certified

APPLICATIONS

- Industrial furnace lining and combustion chambers
- Flue and exhaust stack liners; fire protection
- Heat shields and high-temperature gaskets
- Hot tops for super-alloy casting
- Molten-aluminium contact applications
- Semiconductor processing equipment liners

TECHNICAL PROPERTIES · 4 GRADES

Property	WedGel 650HP	FP1050	FP1260	FPZ1450
Classification temperature °C	700	1,050	1,260	1,450
Colour	White	White	White	White
Al_2O_3 %	1–3	46–52	48–54	≥ 34
SiO_2 %	98–99	50–54	50–55	≥ 50
ZrO_2 %	—	—	—	≥ 15
Tensile strength MPa	≥ 0.5	≥ 0.4	≥ 0.5	≥ 0.8
THERMAL CONDUCTIVITY (W/M·K)				
at 25 °C	0.014	0.030	0.04	0.05
at 200 °C	0.03	0.05	0.05	0.07
at 400 °C	0.04	0.06	0.06	0.08
at 600 °C	0.06	0.07	0.08	0.10
at 800 °C	0.12	0.12	0.11	0.12
at 1,000 °C	0.23	0.23	0.16	0.24
Density kg/m³	190–250	190–250	200–280	200–280

AISi · HTI Tapes

Fire & Insulation Ceramic Tapes

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

Wedge AISi 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.	FIRE PROTECTION	MELTING POINT
1,050 – 1,450 °C	**Up to 240** minutes	**1,650 – 2,000** °C

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_2O_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		

HD-AlSi · Blanket

High Density Alumina Silicate Ceramic Blanket

Four grades — HD-AlSi 1600 · 1550 · 1450 · 1260 — chrome / zircon / polycrystalline wool

Wedge HD AlSi blanket is a high-density alumina-silicate refractory ceramic fibre insulation for continuous service to 1,600 °C. High alumina content and chromia/zirconia chemistry deliver low shrinkage and stable thermal/mechanical properties at high temperature.

SERVICE TEMPERATURE	Λ @ 1,000 °C	DENSITY
1,260 – 1,600 °C	**0.24 – 0.32** W/m·K	**96 – 198** kg/m³

FEATURES & ADVANTAGES

- Continuous service to 1,600 °C
- Chromia and zirconia variants for chemistry control
- Very low shrinkage at high temperature
- Mullite-corundum structure for stability
- Suitable for the most demanding furnace linings
- Excellent thermal-shock and chemical stability

APPLICATIONS

- Industrial high-temperature furnace lining
- Blast-furnace insulation
- Steel reheating and heat-treatment furnaces
- Forging furnaces and ceramic kilns
- Heat-resistant sealing gaskets
- High-temperature filter media

TECHNICAL PROPERTIES · 4 GRADES

Property	HD-AlSi1600	HD-AlSi1550	HD-AlSi1450	HD-AlSi1260
Max service temperature °C	1,600	1,550	1,450	1,260
Density kg/m³	96, 128	128	128	150–198
Al_2O_3 %	80	45	35–40	40–45
Thermal shrinkage @ 24 h	@1,500°C <0.8	@1,400°C <3	@1,400°C <3	@1,100°C <2.5
THERMAL CONDUCTIVITY (W/M·K)				
at 400 °C	0.09	0.05	0.05	0.10
at 800 °C	0.21	0.18	0.15	0.15
at 1,000 °C	0.32	0.27	0.24	0.24
at 1,200 °C	0.41	0.32	0.38	0.35

HD-AlSi · Board

High Density Aluminium Silicate Board

Four grades — HDAlSi 900 · 1000 · 400 · 1450 — vacuum-formed ceramic-fibre boards

Wedge HD AlSi boards are ceramic-fibre boards manufactured by wet or vacuum forming. Unique shot-removal delivers low thermal conductivity, high stability and excellent thermal-shock and chemical-attack resistance — for vibration- and stress-loaded insulation in furnaces, kilns and processing equipment.

