

FAMILY 04 — MICROPOROUS

Microporous

Fumed-silica microporous boards, blankets, slated panels and hydrophobic grades — the thinnest practical hot-face backup insulation, with conductivity below still-air at high temperatures.

TEMPERATURE RANGE	CONDUCTIVITY	PRODUCTS	STANDARDS
800 → 1,260 °C	0.021 → 0.062 W/m·K	8	Non-combustible A1

IN THIS FAMILY

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FSMP-OS · 900–1200HD

Microporous Overstitched Blanket

Five grades — FSMP-OS 1200 · 1000S · 1000T · 900 · 1200HD — flexible pipe-insulation blanket

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FSMP Overstitched are low-density high-performance microporous blankets for pipe insulation. Manufactured by mixing fumed silica agglomerates with opacified pyrogenic silica and filament reinforcement, available with glass-fibre, glass-cloth or aluminium encapsulation coverings. Conductivity below still-air at high temperatures cuts heat loss by 4×.

CLASSIFICATION TEMP. 900 – 1,200 °C	λ @ 400 °C 0.022 – 0.038 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

- Very high insulation — λ below still air
- Reduces insulation thickness by up to 4×
- Reduced heat loss and lower shell temperatures
- Energy cost savings and productivity gains
- Non-combustible A1 classification
- Multiple covering options for pipe-work

APPLICATIONS

- Petrochemical pipe insulation
- Concentrated solar thermal power
- General pipe insulation
- Glass, cement and ceramics industry
- Refineries and oil & gas
- Fuel cells and thermal-battery insulation

TECHNICAL PROPERTIES · 5 GRADES

Property	OS 1200	OS 1000S	OS 1000T	OS 900	OS 1200HD
Strength	High	Medium	High	Low	Very High
Colour	Grey	Grey	Brown	Grey	Grey
Density kg/m³	280–320	300–320	320	240–280	360–480
Classification temperature °C	1,200	1,000	1,000	900	1,200
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.023	0.022	0.021	0.022	0.032
at 400 °C	0.024	0.024	0.022	0.025	0.038
at 600 °C	0.026	0.028	0.028	0.032	0.045
at 800 °C	0.029	0.033	0.031	0.038	0.062
STANDARD SIZES					
Length × Width mm	1,000 × 500				
Thickness mm	3, 5, 6, 7, 8, 10, 12, 15, 20, 25				



FSMP-QF · 900–1200HD

Microporous Quilted Blanket

Five grades — FSMP-QF 1200 · 1000S · 1000T · 900 · 1200HD — 25×25 mm stitched blocks

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FSMP Quilted are microporous blankets stitched with 25×25 mm small blocks to provide flexibility for smaller-diameter pipes. Same fumed-silica core as Overstitched but with finer flexibility for tight bends and small fittings. Variety of coverings — glass-cloth, ceramic paper, mica, millboard, steel.

CLASSIFICATION TEMP. 900 – 1,200 °C	Λ @ 400 °C 0.022 – 0.038 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

- 25 × 25 mm quilting — flexible around small-radius pipes
- Conductivity below still-air at temperature
- Reduces insulation thickness by up to 4×
- Non-combustible A1
- Wide covering options for installation
- Same fumed-silica core as Overstitched

APPLICATIONS

- Small-diameter petrochemical piping
- Concentrated solar receiver tubing
- General process pipe insulation
- Glass and ceramics industry pipework
- Refineries and oil & gas tubing
- Fuel-cell stack and thermal-battery insulation

TECHNICAL PROPERTIES · 5 GRADES

Property	QF 1200	QF 1000S	QF 1000T	QF 900	QF 1200HD
Strength	High	Medium	High	Low	Very High
Colour	Grey	Grey	Brown	Grey	Grey
Density kg/m³	280–320	300–320	320	240–280	360–480
Classification temperature °C	1,200	1,000	1,000	900	1,200
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.028	0.024	0.021	0.022	0.032
at 400 °C	0.032	0.026	0.022	0.025	0.038
at 600 °C	0.036	0.030	0.028	0.032	0.045
at 800 °C	0.039	0.036	0.031	0.038	0.062



Microporous Slated Panel

Five grades — FSMP-SF 1200 · 1000S · 1000T · 900 · 1200HD — slated for one-dimensional pipe wrap

FSMP Slated are slated microporous panels stitched with high-temperature ceramic cloths covering fumed-silica microporous blocks. The slats give one-dimensional flexibility — ideal for wrapping cylindrical pipes and ducts without folds or compression artefacts.

