

FAMILY 02 — CALCIUM SILICATE

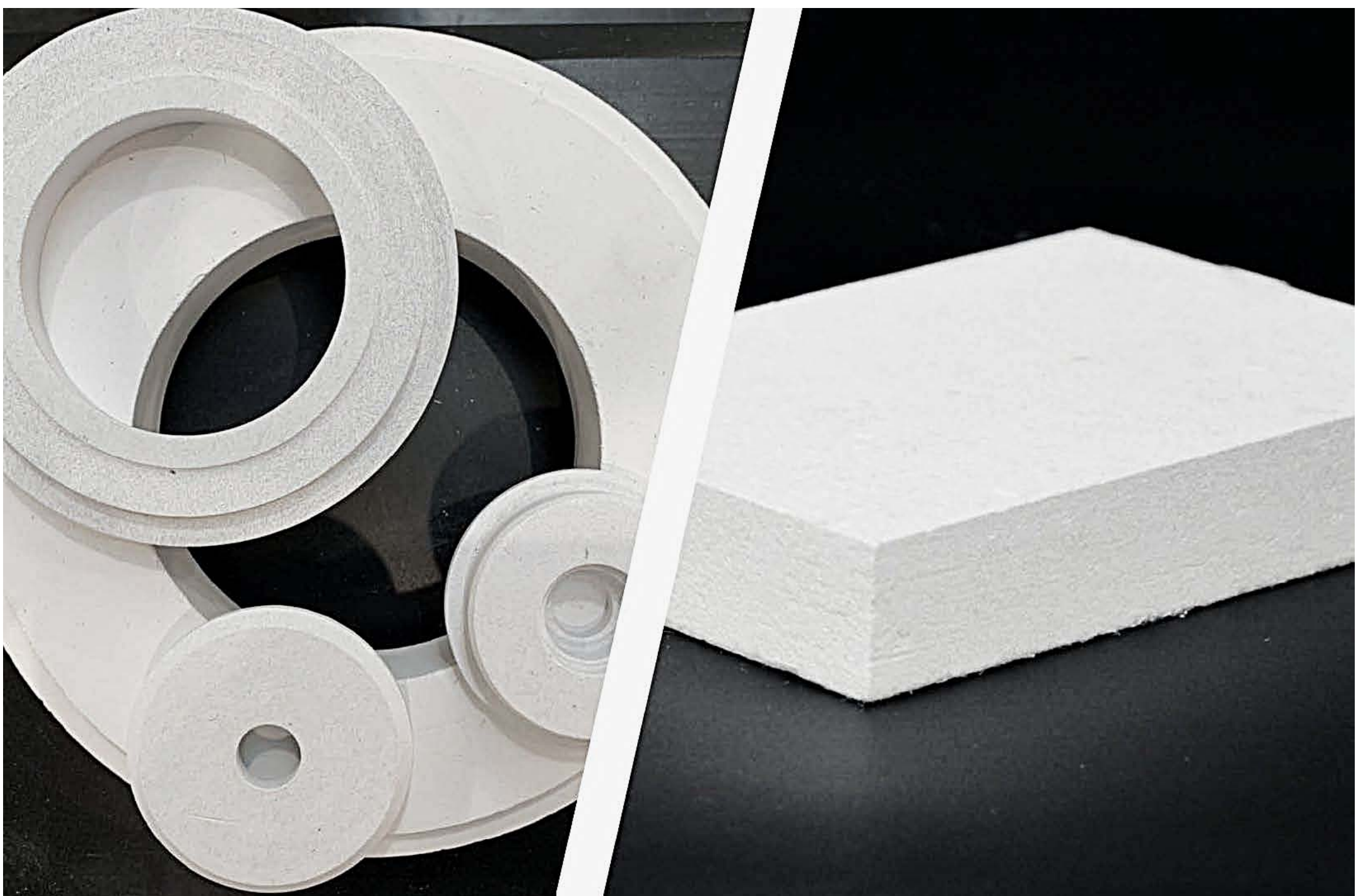
# Calcium Silicate Boards

Lightweight to high-density Calcium Silicate boards manufactured by Filter Press & Gel Tank technology — high-strength backup insulation for steel, glass, cement and aluminium processing.

TEMPERATURE RANGE <b>350 → 1,200 °C</b>	CONDUCTIVITY <b>0.15 → 0.56 W/m·K</b>	PRODUCTS <b>9</b>	STANDARDS <b>Asbestos-free</b>
--	--	----------------------	-----------------------------------

## IN THIS FAMILY

Insulation Refractory Bricks	14	Low Density Calcium Silicate Boards	15
High Density Calcium Silicate Boards	16	High Density CaSi for Molten Aluminium	17
Graphite Reinforced CaSi Boards	18	Wollastonite Calcium Silicate Boards	19
Wollastonite Calcium Silicate Boards	20	High-Temperature Millboards & Gaskets	21
High Density CaSi Fireproof Boards	22		



## Insulation Refractory Bricks

Five grades — WETON 23, 26, 28, 30, 32 — lightweight refractory insulation bricks

WETON lightweight refractory insulation bricks deliver high-temperature insulation to 1,760 °C without compromising mechanical strength. Produced from high-purity raw materials, they combine low thermal conductivity, low bulk density, high thermal-shock resistance and reduced shrinkage for use in furnaces, kilns and combustion chambers.

