

# SAFFIL 1600 BULK FIBRES

SAFFIL Bulk Fibres are high purity polycrystalline wools, designed for use in high temperature applications up to 1600°C. SAFFIL is produced by a unique solution extrusion process which ensures the highest level of chemical purity and lowest level of 'shot' (non-fibre particles). Available in a variety of grades, SAFFIL Bulk Fibres are used to overcome problems in demanding industrial environments and many other specialty applications.



## General Characteristics

SAFFIL Bulk Fibres have the following outstanding characteristics:

- High temperature stability (up to 1600°C)
- Low thermal conductivity
- Virtually 'shot' free
- Resistant to thermal shock
- High purity & low silica ensure chemical resistance
- Easily reprocessed
- Insoluble in water

## Typical Applications

- Wet forming of boards, shapes & papers
- Expansion joint packing
- Loose insulating fill for voids
- Textile manufacture
- Reinforcement for cements and mortars

## Health and Safety

SAFFIL Fibres were designed with the expert advice of toxicologists to minimise the potential for biological activity. The fibres are produced in a novel spinning process from a viscous aqueous solution to give a narrow diameter distribution. They are all then subjected to a controlled heat treatment to develop a polycrystalline microstructure. An extensive series of toxicological tests were carried out on the fibre, involving inhalation, injection and feeding studies. All results were negative, with no fibrogenic, carcinogenic or other toxic effects found. Low Silica levels ensure that there is no possibility of Cristobalite formation after exposure to high temperature.

SAFFIL Fibres are not subject to European regulatory constraints and do not require a hazard warning label or special handling procedures for installation or disposal after use.

For more information, a Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on handling precautions and emergency procedures. This must be consulted and fully understood before handling, storage or use.

# SAFFIL 1600 BULK FIBRES

## Typical Product Parameters

	LA	HA	HX
<i>Typical Chemical Analysis (fibre wt. %)</i>			
Al <sub>2</sub> O <sub>3</sub>	95-97	95-97	95-97
SiO <sub>2</sub>	3-5	3-5	3-5
Trace	<0.5	<0.5	<0.5
<i>Physical Properties</i>			
Colour	White	White	White
Melting Point (°C)	>2000	>2000	>2000
Classification Temperature (°C)*	1600	1600	1600
Median Fibre Diameter (microns)	3-4	3-4	3-4
Fibre Density (g/cm <sup>3</sup> )	3.3-3.5	3.3-3.5	3.3-3.5
<i>Permanent Linear Shrinkage (%) 6 Hour Soak 1500°C</i>			
	<4	<2	<1

\*Classification Temperature is not a definition of the operational limit of these products, especially when long term physical or dimensional stability is a factor. For certain applications continuous use temperature limits may be significantly reduced.

## Bulk Fibres

Grade	Chemical Resistance	Fibre Strength	Shrinkage
LA	Good	Excellent	Good
HA	Very Good	Very Good	Very Good
HX	Excellent	Good	Excellent

## Availability

Saffil Bulk Fibres are available as standard in 5kg polythene bagged bales.