CLASSIFICATION TEMP.	Λ @ 600 °C	DENSITY
1,100 – 1,450 °C	**0.14 – 0.18** W/m·K	**350 – 1,000** kg/m³

FEATURES & ADVANTAGES

- High thermal-shock and heat resistance
- Suitable for high-temperature application
- Low thermal conductivity
- Excellent chemical stability
- High strength under load and vibration
- Multiple sheet sizes and thicknesses

APPLICATIONS

- Industrial furnace lining
- Blast-furnace insulation
- Steel reheating and heat-treatment furnaces
- Forging furnaces and ceramic kilns
- Heat-resistant sealing gaskets
- High-temperature filter media

TECHNICAL PROPERTIES · 4 GRADES

Property	HDAlSi 900	HDAlSi 1000	HDAlSi 400	HDAlSi 1450
Classification temperature °C	1,200	1,100	1,260	1,450
Bulk density kg/m³	900	1,000	400	350
Cold compressive strength MPa	8	10	3	3
Bending strength MPa	7	8	1	1
Shrinkage after 24 h	< 2 @ 850	< 2 @ 1,000	< 4 @ 1,200	< 4 @ 1,200
THERMAL CONDUCTIVITY (W/M·K)				
at 200 °C	0.08	0.10	0.10	0.14
at 400 °C	0.12	0.12	0.12	0.16
at 600 °C	0.14	0.16	0.14	0.18
at 800 °C	0.16	0.20	0.16	0.20
Thickness mm	2, 5, 6, 9, 10, 12 (all)			
Sheet sizes mm	500 × 500 / 1,000 × 1,000 / 1,000 × 1,200 / 12,000 × 1,200			

HDAlSiZ · 130–185

High Density Ceramic Blanket

Three grades — HDAlSiZ 130 · 160 · 185 — high-density ceramic fibre, zirconia-bearing

Wedge AlSiZ are high-temperature, high-density ceramic fibre blankets commonly used in metallurgy, petrochemical and furnace insulation. Three densities (130, 160, 185 kg/m³) with zirconia 15–17 % for high-temperature dimensional stability.

SERVICE TEMPERATURE	Λ @ 800 °C	DENSITY
1,430 – 1,450 °C	**0.15 – 0.21** W/m·K	**130 – 185** kg/m³

FEATURES & ADVANTAGES

- High thermal-shock resistance
- High tensile strength
- Low thermal conductivity
- Excellent chemical stability
- Easy to cut and machine
- Tensile strength 58–74 kPa along direction

APPLICATIONS

- Industrial furnace lining
- High-temperature pipe heat preservation
- High-temperature insulation gaskets
- Ingot-mould liner; refractory backup insulation
- Molten-metal splash and spark protection
- Hot-top lining and silencer insulation

TECHNICAL PROPERTIES · 3 GRADES

Property	HDAlSiZ 130	HDAlSiZ 160	HDAlSiZ 185
Max service temperature °C	1,430–1,450	1,430–1,450	1,430–1,450
Density kg/m³	130	160	185–190
Al_2O_3 %	35–40	35–40	35–40
SiO_2 %	45–50	45–50	45–50
ZrO_2 %	15–17	15–17	15–17
Mean fibre diameter µm	3.4	3.5	3.8
Shot content max %	40	40	40
THERMAL CONDUCTIVITY (W/M·K)			
at 400 °C	0.08	0.09	0.09
at 800 °C	0.21	0.18	0.15
at 1,200 °C	0.41	0.32	0.36
Tensile strength along direction kPa	58	68	74

AlSi-M · 1260–1430

Aluminium Silicate Ceramic Modules

Three grades — AlSi-M1260 · M1350HP · M1430 — folded-blanket modules

Wedge AlSi-M ceramic-fibre modules are folded-blanket modules for direct fire-side furnace lining. Made by the latest spinning, needling and thermal-forming processes, they combine low heat storage with complete thermal-shock resistance and extreme fire resistance. Available with anchoring systems for industrial furnaces and kilns.

CLASSIFICATION TEMP.	Λ @ 1,000 °C	DENSITY
1,260 – 1,430 °C	**0.26 – 0.27** W/m·K	**160 – 220** kg/m³

FEATURES & ADVANTAGES

- High thermal-shock and heat resistance
- Suitable for making fire doors and fire walls
- Low thermal conductivity
- Excellent chemical stability
- Low shot content; low heat storage
- Pre-folded modules speed installation

APPLICATIONS

- Industrial furnace lining and kilns
- Fire-wrap and infill in fire doors
- Fire-resistant walls and partitions
- High-temperature pipe heat preservation
- Glass-tank furnace thermal insulation
- Power-boiler and nuclear heat insulation