<b>CLASSIFICATION RANGE</b> <b>1,260 – 1,760 °C</b>	<b>λ @ 1,000 °C</b> <b>0.24 – 0.53 W/m·K</b>	<b>CRUSHING STRENGTH</b> <b>1.2 – 3.4 MPa</b>
--	---	--

### FEATURES & ADVANTAGES

- Low thermal conductivity at very high temperatures
- Low bulk density — low heat-storage, fast response
- Good high-temperature resistance and creep stability
- Reduced thermal shrinkage on first heat cycle
- High thermal-shock resistance
- High mechanical resistance — handles transport and install

### APPLICATIONS

- Insulating layer in torpedo ladles
- Chamber, bogie-hearth and tunnel kilns
- Anode baking furnaces
- Cracker and process plant linings
- Combustion-chamber and reheating furnace lining
- Glass tank, walking-beam and rapid-roller kilns

### TECHNICAL PROPERTIES · 5 GRADES

Property	WETON 23	WETON 26	WETON 28	WETON 30	WETON 32
Type	Soft	Hard	Hard	Hard	Hard
Colour	White	White	White	White	White
Classification temperature °C	1,260	1,430	1,540	1,650	1,760
Bulk density kg/m <sup>3</sup>	600	800	890	1,030	1,250
Flexural strength MPa	0.9	1.5	1.6	1.7	2.0
Cold crushing strength MPa	1.2	2.4	2.6	2.8	3.4
<b>THERMAL CONDUCTIVITY (W/M·K)</b>					
at 400 °C	0.17	0.24	0.30	0.40	0.49
at 600 °C	0.18	0.27	0.32	0.42	0.50
at 800 °C	0.21	0.29	0.35	0.44	0.51
at 1,000 °C	0.24	0.32	0.38	0.45	0.53
at 1,200 °C	—	0.35	0.39	0.47	0.55
<b>CHEMICAL ANALYSIS (%)</b>					
Al <sub>2</sub> O <sub>3</sub>	45	55	65	72	76
SiO <sub>2</sub>	50	43	33	26	22
Fe <sub>2</sub> O <sub>3</sub>	0.7	0.6	0.3	0.3	0.3



W-LD · 650 – 1100

## Low Density Calcium Silicate Boards

Four grades — 650 · 900 · 1000 · 1100 — Filter Press & Gel Tank technology

Wedge low- and medium-density Calcium Silicate Boards are produced by Filter Press & Gel Tank technology to combine low density and high mechanical strength with full machinability. The four grades cover service temperatures from 650 °C through 1,100 °C and are most often specified as backup insulation for steel, ceramic, glass, cement, chemical and petrochemical processing equipment. All grades are asbestos-free, resistant to H<sub>2</sub>, CO, CH<sub>4</sub>, NH<sub>3</sub> and N<sub>2</sub> atmospheres, and supplied as boards or machined ready-to-use shapes.

<b>SERVICE TEMPERATURE</b> <b>650 – 1,100 °C</b>	<b>λ AT 400 °C</b> <b>0.095 – 0.105</b> W/m·K	<b>FIRE CLASSIFICATION</b> <b>Class A1</b> Non-combustible
---	--	---

### FEATURES & ADVANTAGES

- Low thermal conductivity across full service range
- Resistant to H<sub>2</sub>, CO, CH<sub>4</sub>, NH<sub>3</sub>, N<sub>2</sub> atmospheres
- Low density & lightweight — easy to handle on site
- High thermal resistance and dimensional stability
- High mechanical and flexural strength
- Vibration resistant; moisture & chemical resistant
- Low heat storage — fast response to thermal cycling

### APPLICATIONS

- High temperature insulation & heat protection
- Steel: smelting, heat distortion & heat treatment plants
- Ceramic: chamber and tunnel furnaces
- Glass: melting furnaces & cooling channels
- Cement: heat exchangers & cyclone separators
- Chemical / petrochemical: thermal cracking, reactors & processing plants

### TECHNICAL PROPERTIES · 4 GRADES

Property	W-LD 650	W-LD 900	W-LD 1000	W-LD 1100
Colour	White	White	White	White
Service temperature °C	650	900	1,000	1,100
Bulk density kg/m <sup>3</sup>	220–240	245	255	255
Open porosity %	90	90	90	90
Cold compressive strength MPa	0.75	1.5	1.6	1.6
Flexural strength MPa	0.35	0.5	0.5	0.5
Linear shrinkage @ service %	1.8	0.9	1.0	1.0
<b>THERMAL CONDUCTIVITY (W/M·K)</b>				
at 200 °C	0.062	0.075	0.075	0.075
at 400 °C	0.095	0.105	0.105	0.105
at 600 °C	—	0.145	0.145	0.145
at 800 °C	—	0.175	0.175	0.185
Specific heat @ 400 °C kJ/kg·K	—	1.03	1.03	1.05



HD · 150-T1000

## High Density Calcium Silicate Boards

Five grades — HD L23 · HD150 · HD280 · HDT1000 · HD850 — high compressive strength

Wedge high-density Calcium Silicate Boards combine very high compressive strength (up to 85 MPa) with high-temperature insulation and excellent machinability. Specified for hot-tank support bases, load-bearing pipe columns, die-casting platen insulation and induction-furnace structural parts. All grades are asbestos-free, dust-free, with high electrical strength and arc resistance.

