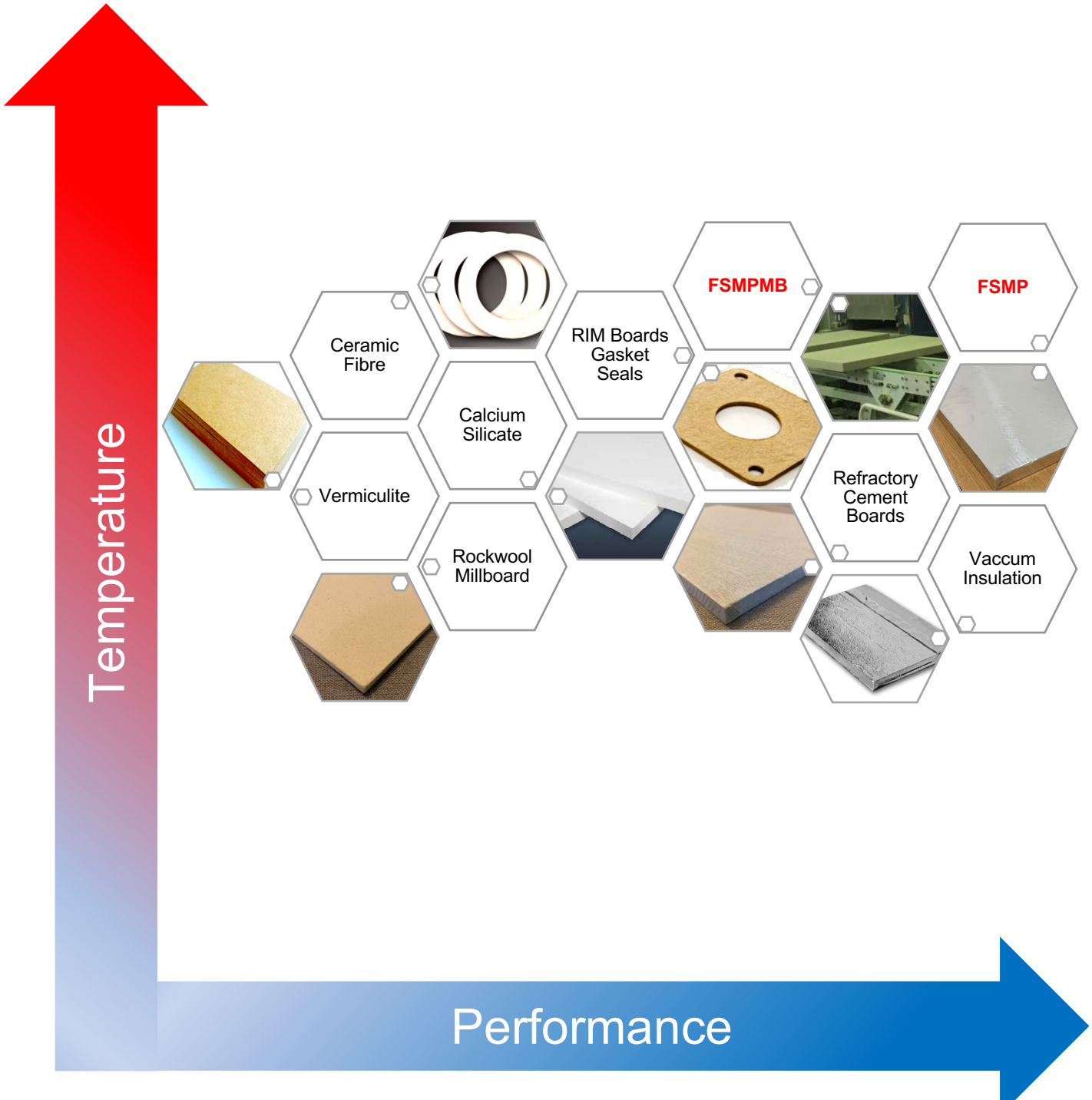
Wedge

Microporous Insulation Board & Mattress

Low Cost | Low Thickness | High Insulation



Microporous Insulation Boards

Microporous insulation boards are manufactured by mixing high quality agglomerates of pyrogenic silica and selective grade opacifiers along with filaments and pressed at a very specific pressure range to achieve a very narrow range of optimum highest possible porosity and unique range of densities to deliver a product with lowest possible heat loss through conduction, convection, radiations, and gaseous conduction. The thermal conductivity of Microporous insulation is lower than the still air at high temperatures.