TECHNICAL PROPERTIES · 3 GRADES

Property	AlSi-M1260	AlSi-M1350HP	AlSi-M1430
Classification temperature °C	1,260	1,350	1,430
Al_2O_3 %	43	52	35
SiO_2 %	54	47	49
ZrO_2 %	—	—	15
Density kg/m³	160–220	160–220	160–220
Permanent linear shrinkage	1,000 °C / 24 h ≤ 2.5	1,200 °C / 24 h ≤ 3.0	1,350 °C / 24 h ≤ 3.0
THERMAL CONDUCTIVITY (W/M·K)			
at 400 °C	0.10	0.10	0.10
at 600 °C	0.18	0.16	0.15
at 800 °C	0.20	0.20	0.19
at 1,000 °C	0.27	0.26	0.26

AISi · Wool

Aluminium Silicate Ceramic Wool Bulk

Five grades — AISi 96 · AISi 99 · Textile · Chopped · ASZ 15 — bulk ceramic fibre

Wedge AISi wool is ceramic-fibre bulk made of high-purity composite raw materials, melted in resistance furnaces and processed by blowing or spinning. Used as feedstock for blankets, boards, fire doors and as a packing material for expansion joints and kiln-car furniture.

CLASSIFICATION TEMP.	λ @ 600 °C	FIBRE DIAMETER
1,260 – 1,430 °C	**0.15 – 0.17** W/m·K	**3 – 5** µm

FEATURES & ADVANTAGES

- High thermal-shock resistance
- Excellent thermal stability
- Low thermal conductivity; low heat storage
- High-temperature resistance
- Multiple chemistries — silica, alumina, zirconia
- Bulk packing for expansion joints

APPLICATIONS

- Raw material for ceramic-fibre blanket & boards
- Joint-filling material in insulation installation
- Packing for expansion joints
- Fire-resistant doors infill
- Kiln-car filling and furniture support
- Refractory casting and acoustic packing

TECHNICAL PROPERTIES · 5 GRADES

Property	AISi 96	AISi 99	Textile	Chopped	ASZ 15
Classification temperature °C	1,260	1,260	1,260	1,260	1,430
Melting temperature °C	1,425	1,575	1,575	1,575	1,750
Al_2O_3 %	≥ 44	≥ 45	≥ 45	≥ 45	≥ 34
$Al_2O_3 + SiO_2$ %	≥ 96	≥ 99	≥ 99	≥ 99	≥ 84
ZrO_2 %	—	—	—	—	≥ 15
Shot content % max	≤ 15	≤ 15	≤ 12	≤ 10	≤ 12
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.06	0.07	0.06	0.06	0.075
at 400 °C	0.09	0.10	0.10	0.10	0.11
at 600 °C	0.15	0.15	0.15	0.15	0.168

HTAL · 1600

High Temperature Ceramic Glue

Single grade — high-alumina air-setting refractory cement for service to 1,700 °C

Wedge HTAL1600 is high-alumina air-setting refractory cement used for bricklaying with thin joints, air & gas joints and strong joints. The fibre product can be shaped or moulded into refractory bricks at any density — useful for quick repair and monolithic linings in furnaces, reactors, kilns and investment-casting moulds.

SERVICE TEMPERATURE	DENSITY	SHRINKAGE
1,600 – 1,700 °C	1,800 kg/m³	< 3 %

FEATURES & ADVANTAGES

- High-alumina formulation for extreme service
- Air-setting — no heat needed for cure
- Mouldable into bricks or as monolithic lining
- Strong joint bonds with thin film
- Initial set 1–2 hours; final set 4–6 hours
- Compatible with refractory fibre boards and ropes

APPLICATIONS

- Refractory brick laying — thin and strong joints
- Air and gas joint sealing
- Furnace and reactor monolithic linings
- Investment-casting mould bonding
- Kiln rebuild and quick repair
- Gas and steam turbine insulation jointing

TECHNICAL PROPERTIES

Property	Value
Service temperature °C	1,600 – 1,700
Density kg/m³	1,800
Shrinkage %	< 3
Al_2O_3 %	32
SiO_2 %	52
Fe_2O_3 %	0.8
Initial setting hours	1–2
Final setting hours	4–6

HTAL · 1000

High Temperature Glue & Adhesives

Two grades — HTAL1000 WK 84 (paste) · WK 84/16 (fluid) — inorganic asbestos-free glue

Wedge HTAL1000 high-temperature glue is developed for economical processing of insulation materials and lightweight construction systems. Inorganic, asbestos-free and incombustible — adheres to almost all foundations. Two consistencies (pasty and fluid) for application by trowel or roller. Service to 1,000 °C.