<b>SERVICE TEMPERATURE</b> <b>350 – 1,000 °C</b>	<b>COMPRESSIVE STRENGTH</b> <b>15 – 85 MPa</b>	<b>FIRE CLASSIFICATION</b> <b>Class A1</b> <small>Asbestos-free, non-combustible</small>
---	---	---

### FEATURES & ADVANTAGES

- Up to 85 MPa compressive strength — true load-bearing insulation
- Excellent machinability to close tolerances
- Dust-free surface; asbestos-free
- High electrical strength and arc resistance
- Resistant to moisture and chemicals
- High mechanical strength under cyclic load

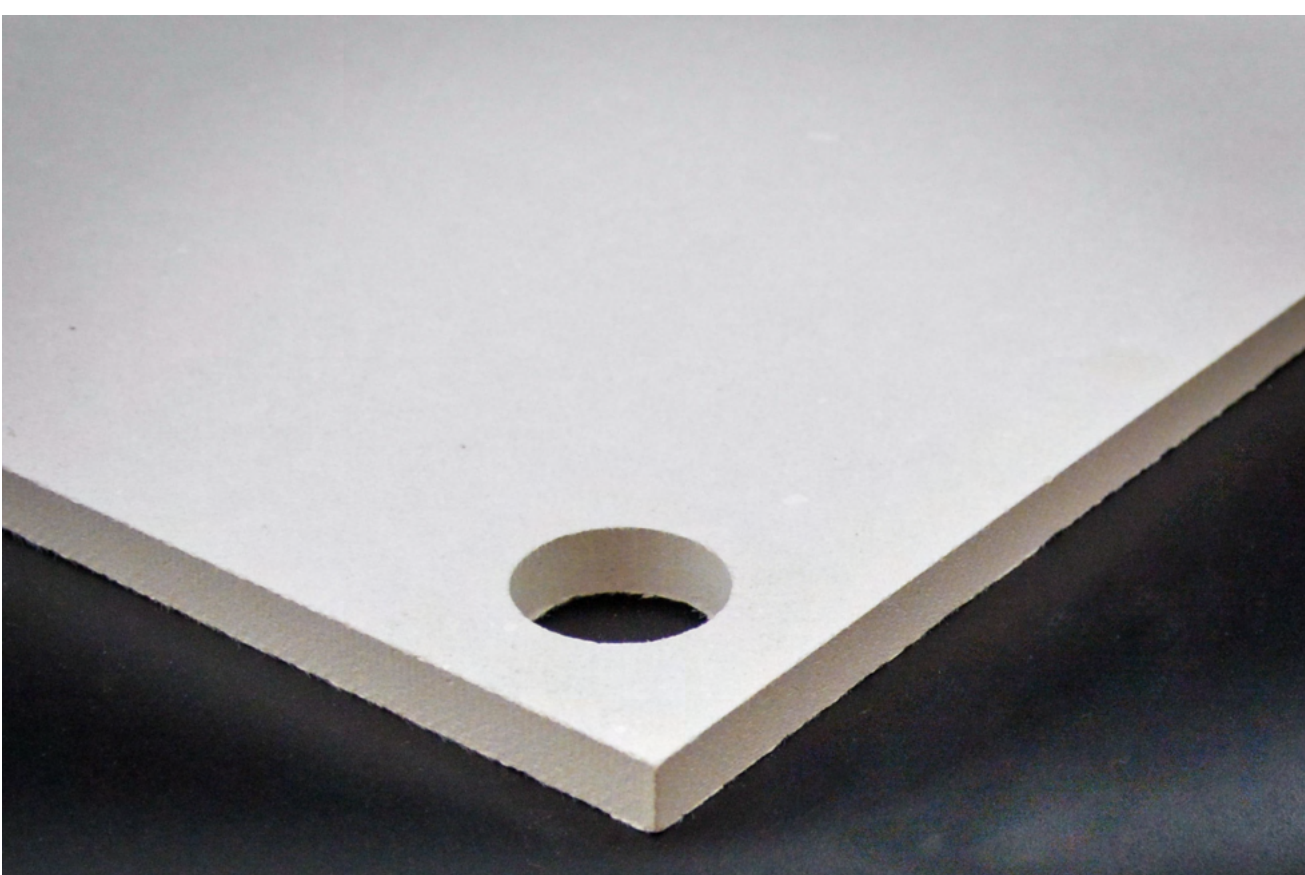
### APPLICATIONS

- Heat protection and load-bearing pipe columns
- Dryer, ventilation and air-conditioning structural insulation
- Furnace construction and induction-furnace structural parts
- Machine and apparatus construction precision parts
- Platen-press and oven/drier wall cladding
- Heat shields, thermal breaks and furnace bottoms

### TECHNICAL PROPERTIES · 5 GRADES

Property	HD L23	HD150	HD280	HDT1000	HD850
Colour	White	White	White	White	White
Classification temperature °C	350	900	1,000	1,000	1,000
Bulk density kg/m <sup>3</sup>	1,800	750	950	1,400	900
Cold compressive strength MPa	85	15	28	55	18
Bending strength MPa	32	7	10	16	8
Hardness Shore D	55	—	—	—	—
Shrinkage @ CT 12 h %	0.5	0.4	0.4	0.25	0.20

THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.5	0.16	0.28	0.56	0.20
at 400 °C	—	0.19	0.30	0.54	0.22
at 600 °C	—	0.20	0.31	0.52	0.24
at 800 °C	—	0.22	0.32	0.49	0.28



HD · 900-C45

## High Density CaSi for Molten Aluminium

Five grades — HD900 · HD1000 · Z140 · M-1000 · C45 — non-wetting, machinable

PAGE 17  
FAMILY 02 / 06

Wedge high-density Calcium Silicate Boards specified for direct contact with molten aluminium — transfer ladles, casting and holding launders, spouts, floats and hot-top ring headers. Low thermal conductivity and low heat capacity transfer aluminium with minimal temperature drop; excellent machinability allows variety of geometries.

