Product Information Sheet

Silplate® 1212S Structural Insulating Board

Silplate® boards were specially developed by Unifrax for backup applications that require a very high-strength refractory insulating material. Common applications are for backup in ladles or tundishes that are used in molten metal transfer. Using Silplate boards for backup applications can significantly reduce steel shell cold face temperatures. Because of Silplate's high use temperature limit, in many cases a thinner refractory cross section may be used and this practice results in increased vessel capacity.

All of the boards in the Silplate product line are inorganic, resulting in optimal fired strength. Also, Silplate boards may be manufactured in a variety of custom shapes for specific applications. Silplate can be used as a hot face lining material for high air velocity and/or vibration applications.

Silplate 1212S is a unique structural insulating board for use in high-temperature applications. While in service, Silplate 1212S maintains high compressive strength and low thermal conductivity. Physical properties of this material remain unchanged up to the maximum use temperature of 2192°F (1200°C), providing stability to the entire refractory lining system. Therefore, potential joint attack to the working lining is minimized.

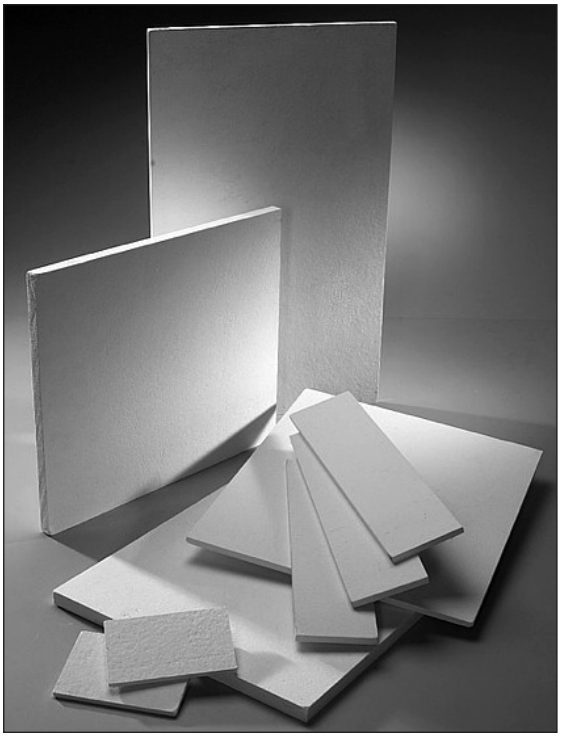
Silplate 1212S provides excellent chemical stability, resisting the attack of most acids and corrosive agents except hydrofluoric, phosphoric, and concentrated alkalis. Made from high-purity materials, Silplate 1212S has very low Fe_2O_3 content.

Advantages of Silplate

- High compressive strength
- High thermal resistance
- Low thermal conductivity
- Dimensional stability

Main Applications

Backup insulation for Trough Runners, Torpedo Cars, Tundishes, Steel, Iron and Foundry Ladles.



Silplate Structural Insulating Boards are available in a variety of thicknesses and sizes.

Typical Product Properties

Color	White
Operation Temperature	2192°F (1200°C)
Basic Composition	Calcia-Magnesia-Silica
Density (pcf)	50-56

Thermal Conductivity	**[BTU.in/(hr.ft²°F)]**	**(W/mK)**
@664°F	1.040	0.15
@1100°F	1.248	0.18
@1401°F	1.387	0.20

Cold Crushing Strength (psi)	>1450
Hot Crushing Strength (psi) @932°F	≥1740
Linear Shrinkage	
Soaking regime @2192°F	<2.00%

For additional information about product performance, to identify the recommended product for your application, or for a specific heatflow calculation, please contact the Unifrax Application Engineering Group at 716-768-6460.

Data are average results of tests conducted under standard procedures and are subject to variation.

Refer to the product Safety Data Sheet (SDS) for recommended work practices and other product safety information.

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