SERVICE TEMPERATURE	SETTING TIME	SHELF LIFE
1,000 °C continuous	**1 – 8** hours	**6** months (frost-free)

FEATURES & ADVANTAGES

- Ready-to-use, no mixing required
- High permanent temperature resistance to 1,000 °C
- Quick bonding; high adhesion strength
- Inorganic and asbestos-free
- Incombustible, does not generate smoke
- High pH — does not damage steel substrates

APPLICATIONS

- Bonding low-density Calcium Silicate boards
- High-density Calcium Silicate board bonding
- Microporous insulation bonding
- Insulation on steel substrates
- Ceramic fibre and fireproof stones
- Perlite board bonding

TECHNICAL PROPERTIES · 2 GRADES

Property	HTAL1000 WK 84	HTAL1000 WK 84/16
Product	High-temperature glue	High-temperature glue
Classification temperature	1,000 °C	1,000 °C
Colour	Grey	Grey
Consistency	Pasty	Fluid
Processing temperature	5–40 °C	5–40 °C
Setting after application	8 h	1 h
Hardening	24 h	8 h
Full hardening	1 week	1 week
Storage	Frost-free, 6 months	Frost-free, 6 months
Packaging	7.5 / 15 kg bucket	15–20 kg bucket

AISi · 1000

Aluminized High-Temperature Fabric

Single grade — aluminized molten-metal splash-protection fabric for 1,000 °C short-term

Wedge AlSi1000 aluminized HT fabrics are made of high-temperature fire-resistant yarns in a closed weave — lightweight and durable. Provide molten-metal splash protection; the fabric's aluminized side reflects radiant heat. Continuous service to 550–650 °C, short-term excursion to 1,000 °C.

SHORT-TERM TEMP.	LONG-TERM TEMP.	WEIGHT
1,000 °C	550 – 650 °C	1,120 g/m²

FEATURES & ADVANTAGES

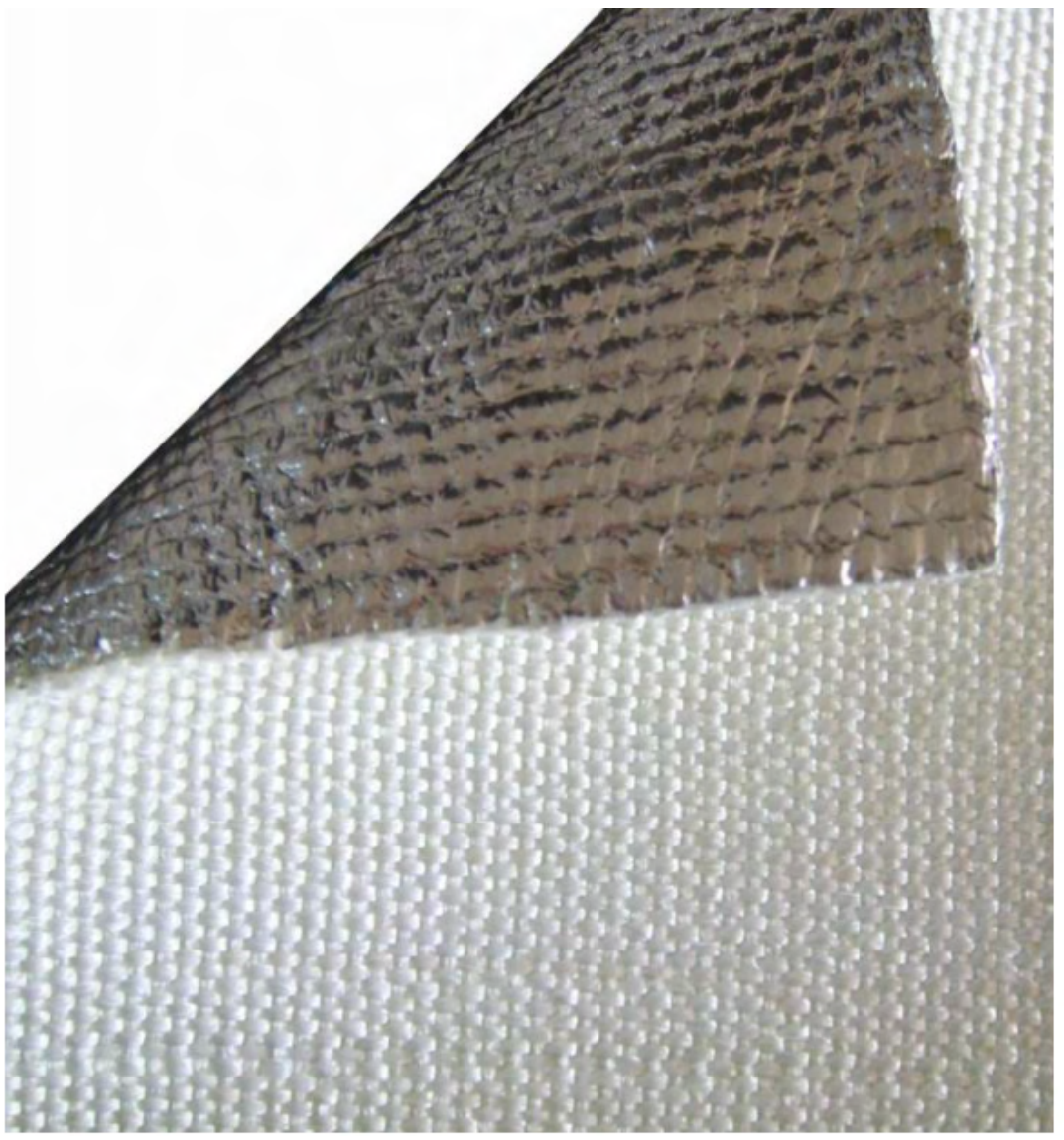
- Aluminized face reflects radiant heat
- Closed weave — lightweight and durable
- Molten-metal splash protection
- Non-flammable construction
- Warp tensile strength ≥ 450 N/25 mm
- Weft tensile strength ≥ 325 N/25 mm