<b>SERVICE TEMPERATURE</b> <b>1,000</b> °C all grades	<b>BULK DENSITY</b> <b>800 – 1,000</b> kg/m <sup>3</sup>	<b>BENDING STRENGTH</b> <b>7 – 12</b> MPa
--	---	--

### FEATURES & ADVANTAGES

- Non-wetting to molten aluminium — zero metal stickage
- Low heat capacity — minimal temperature drop in transfer
- Excellent machinability for floats, spouts, hot-top rings
- Energy savings in holding-furnace linings
- Low oil absorption; low out-gassing in metal contact
- Asbestos-free, dust-free surface

### APPLICATIONS

- Molten aluminium transfer & holding launders
- Float, spout and stopper-pin geometry
- Hot-top ring headers and float plates
- Holding furnace working lining for low-energy die cast
- Tundish gates and bushing rings
- Casting machine transition plates

### TECHNICAL PROPERTIES · 5 GRADES

Property	HD900	HD1000	Z140	M-1000	C45
Colour	White	White	White	White	White
Classification temperature °C	1,000	1,000	1,000	1,000	1,000
Bulk density kg/m <sup>3</sup>	860	1,000	840	800	1,000
Cold compressive strength MPa	19	28	1% @2.3	1% @2.7	> 30
Bending strength MPa	7	12	8.8	9.3	> 8
Hardness Shore D	—	55	68	64	64
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.24	0.25	0.2	0.19	0.25
at 400 °C	0.25	0.26	0.2	0.2	0.26
at 600 °C	0.25	0.28	0.2	0.2	0.27
at 800 °C	0.27	0.29	0.2	0.2	0.27



CMA · C18 · CCG4 · WL100

## Graphite Reinforced CaSi Boards

Four grades — W-CMA · W-C18 · W-CCG4 · WL-101 — graphite + CaSi composite

PAGE 18  
FAMILY 02 / 06

Wedge graphite-reinforced boards combine graphite's mechanical properties with calcium silicate's thermal stability to deliver very high load-carrying capacity, very low shrinkage and low out-gassing in molten-metal contact. After contact with aluminium there is almost zero stickage and reduced oxide transport into the cast.

<b>CLASSIFICATION TEMP.</b> <b>850 – 1,000 °C</b>	<b>COMPRESSIVE STRENGTH</b> <b>16 – 24 MPa</b>	<b>GRAPHITE CONTENT</b> <b>4 – 8 %</b>
--	---	---

### FEATURES & ADVANTAGES

- Very low shrinkage on first heat cycle
- Less oil absorption than standard CaSi
- Less out-gassing in molten-metal contact
- High non-wetting to molten metal
- Excellent machinability — improved toughness
- Reduced oxide transport into the cast part

### APPLICATIONS

- Transfer & transport launders and ladles
- Bushings and hot-top rings
- Transition plates, tips, snouts, filter boxes
- Head boxes, headers, floats and spouts
- Tundish refractory components
- Casting-machine wear-contact parts

### TECHNICAL PROPERTIES · 4 GRADES

Property	W-CMA	W-C18	W-CCG4	WL-101
Classification temperature °C	1,000	850	1,000	1,000
Bulk density kg/m <sup>3</sup>	1,040	816–818	1,100–1,150	800
Cold compressive strength MPa	17	16	22–24	1% @2.7
Bending strength MPa	9.5	8	10–11	9.3
Hardness Shore D	—	60	65–70	64
<b>THERMAL CONDUCTIVITY (W/M·K)</b>				
at 200 °C	0.2	0.2	—	0.19
at 400 °C	0.2	0.2	0.64–1.2	0.2
at 600 °C	0.21	0.21	0.52–0.92	0.2
at 800 °C	0.22	0.22	0.37–0.62	0.2
<b>COMPOSITION</b>				
Calcium silicate %	82–85	82–85	90–95	82–85
Graphite %	4–8	4–8	—	4–8



## Wollastonite Calcium Silicate Boards

Single grade — refractory mineral fibres + CaSi bonded with high-temperature clays

HSI 1200 are Calcium-Silicate based Refractory Insulation Boards made of high-quality refractory mineral fibres and calcium silicate bonded with high-temperature clays. They combine compressive strength, high-temperature electrical resistance and excellent fire resistance — for furnace backup insulation, high-temperature gasketing and electrical seals.

<b>CLASSIFICATION TEMP.</b> <b>1,200 °C</b>	<b>λ @ 600 °C</b> <b>0.17 W/m·K</b>	<b>COMPRESSIVE STRENGTH</b> <b>8 – 10 MPa</b>
--	--	--

### FEATURES & ADVANTAGES

- Very strong boards with high compressive strength
- High-temperature resistance up to 1,200 °C
- Low thermal conductivity at high temperatures
- High electrical resistance at elevated temperature
- High fire resistance and heat-shield properties
- Easy to cut, punch and machine; pipe sections available

### APPLICATIONS

- Ladle & tundish insulation
- Lime kiln and cement kiln insulation
- High-temperature gaskets, seals and washers
- Boiler, furnace, dryer and oven insulation
- Oil & gas burner insulation
- Pipe & duct insulation; metal-clad gasket fillers
- Stainless-steel plant rollers; fire-resistant doors and safes

### TECHNICAL PROPERTIES

Property	Value
Base materials	Calcium Silicate + Refractory Fibre
Classification temperature °C	1,200
Density kg/m³	1,000
<b>THERMAL CONDUCTIVITY (W/M·K)</b>	
at 400 °C	0.15
at 600 °C	0.17
at 800 °C	0.18
<b>MECHANICAL &amp; OTHER</b>	
Tensile strength MPa	5
Flexural strength MPa	6
Shrinkage @ 1,000 °C %	< 1
Compressive strength MPa	8–10
Loss on Ignition %	7



## Wollastonite Calcium Silicate Boards

Single grade — wollastonite fibres + CaSi for backup insulation & fire protection

HSI 1100 are calcium-silicate and wollastonite-fibre based boards ideal for backup insulation, fire protection, fire doors, electrical appliances and arc-resistant applications. Combine high compressive strength, low conductivity and excellent fire resistance for general industrial backup insulation duties.