CLASSIFICATION TEMP. 900 – 1,200 °C	Λ @ 400 °C 0.022 – 0.038 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

- Slated construction — true cylindrical wrap
- No fold compression at the inner radius
- Conductivity below still-air at temperature
- Reduces insulation thickness by up to 4×
- Non-combustible A1 classification
- Multiple ceramic-cloth covering options

APPLICATIONS

- Pipe and duct insulation
- Petrochemical, refinery and oil & gas
- Concentrated solar thermal power
- Glass and cement industry
- Fuel cells and thermal batteries
- Combustion-gas exhaust lines

TECHNICAL PROPERTIES · 5 GRADES

Property	SF 1200	SF 1000S	SF 1000T	SF 900	SF 1200HD
Strength	High	Medium	High	Low	Very High
Density kg/m³	280–320	300–320	320	240–280	360–480
Classification temperature °C	1,200	1,000	1,000	900	1,200
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.028	0.024	0.021	0.022	0.032
at 400 °C	0.032	0.026	0.022	0.025	0.038
at 800 °C	0.039	0.036	0.031	0.038	0.062



FSMP 1000S HD

High Strength Microporous Board

Three grades — FSMP 1200 HD · 1000S HD · 1260 HD — high-density structural microporous

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Wedge FSMP HD high-strength microporous boards are manufactured by mixing fumed-silica agglomerates with selective opacifiers and filaments at very specific pressures. Highest-possible porosity and density combine to deliver conductivity lower than still air at high temperatures, with high compressive strength up to 0.78 MPa.

CLASSIFICATION TEMP. 1,050 – 1,260 °C	Λ @ 400 °C 0.024 – 0.038 W/m·K	COMPRESSIVE STRENGTH 0.55 – 0.78 MPa
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FEATURES & ADVANTAGES

- Conductivity lower than still air at high temperature
- Reduces insulation thickness by 4×
- Reduced heat loss and lower shell temperatures
- Energy cost savings and productivity gains
- Non-combustible A1 classification
- High compressive strength for structural applications

APPLICATIONS

- Furnace back-up insulation
- Steel and aluminium industry
- Glass, cement and ceramics industry
- Petrochemical industry
- Fuel cells and thermal-battery insulation
- Structural insulation under refractory castables

TECHNICAL PROPERTIES · 3 GRADES

Property	FSMP 1200 HD	FSMP 1000S HD	FSMP 1260 HD
Strength	High	Medium	Very High
Colour	Grey	Grey	Grey
Density kg/m³	300–320	280–300	360–480
Classification temperature °C	1,200	1,050	1,260
Compressive strength @ 10 % MPa	0.78	0.74	0.55
THERMAL CONDUCTIVITY (W/M·K)			
at 200 °C	0.023	0.022	0.032
at 400 °C	0.024	0.024	0.038
at 600 °C	0.030	0.028	0.045
at 800 °C	0.032	0.032	0.062



Standard Microporous Board

Five grades — FSMP 1200 · 1000S · 1000T · 900AL · 1260HD — standard microporous board

Wedge FSMP standard microporous boards are the workhorse of the range — fumed-silica with opacifier and filament reinforcement, pressed for optimum porosity. Multiple covering options (plastic, ceramic paper, aluminium foil, glass cloth, mica, millboard) and a wide range of dimensions for back-up insulation in furnaces, kilns and pipework.

CLASSIFICATION TEMP. 900 – 1,260 °C	Λ @ 400 °C 0.022 – 0.038 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