APPLICATIONS

- Foundry molten-metal splash protection
- Welding curtains and screens
- Personnel-protection blankets
- Furnace personnel curtains
- Heat-reflective covers and tarps
- Forge-shop fire blankets

TECHNICAL PROPERTIES

Property	Value
Max short-term temperature °C	1,000
Long-term service temperature °C	550–650
Width mm	≥ 1,000
Weight g/m²	1,120
Thickness mm	1.50 ± 0.05
Warp tensile strength N/25 mm	≥ 450
Weft tensile strength N/25 mm	≥ 325
Flammability	Non-flammable



AISi · 1200CT

Aluminium Silica Fibre Cloth

Two grades — AISi 1200CT-FG · AISi 1200CT-SS — fibreglass or stainless-steel reinforced

Wedge AISi1200CT is alumina-silica fibre cloth — the most cost-effective industrial cloth, manufactured from alumina-silica fibre yarn with fibreglass or stainless-steel core for high strength retention at elevated temperatures. Durable and flexible for applications up to 1,200 °C in welding, furnace curtains, aerospace and personnel protection.

CLASSIFICATION TEMP.	DENSITY	THICKNESS RANGE
1,240 °C	500 – 550 kg/m³	1 – 6 mm

FEATURES & ADVANTAGES

- High thermal-shock resistance and heat resistance
- Low thermal conductivity
- Excellent chemical stability
- Non-wetting to molten aluminium
- Easy to cut and machine
- Fibreglass or stainless-steel reinforcement options

APPLICATIONS

- Furnace curtains (entrance, exit barriers)
- Welding blankets and aerospace applications
- Lining cloth for welding and combustion pipes
- Fireproof rolling curtains
- Aircraft and rocket-engine insulation
- Motorsport engine and exhaust insulation
- Semiconductor processing pads
- Hot-glass processing mark / scratch prevention

TECHNICAL PROPERTIES · 2 GRADES

Property	AISi 1200CT-FG	AISi 1200CT-SS
Al_2O_3 %	45–46	45–46
SiO_2 %	52–53	52–53
$Al_2O_3 + SiO_2$ %	98	98
Fibre length mm	75	75
Fibre diameter µm	5.2	5.2
Density kg/m³	500–550	500–550
Classification temperature °C	1,240	1,240
Water content %	≤ 1	≤ 1
Organic content %	≤ 18	≤ 18
Thickness mm	1–6	1–6
Width mm	1,000	1,000
Reinforcement	Fibreglass	Stainless Steel

WSC · 600

E-Glass / High-Silica Cloth

Single grade — 96 % SiO_2 amorphous silica fabric, asbestos-free thermal barrier

Woven SC600 is pure E-glass cloth made from high-silica fabric with 96 % pure SiO_2 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.	SIO_2 PURITY	THICKNESS RANGE
982 °C	**96** % amorphous	**0.25 – 1.3** mm

FEATURES & ADVANTAGES

- 96 % pure amorphous SiO_2 — 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.

HEADQUARTERS

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