<b>CLASSIFICATION TEMP.</b> <b>1,000 °C</b>	<b>λ @ 600 °C</b> <b>0.12 W/m·K</b>	<b>COMPRESSIVE STRENGTH</b> <b>8 – 10 MPa</b>
--	--	--

### FEATURES & ADVANTAGES

- Very strong boards with high compressive strength
- High-temperature resistance up to 1,100 °C
- Low thermal conductivity at high temperatures
- High electrical resistance at elevated temperature
- High fire resistance and heat-shield properties
- Easy to cut, punch and machine

### APPLICATIONS

- Backup insulation in furnaces, dryers and kilns
- Fire-rated doors, lifts, safes and cupboards
- Electrical home appliance heat-shield gaskets
- Duct fire protection and pipe insulation
- High-temperature gasketing and seals
- Electrical-arc resistant applications

### TECHNICAL PROPERTIES

Property	Value
Base materials	Wollastonite fibres + Calcium Silicate
Classification temperature °C	1,000
Density kg/m³	1,000
<b>THERMAL CONDUCTIVITY (W/M·K)</b>	
at 400 °C	0.11
at 600 °C	0.12
at 800 °C	0.14
<b>MECHANICAL &amp; OTHER</b>	
Tensile strength MPa	5
Flexural strength MPa	6
Shrinkage @ 1,000 °C %	< 1
Compressive strength MPa	8-10
Loss on Ignition %	8



RIMB · 1000-1260A

## High-Temperature Millboards & Gaskets

Three grades — RIMB 1000A · 1100A · 1260A — wollastonite, CaSi & rockwool mix

Wedge RIMB are refractory-grade insulation millboards, gaskets and seals made from wollastonite, calcium-silicate and rockwool fibres bonded with high-temperature clays. Used for furnace backup insulation, high-temperature gasketing, expansion joints and wet-mouldable pipe insulation.

<b>CLASSIFICATION TEMP.</b> <b>1,000 – 1,260 °C</b>	<b>λ @ 600 °C</b> <b>0.12 – 0.13 W/m·K</b>	<b>COMPRESSION STRENGTH</b> <b>8 – 12 MPa</b>
--	---	--

### FEATURES & ADVANTAGES

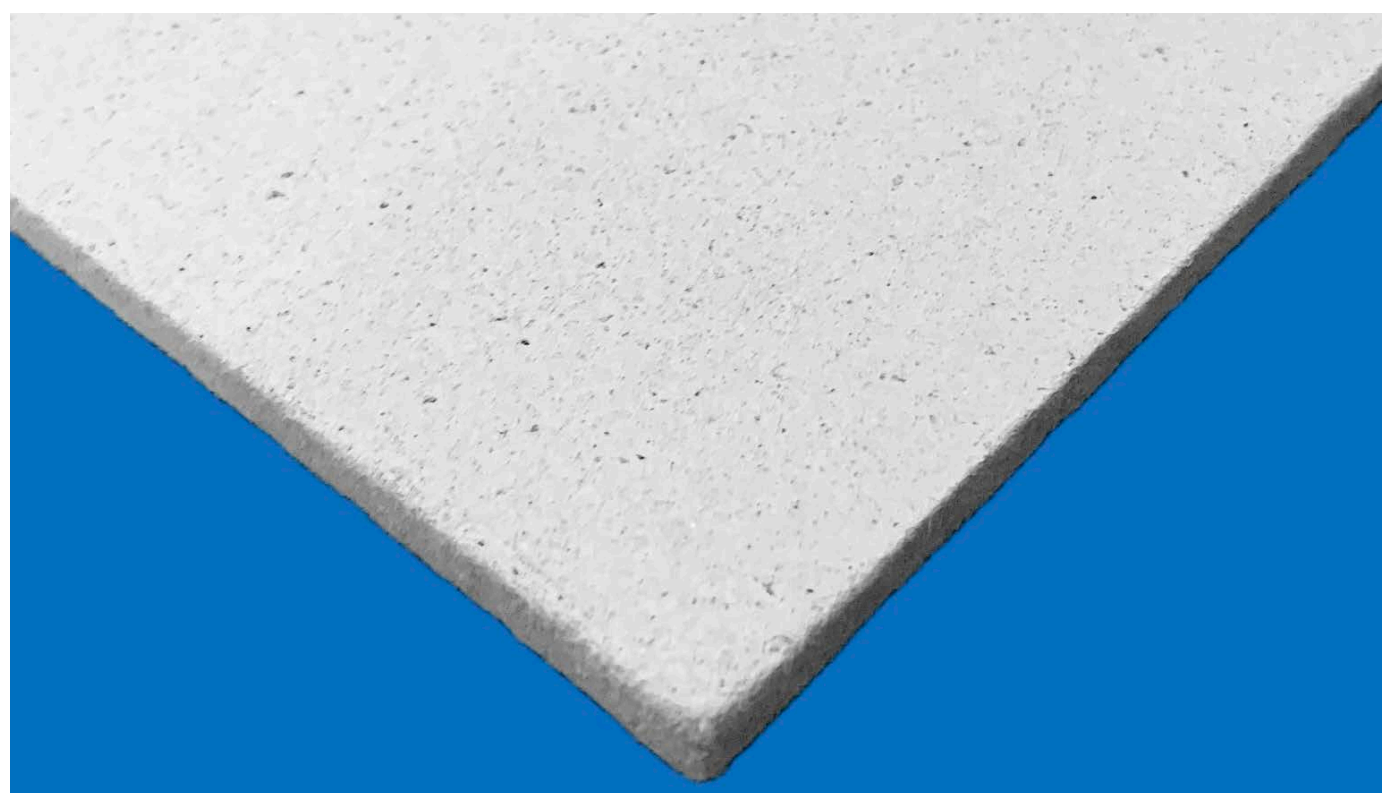
- Strong boards with high compressive strength
- High-temperature resistance 1,000-1,260 °C
- Very low thermal conductivity at high temperatures
- High electrical resistance at elevated temperature
- Easy to cut and punch; wet-mouldable for pipe insulation
- High fire resistance and heat-shield properties