Advantages

- Very high insulation, extremely low thermal conductivity.
- Very thin insulation to save space.
- Reduce insulation thickness by 4 times.
- Reduce heat loss and shell temperatures.
- Reduce energy cost and increase productivity.
- Non combustible A1 classification.
- Environmentally friendly, free of organic binders

Applications

- Furnace back-up insulation
- Steel, and Aluminium industry.
- Glass, cement, and ceramics industry
- Petrochemical industry
- Fuel cells & Thermal Batteries insulation

Quality		FSMP 1200	FSMP 1000S	FSMP 1000T	FSMP 900	FSMP 1200HD
Strength		High	Medium	High	Low	Very High
Cost		Low	Medium	Medium	Very Low	High
Colour		Grey	Grey	Brown	Grey	Grey
Density	kg/m3	280 - 320	300 - 320	320	240 - 280	360 - 480
Classification Temperature	ºC	1200	1000	1000	900	1200
Non combustibility test Classification		A1	A1	A1	A1	A1
Compressive strength at 10% (ASTM C 165)	MPa	0.33	0.32	0.34	0.32	0.55
Thermal conductivity (ISO 8302, ASTM C177)						
200°C	W/m.K	0.023	0.024	0.021	0.022	0.032
400°C	W/m.K	0.024	0.025	0.022	0.025	0.038
600°C	W/m.K	0.026	0.028	0.028	0.032	0.045
800°C	W/m.K	0.029	0.032	0.031	0.038	0.062
Specific Heat Capacity						
200°C	kJ/kg.K	0.89	0.92	0.92	0.92	0.88
400°C	kJ/kg.K	1.01	1.01	1.01	1.01	0.98
600°C	kJ/kg.K	1.04	1.04	1.03	1.03	1.03
800°C	kJ/kg.K	1.07	1.08	1.08	1.08	1.06
Shrinkage (ISO2477) one side 12h @1000°C Full soak	%	<0.5	<0.5	<0.5	<0.5	<0.5
Coverings		Aluminium Foil, E-Glass Cloth, Ceramic Paper, Mica, Millboard, Steel				
Lengths	mm	250, 300, 500, 610, 1000, 1100, 1200				
Widths	mm	250, 300, 500, 610, 750				
Thickness	mm	5, 6, 10, 12, 15, 20, 25, 30, 40, 50, 55, 60				

Microporous Insulation Flexible Matress

Microporous insulation boards are manufactured by mixing high quality agglomerates of pyrogenic silica and selective grade opacifiers along with filaments and pressed at a very specific pressure range to achieve a very narrow range of optimum highest possible porosity and unique range of densities to deliver a product with lowest possible heat loss through conduction, convection, radiations, and gaseous conduction. The thermal conductivity of Microporous insulation is lower than the still air at high temperatures.

Advantages

- Very high insulation, extremely low thermal conductivity.
- Very thin insulation to save space.
- Reduce insulation thickness by 4 times.
- Reduce heat loss and shell temperatures.
- Reduce energy cost and increase productivity.
- Non combustible A1 classification.
- Environmentally friendly, free of organic binders

Applications

- Pipe insulation external & internal.
- Turbine Insulation.
- Solar thermal power plant
- Oil & Gas plants
- Petrochemical industry
- Fuel cells & Thermal Batteries insulation

Quality		FSMP 1200	FSMP 1000S	FSMP 1000T	FSMP 900	FSMP 1200HD
Strength		High	Medium	High	Low	Very High
Cost		Low	Medium	Medium	Very Low	High
Color		Grey	Grey	Brown	Grey	Grey
Density	kg/m3	280 - 320	300 - 320	320	240 - 280	360 - 480
Classification Temperature	ºC	1200	1000	1000	900	1200
Non combustibility test Classification		A1	A1	A1	A1	A1
Compressive strength at 10% (ASTM C 165)	MPa	0.33	0.32	0.34	0.32	0.55
Thermal conductivity (ISO 8302, ASTM C177)						
200°C	W/m.K	0.023	0.024	0.021	0.022	0.032
400°C	W/m.K	0.024	0.025	0.022	0.025	0.038
600°C	W/m.K	0.026	0.028	0.028	0.032	0.045
800°C	W/m.K	0.029	0.032	0.031	0.038	0.062
Specific Heat Capacity						
200°C	kJ/kg.K	0.89	0.92	0.92	0.92	0.88
400°C	kJ/kg.K	1.01	1.01	1.01	1.01	0.98
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800°C	kJ/kg.K	1.07	1.08	1.08	1.08	1.06
Shrinkage (ISO2477) one side 12h @1000°C Full soak	%	<0.5	<0.5	<0.5	<0.5	<0.5
Coverings		Aluminium Foil, E-Glass Cloth, Ceramic Paper, Mica, Millboard, Steel				
Types		Flexible, Quilted, Slated, Overstitched, Pipe Section				
Lengths	mm	250, 300, 500, 610, 1000, 1100, 1200				
Widths	mm	250, 300, 500, 610, 750				
Thickness	mm	5, 6, 10, 12, 15, 20, 25, 30, 40, 50, 55, 60				

Thermal Conductivity Graph