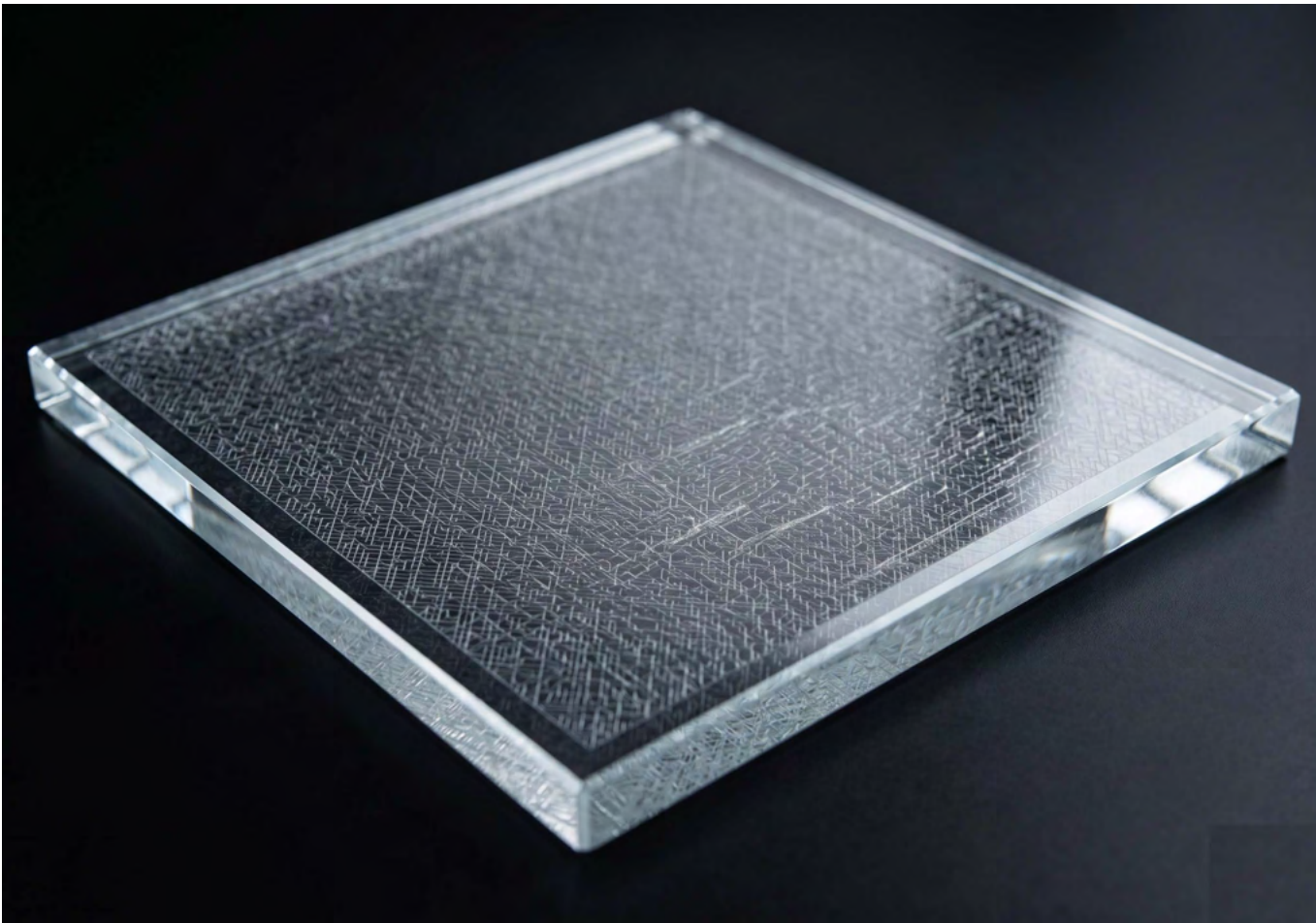
- Five strength / temperature grades
- Conductivity below still air at high temperature
- Reduces insulation thickness by 4×
- Non-combustible A1 classification
- Multiple covering options
- Wide range of sheet sizes and thicknesses

APPLICATIONS

- Furnace back-up insulation
- Steel and aluminium industry
- Glass, cement and ceramics industry
- Petrochemical industry
- Fuel cells and thermal batteries
- Pipework backup insulation

TECHNICAL PROPERTIES · 5 GRADES

Property	FSMP 1200	FSMP 1000S	FSMP 1000T	FSMP 900AL	FSMP 1260HD
Strength	High	Medium	High	Low	Very High
Colour	Light Grey	Light Grey	Light Brown	Light Grey	Light Grey
Density kg/m³	300–320	280–300	320	240–280	360–480
Classification temperature °C	1,200	1,050	1,150	900	1,260
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.023	0.022	0.021	0.022	0.032
at 400 °C	0.024	0.023	0.022	0.025	0.038
at 600 °C	0.030	0.028	0.028	0.032	0.045
at 800 °C	0.032	0.031	0.031	0.038	0.062
SIZES					
Length mm	250, 300, 500, 610, 1,000, 1,100, 1,200				
Thickness mm	5–100				



FSMP-HEC · 800–1260

Microporous Ceramic-Cloth Panel

Five grades — HEC 1260 · 1100S · 1100T · 800 · 1200HD — high-temperature glass-cloth covered

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FSMP-HEC are microporous panels covered with high-temperature resistant glass cloth for longer life, easy handling and reduced heat loss in internal and external insulation. Fumed-silica core with multi-grade covering for furnace, turbine, pipe insulation, tunnel duct work and cable protection.