### APPLICATIONS

- Ladle & tundish high-temperature gaskets
- Lime and cement kiln backup insulation
- Refractory expansion joints
- Boiler, oven and burner insulation
- Stainless-steel plant rollers insulation
- Fire-resistant doors, lifts and safes

### TECHNICAL PROPERTIES · 3 GRADES

Property	RIMB 1000A	RIMB 1100A	RIMB 1260A
Colour	Brown / White	Buff	White
Classification temperature °C	1,000	1,100	1,260
Density kg/m <sup>3</sup>	1,000	1,000	1,000
<b>THERMAL CONDUCTIVITY (W/M·K)</b>			
at 400 °C	0.11	0.12	0.11
at 600 °C	0.12	0.13	0.12
at 800 °C	0.14	0.14	0.13
<b>MECHANICAL &amp; OTHER</b>			
Electrical resistance Ω×10 <sup>9</sup> /cm <sup>2</sup>	7.9	4.2	2.4
Tensile strength MPa	5	5	5
Flexural strength MPa	7	6	6
Shrinkage @ 1,000 °C %	2	1.8	1.6
Compression strength MPa	8	12	12



FP1000 · SP1150

## High Density CaSi Fireproof Boards

Two grades — FP1000 · SP1150 — asbestos-free fire boards for structural protection

PAGE 22  
FAMILY 02 / 06

FP1000 and SP1150 are high-temperature fireproof CaSi-based boards manufactured from cement, calcium silicate and asbestos-free minerals. Large-sized, easy to handle, with high acoustic insulation, humidity tolerance and fire rating up to 240 minutes for 10 mm thick — for structural steel protection, fire doors and timber-floor fire upgrades.

<b>SERVICE TEMPERATURE</b> <b>100 – 1,200</b> °C short-term	<b>FIRE RATING @ 10 MM</b> <b>120 – 240</b> minutes	<b>FIRE CLASSIFICATION</b> <b>A1</b> Non-combustible
--	--	---

### FEATURES & ADVANTAGES

- Fire rating up to 240 minutes at 10 mm thickness
- Short-term temperature resistance up to 1,200 °C
- Continuous operating temperature up to 450 °C
- Service life beyond 15 years
- Good thermal and acoustic insulation
- Unaffected by humidity; asbestos-free mineral construction

### APPLICATIONS

- Structural steel fire protection
- Self-supporting ceilings and access panels
- Industrial furnace and apparatus construction
- Fire-door manufacturing (FD30 / FD60 / FD120 / FD240)
- Timber-floor fire upgrades
- Steel duct cladding, smoke barriers, parapet walls

### TECHNICAL PROPERTIES · 2 GRADES

Property	FP1000	SP1150
Colour	White / Grey	White / Light Brown
Short-term service temperature °C	1,200	1,000
Classification temperature °C	400	100
Density kg/m <sup>3</sup>	880–900	1,150
<b>THERMAL CONDUCTIVITY (W/M·K)</b>		
at 20 °C	0.16	0.18
at 100 °C	0.18	—
at 200 °C	0.20	—
<b>MECHANICAL &amp; FIRE</b>		
Tensile strength MPa	5	4
Flexural strength MPa	8	8
Compression strength MPa	10	8
Fire rating (10 mm thick) min	240	120
Building material class	A1 Non-combustible	A1 Non-combustible
Sheet size mm	2,500 × 1,220	2,500 × 1,220
Thickness mm	4–30	4–30



HDSP450

## Calcium Silicate Sandwich Panel

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

PAGE 24  
FAMILY 03 / 06

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.

<b>CLASSIFICATION TEMP.</b> <b>450</b> °C continuous	$\lambda$ <b>0.16</b> W/m·K	<b>COMPRESSIVE STRENGTH</b> <b>9.3</b> N/mm <sup>2</sup>
---	--------------------------------	---

### 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/m <sup>3</sup>	870
Compressive strength N/mm <sup>2</sup>	9.3
Thermal conductivity $\lambda$ W/m·K	0.16

### STANDARD SIZES

Length x Width mm	2,440 x 1,220
Thickness mm	6, 8, 9, 10, 12, 15, 20, 25

**Calcium Silicate Mineral Wool Sandwich Panel**

- Size: 2440 x 1220 x 75 mm
- Core: Mineral Wool (Rock Wool)
- Facing: Calcium Silicate Board
- High Fire Resistance
- Thermal & Acoustic Insulation
- Durable & Eco-friendly

FIRE RESISTANT

THERMAL INSULATION

ACOUSTIC INSULATION

ECO FRIENDLY

DURABLE PERFORMANCE

HDRW · 850

## High Density Mineral Wool Boards

Single grade — refractory-grade rigid mineral wool board for fire & furnace applications

PAGE 55  
FAMILY 05 / 06

Wedge HDRW 850 are refractory-grade rigid mineral-wool boards bonded with high-temperature clays for fire-door, heat-shield and furnace backup duty. High compressive strength, high electrical resistance and 60–120 minute fire rating depending on thickness.

