

## Fiberfrax® Silplate® 1308 Structural Insulating Board

### Introduction

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 product formulations 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 1308 is a unique structural insulating board for use in high-temperature applications. While in service, Silplate 1308 maintains high compressive strength and low thermal conductivity. Physical properties of this material remain unchanged up to the maximum use temperature of 2444°F (1340°C), providing stability to the refractory lining system. Therefore, potential joint attack to the working lining is minimized.

Silplate 1308 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 1308 has very low Fe<sub>2</sub>O<sub>3</sub> content.

### Main Performance Advantages

- Inorganic Formulation/High Fired Strength
- High Use Temperature
- Low Thermal Conductivity
- Excellent Compressive Strength
- High Volume Stability/Minimal Shrinkage
- Excellent Resistance to Liquid Metal Attack



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

### Typical Product Properties

Color	Green
Maximum Operating Temperature	2444°F (1340°C)
Basic Composition	Alumina-Silica
Density	50 pcf
Hot Crushing Strength @ 932°F	>4641 psi
Linear Shrinkage (24 hr. soak @ 2444°F)	<3.00%



Typical steel transport ladle.



Special shapes such as burner blocks may be manufactured by using the Silplate technology platform.



Silplate 1308 installation in a steel transport ladle.



Safety lining brick installed over Silplate 1308.



Silplate Structural Insulating Boards can be used for high velocity/turbulent applications such as aluminum homogenizing furnaces.

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.

