

# ETS Schaefer, LLC

## Alkegen

### Fiberfrax® Silplate® Mass 1500

Silplate® Mass 1500 is a hot face coating material for use over ceramic fiber modules, castables and refractory bricks. It is manufactured from the combination of high-temperature fibrous materials and sintered high-purity, refractory oxides. Silplate Mass 1500 is a compound ready for application at temperatures up to 1500°C (2732°F). It may be applied on ceramic fiber insulation to form a surface that is highly resistant to abrasion and flame impingement.

It has less than 1% shrinkage, minimizing the appearance of cracks even when operating up to its temperature limit. When exposed to temperatures above 870°C (1600°F), Silplate Mass 1500 forms a ceramic bond providing further strength and integrity.

#### Product Information

- Classification Temperature: 2732°F (1500°C)
- Color: Orange
- Wet Density: 80 pcf (nominal)
- Dry Density: 55 pcf (nominal)
- Application Thickness: 1/8" to 1"
- Packaging: 25 kg (55 lb.) Pail
- Resistance to Gas Velocity: 200 ft./second
- Shelf Life: 12 Months

#### Silplate Mass 1500 Applications

**Silplate Mass 1500 is applied on ceramic fiber lining systems with the following benefits:**

- Increased abrasion resistance and durability
- Underlying fiber protected from shrinkage and/or chemical attack
- Minimized heat loss through cracks in the insulation
- Increased flue gas velocity resistance
- Heat Reflectance/Energy Efficiency



**Silplate Mass 1500 is applied on hard refractory surfaces with the following benefits:**

- Increased lining service life
- Reduced heat loss
- Increased operating temperature
- Heat Reflectance/Energy Efficiency
- Thermal shock protection

#### Installation Techniques

Silplate Mass high-temperature coating material may be installed using a variety of techniques. Typical installation techniques are outlined below:

- External placement through a furnace or vessel casing with a pneumatic pump to repair lining hot spots.
- Troweled on surface of refractory or edge grain fiber lining surface to increase use temperature.
- Pumped, troweled or gunned over existing linings to caulk cracks and extend lining life.
- Hot gunning over an existing furnace lining to replace lost or damaged refractory.
- "Silplate Mass Module System" – contact our Application Engineering for more details.

#### Typical Composition

- Refractory Oxides, Silica and Alumina

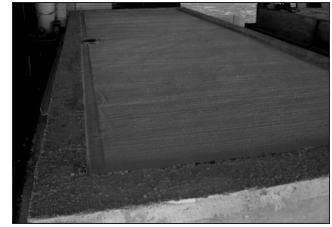
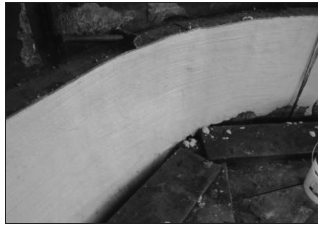
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## Typical Applications

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Application on refractory surfaces



Application on ceramic fiber modules

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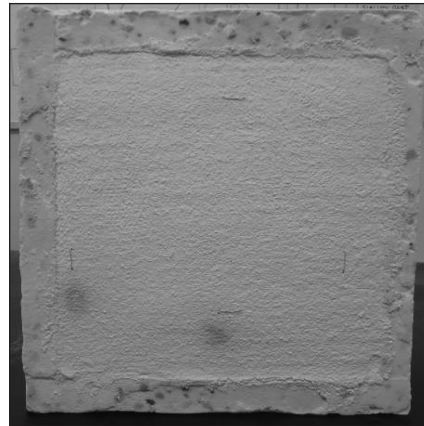
## Shrinkage Testing

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- **Silplate Mass 1500** – Application on the surface of a ceramic fiber module
- Exposure Temperature: **1500°C (2732°F)** – Time: **120 hours**



Module without **Silplate Mass 1500**  
Shrinkage in excess of 3%



Module with **Silplate Mass 1500**  
No measurable shrinkage

For additional information about product performance, to identify the recommended product for your application, or for a specific heatflow calculation, please contact ETS Schaefer.

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.