<b>CLASSIFICATION TEMP.</b> <b>850</b> °C	<b>λ @ 600 °C</b> <b>0.11</b> W/m·K	<b>FIRE RATING @ 10 MM</b> <b>120</b> minutes
--	--	--

### FEATURES & ADVANTAGES

- Strong rigid boards with high compressive strength
- High-temperature resistance up to 850 °C
- Very low thermal conductivity at high temperatures
- High electrical resistance at elevated temperature
- Easy to cut, laminate and punch
- Wet-mouldable for pipe insulation

### APPLICATIONS

- Fire-rated doors and lift doors
- Heat-shield and thermal protection
- Fire-protection systems
- Lime kiln and cement kiln insulation
- Boiler, furnace, dryer and oven insulation
- Refractory insulation expansion joints

### TECHNICAL PROPERTIES

Property	Value
Colour	Light Brown
Classification temperature °C	850
Density kg/m <sup>3</sup>	950
<b>THERMAL CONDUCTIVITY (W/M·K)</b>	
at 400 °C	0.10
at 600 °C	0.11
at 800 °C	0.12
<b>MECHANICAL &amp; FIRE</b>	
Fire resistance @ 10 mm min	120
Fire resistance @ 5 mm min	60
Tensile strength MPa	3.5
Shrinkage @ 1,000 °C %	2
Compression @ 70 kg/cm <sup>2</sup>	15



## Cement Silicate Engineering Boards

Seven grades — H91-WI · H91-WUK · L21 · HD280 · HDT800 · HD900 · FP1000

Syndanio boards are high-strength, machinable engineering boards for demanding heat and electrical insulation in induction furnaces, billet-heater boxes, oven cladding, cathode support pads and structural insulation. H91 is the industry standard for high-temperature insulation and structural insulation boards.

<b>OPERATING TEMP.</b> <b>250 – 1,000 °C</b>	<b>λ @ 100 °C</b> <b>0.18 – 0.5 W/m·K</b>	<b>COMPRESSIVE STRENGTH</b> <b>14 – 96 MPa</b>
---	--	---

### FEATURES & ADVANTAGES

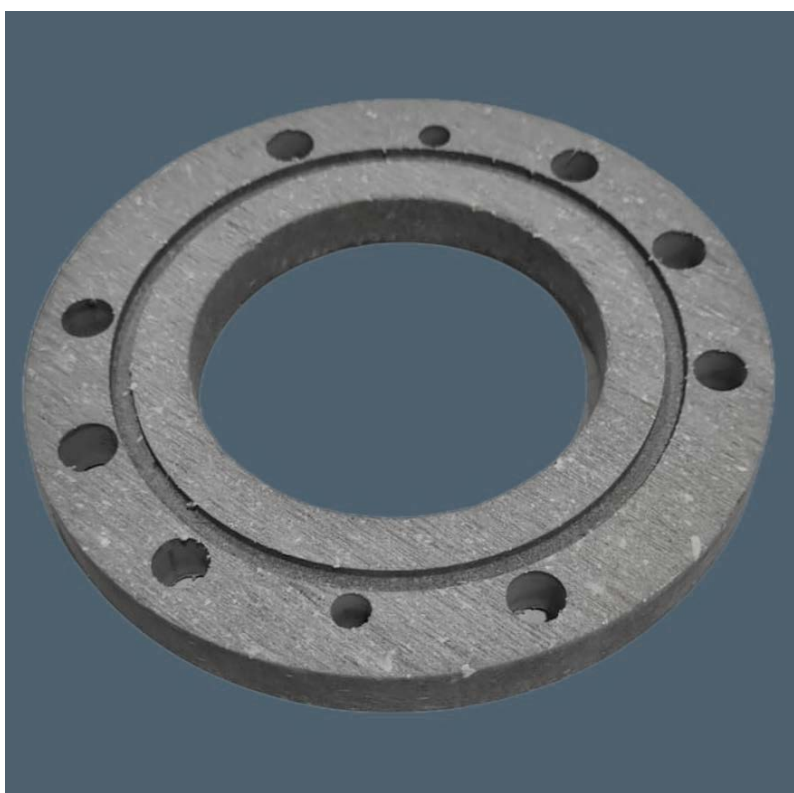
- Up to 96 MPa compressive strength — true engineering board
- Machinable to precision tolerances
- High electrical strength up to 50 kV/mm
- Multi-grade range for varied operating temperature
- Asbestos-free mineral construction
- Available in 7 grades from 250 °C to 1,200 °C

### APPLICATIONS

- Induction-furnace billet-heater boxes
- Oven cladding and structural insulation
- Cathode support pads for electrolytic cells
- Heat and electrical insulation in smelters
- Apparatus construction structural parts
- Press platens and laminating tooling

