

## FIBERFRAX® 1400 BULK FIBER

Fiberfrax 1400 Bulk Ceramic Fiber is made from high purity alumina, silica and zirconia chemistry, which imparts extremely low shrinkage characteristics up to a continuous use temperature of 1400°C.

Fiberfrax 1400 Bulk Fiber is a highly efficient insulator having low heat storage capacity and complete resistance to damage from thermal shock. The refractoriness and thermal stability of Fiberfrax 1400 Bulk Fiber allows a greater margin of safety in design where adverse environmental conditions are encountered. Fiberfrax 1400 Bulk Fiber can be used in a wide range of applications as thermal insulation, particularly in fire protection and high-temperature expansion joint applications.

### General Characteristics

Fiberfrax 1400 Bulk Fiber offers users a number of important advantages over other man-made mineral fibers:

- Excellent thermal and physical stability up to 1430°C
- Extremely low shrinkage
- Excellent thermal shock resistance
- Excellent sound absorption
- Light weight
- Low heat storage & thermal conductivity
- Excellent corrosion resistance

### Typical Application

- Expansion joints
- Furnace base seals
- Packing around burner tiles
- Tube seals
- Chimney insulation

### Chemical Analysis (wt.%)

Al <sub>2</sub> O <sub>3</sub>	30.5
SiO <sub>2</sub>	54.0
ZrO <sub>2</sub>	15.5

### Thermal Conductivity Data (W/mK)

Mean Temp	96 kg/m <sup>3</sup>	128kg/m <sup>3</sup>
400°C	0.08	0.07
600°C	0.15	0.13
800°C	0.23	0.18
1000°C	0.34	0.25

*Data are average results conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.*



### Physical Properties

Colour	White
Classification Temperature	1430°C
Melting Point	1740°C
Normal Packing Density	96-192 kg/m <sup>3</sup>
Fiber Diameter	2-3 microns
Fiber Lengths	Up to 100mm
Specific gravity	2.73
Specific heat at 1100°C	1130 J/kg °C
Fiber Tensile Strength	>35 kPa (128kg/m <sup>3</sup> )
Fiber Surface Area	0.5 m <sup>2</sup> /g

### Chemical Resistance

Fiberfrax 1400 Bulk Fiber exhibit excellent resistance to attack from most corrosive agents with the exceptions of hydrofluoric acid phosphoric acid and strong alkalis. The fibers also effectively resist oxidation and reduction. If wet by water or steam, thermal and physical properties are restored upon drying.

### Other Fiberfrax 1400 Product Forms are:

- Fiberfrax Durablanket
- Fiberfrax Duraboards
- Fiberfrax Vacuum Cast Shapes
- Fiberfrax Mastics and Cements