CLASSIFICATION TEMP. 800 – 1,260 °C	Λ @ 400 °C 0.022 – 0.038 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

- Glass-cloth covering for handling and durability
- Conductivity below still air at high temperature
- Thin profile saves space
- Reduces insulation thickness by 4×
- Non-combustible A1 classification
- Wide range of covering and thickness options

APPLICATIONS

- Furnace, turbine and pipe insulation
- Tunnel duct and roof/wall/door insulation
- Cable protection heat shields
- Concentrated solar thermal power
- Glass, cement and ceramics industry
- Cable trays and busbar protection

TECHNICAL PROPERTIES · 5 GRADES

Property	HEC 1260	HEC 1100S	HEC 1100T	HEC 800	HEC 1200HD
Strength	High	Medium	High	Low	Very High
Density kg/m³	280–320	240–260	320	220–260	360–480
Classification temperature °C	1,200	1,050	1,100	800	1,200
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.023	0.022	0.021	0.022	0.032
at 400 °C	0.024	0.024	0.022	0.025	0.038
at 800 °C	0.029	0.033	0.031	0.038	0.062



Hydrophobic Microporous Board

Five grades — HY 1200 · 1000S · 1100T · 900 · 1200HD — water-repellent microporous panel

Wedge water-repellent microporous insulation panels are hydrophobic-grade boards for applications where contact with liquid water or condensation is possible. Designed for back-up of refractory castable or pipes where water penetration risk is high. Free of organic binders and environmentally friendly.

CLASSIFICATION TEMP. 900 – 1,200 °C	Λ @ 400 °C 0.022 – 0.038 W/m·K	HYDROPHOBIC Yes Free of organic binders
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FEATURES & ADVANTAGES

- Hydrophobic base — very high water repellency
- Conductivity below still air at high temperature
- Thin insulation saves space
- Reduces insulation thickness by 4×
- Non-combustible A1 classification
- Environmentally friendly, free of organic binders

APPLICATIONS

- Furnace back-up insulation behind castable refractory
- Pipework where water penetration risk is high
- Steel and aluminium industry
- Glass, cement and ceramics industry
- Petrochemical industry
- Fuel cells and thermal batteries

TECHNICAL PROPERTIES · 5 GRADES

Property	HY 1200	HY 1000S	HY 1100T	HY 900	HY 1200HD
Strength	High	Medium	High	Low	Very High
Colour	White	White	White	White	White
Density kg/m³	280–320	260–300	320	235–265	360–480
Classification temperature °C	1,200	1,050	1,100	900	1,200
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.023	0.022	0.021	0.022	0.032
at 400 °C	0.024	0.024	0.022	0.025	0.038
at 800 °C	0.029	0.034	0.031	0.038	0.062



MS · 900 – 1200HD

Slim MicroSilica Insulation Boards

Five grades — MS 1200 · 1000S · 1000T · 900 · 1200HD — high-density microporous boards

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MicroSilica is high-density microporous insulation board for furnace back-up insulation. Manufactured by mixing fumed-silica agglomerates with opacifiers and filaments at very specific pressures, the boards deliver the lowest possible heat loss through all transfer modes — conduction, convection, radiation and gaseous conduction.

CLASSIFICATION TEMP. 900 – 1,200 °C	Λ @ 400 °C 0.022 – 0.038 W/m·K	FIRE CLASSIFICATION Class A1 Non-combustible
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FEATURES & ADVANTAGES