### TECHNICAL PROPERTIES · 7 GRADES

Property	H91-WI	H91-WUK	L21	HD 280	HDT800	HD900	FP1000
Density kg/m <sup>3</sup>	1,750	1,610	1,730	1,000	1,750	860	1,000
Operating temperature °C	385	700	250	1,000	800	1,000	650
Short-term temperature °C	850	850	350	1,400	1,100	1,200	1,250
<b>THERMAL CONDUCTIVITY (W/M·K)</b>							
at 100 °C	0.5	0.5	0.5	0.18	0.37	0.22	0.18
at 150 °C	—	—	—	0.26	0.42	0.24	0.27
at 300 °C	—	—	—	0.28	0.47	0.26	0.38
<b>MECHANICAL</b>							
Compressive strength MPa	85	96	85	28	30	19	14
Flexural strength MPa	25	30	28	10	32	7	8
Linear shrinkage @ 350 °C %	0.4	0.4	0.21	—	0.18	—	0.25



## Vermiculite Boards & Designs

Four grades — VC450 · VC600 · VC700 · VC900 — exfoliated vermiculite boards

Wedge W-VCL vermiculite insulating boards are manufactured from exfoliated vermiculite and inorganic binders — free of asbestos and organic substances. Aluminium-magnesium layer silicate bloated to ultra-lightweight granulate through heating, then compression-moulded to boards, bricks and shapes for industrial furnace construction.

<b>SERVICE TEMPERATURE</b> <b>1,100 – 1,150 °C</b>	<b>λ @ 200 °C</b> <b>0.14 – 0.19 W/m·K</b>	<b>COMPRESSIVE STRENGTH</b> <b>2.5 – 6.3 MPa</b>
---	---	---

### FEATURES & ADVANTAGES

- High thermal-shock resistance — hot-face capable
- Fireproof, non-combustible A1
- No smoke nuisance during heating
- Low thermal conductivity; high electrical resistance
- Resistant to CO and CH<sub>4</sub> atmosphere
- Non-wetting to fluid aluminium, kryolite and fluoride

### APPLICATIONS

- Industrial furnace construction for thermal insulation
- Hot-face directly in the furnace and backup insulation
- Aluminium melting furnace, steel ladle, tundish
- Torpedo-ladle and glass-melting backup insulation
- Night storage heaters, boilers, hearths
- Fireplace linings and hot stoves

### TECHNICAL PROPERTIES · 4 GRADES

Property	VC450	VC600	VC700	VC900
Colour	Brown	Brown	Brown	White / Brown
Service temperature °C	1,100	1,100	1,100	1,150
Bulk density kg/m <sup>3</sup>	450–475	600	700–800	900
Porosity %	81	76	74	57
Cold compressive strength MPa	2.5	4.2	4.5	6.3
Thermal shock resistance cycles	> 10	> 10	> 10	> 8
Flexural strength MPa	0.6–0.8	1.6	2.0	2.1

THERMAL CONDUCTIVITY (W/M·K)				
at 25 °C	0.048	0.056	0.058	0.056
at 200 °C	0.14	0.16	0.19	0.18
at 400 °C	0.17	0.18	0.20	0.19
at 800 °C	0.21	0.22	0.22	0.23



## Fire-Resistant Vermiculite Boards

Compression-moulded vermiculite + binder for fire-rated wall, door & chimney lining

Wedge MagSil fire-resistant vermiculite boards are compressed expanded-vermiculite with a special binder that enhances fire resistance. Withstand up to 1,200 °C with fire ratings from 60 to 240 minutes depending on thickness. Used as fire barriers for fireplaces, chimneys, wood stoves and other high-temperature wall constructions.

<p><b>SERVICE TEMPERATURE</b> <b>Up to 1,200 °C</b></p>	<p><b>FIRE RATING</b> <b>60 – 240</b> minutes</p>	<p><b>STABILITY</b> <b>Chemically stable</b> Lightweight</p>
---	---	--

### FEATURES & ADVANTAGES

- High-temperature resistance up to 1,200 °C+
- Fire rating 60–240 minutes by thickness
- Thermal insulation plus structural fire protection
- Lightweight despite high temperature rating
- Chemically stable and corrosion-resistant
- Customisable sizes and thicknesses

### APPLICATIONS

- Fireplace linings and inserts
- Wood-stove and pellet-stove surrounds
- Chimney and flue linings
- Fire-rated wall partitions
- Heat-shield for combustion appliances
- Decorative fire-protection panels

### TECHNICAL PROPERTIES

Property	Value
Service temperature °C	Up to 1,200
Fire rating range minutes	60 / 90 / 120 / 180 / 240
Construction	Expanded vermiculite + binder
Fire resistance role	Barrier — prevents flame & heat spread
Chemical stability	Corrosion-resistant
Customisation	Sizes and thicknesses to specification
Asbestos / organics	Free of asbestos and organic substances



— CLOSE

# Specify Wedge.

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

HEADQUARTERS

## Delhi NCR

Galleria Tower, 6th Floor  
DLF Phase 4 · Gurugram 122002  
Haryana, India

SALES

## Commercial

info@wedge-india.com  
+91 9717506848  
M–F · 09:00–18:00 IST

ENGINEERING

## Technical

info@wedge-india.com  
Heat-loss · specification  
Drawing review · audits

REGIONAL

## Network

Dubai · Singapore · Houston  
Rotterdam · Shanghai  
www.wedge-india.com



# Wedge India

[info@wedge-india.com](mailto:info@wedge-india.com) | [www.wedgeinsulation.com](http://www.wedgeinsulation.com)

[Request a Quote / Consultation](#)