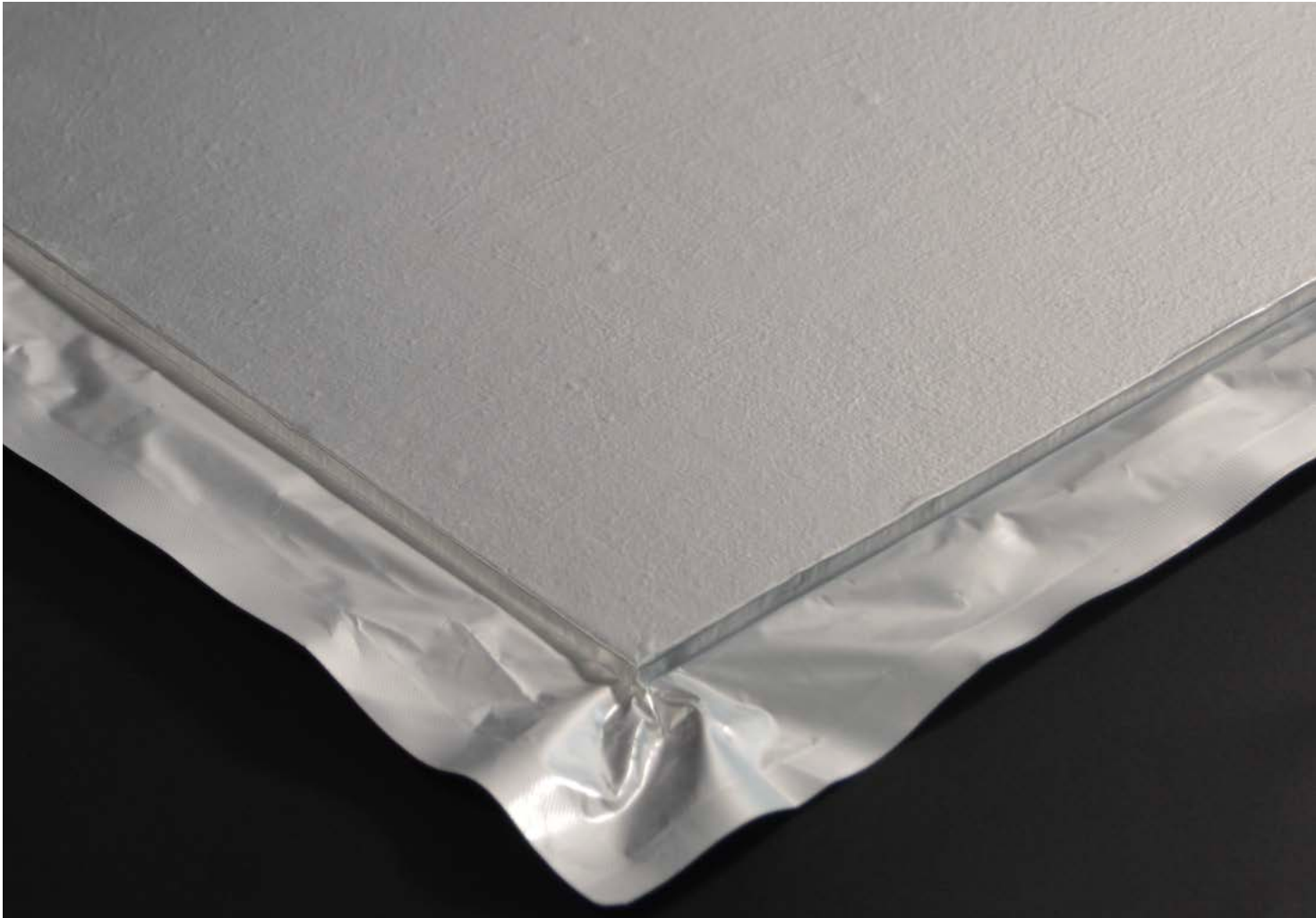
- Highest-possible porosity in the FSMP range
- Conductivity below still-air at high temperature
- Thin profile — reduces insulation thickness by 4×
- Reduced heat loss and lower shell temperatures
- Energy cost savings and productivity gains
- Multiple covering options

APPLICATIONS

- Furnace back-up insulation
- Steel and aluminium industry
- Glass, cement and ceramics industry
- Petrochemical industry
- Fuel cells and thermal-battery insulation
- Industrial kiln and reformer lining

TECHNICAL PROPERTIES · 5 GRADES

Property	MS 1200	MS 1000S	MS 1000T	MS 900	MS 1200HD
Strength	High	Medium	High	Low	Very High
Colour	Grey	Grey	Brown	Grey	Grey
Density kg/m³	280–320	280–300	320	240–280	360–480
Classification temperature °C	1,200	1,000	1,000	900	1,200
Compressive strength @ 10 % MPa	0.33	0.32	0.34	0.32	0.55
THERMAL CONDUCTIVITY (W/M·K)					
at 200 °C	0.023	0.022	0.021	0.022	0.032
at 400 °C	0.024	0.023	0.022	0.025	0.038
at 600 °C	0.026	0.027	0.028	0.032	0.045
at 800 °C	0.029	0.034	0.031	0.038	0.062



— 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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