



**FIBERFRAX DURABLANKET S**

**The FIBERFRAX DURABLANKET family of lightweight needled blankets are manufactured from Fiberfrax refractory ceramic fibres and provide effective solutions to a wide spectrum of thermal management problems.**



Utilising our proprietary high output blowing and spinning techniques these products offer superior insulating performance, flexibility and resilience. Fiberfrax Durablanket products are unaffected by most chemicals (except hydrofluoric & phosphoric acids and concentrated alkalis). Thermal and physical properties are retained after drying following wetting by oil, steam or water. Fiberfrax Durablanket products are completely inorganic, so there are no fumes when heating for the first time. Available in a variety of chemistry, density and thickness combinations, the Fiberfrax Durablanket range is one of the most versatile available to the market today.

Fiberfrax Durablanket S is a premium grade product made from spun 1250°C ceramic fibres. The extra long spun fibres make it one of the strongest blankets available. This coupled with its superior resilience make it particularly tough and suitable for applications involving further handling or in difficult environments.

**General Characteristics**

FIBERFRAX BLANKET S has these outstanding characteristics:

- High tensile strength
- High heat reflectance
- Low thermal capacity
- Low shrinkage
- Excellent hot strength
- Resistance to thermal shock
- High resiliency
- Low thermal conductivity
- Good sound absorption

**Typical Applications**

- Investment casting mould wrappings
- High temperature filtration
- Removable insulating blankets for field stress relieving welds
- Expansion joint seals
- Annealing cover seals
- Reusable insulation for steam and gas turbines
- High temperature gasketing
- Flexible high temperature pipe insulation
- Glass furnace crown insulation
- Pressure and cryogenic vessel fire protection
- Incineration equipment and stack linings
- High temperature kiln and furnace insulation
- Fire protection systems
- Furnace door linings and seals



## REFRACTORY FIBER PRODUCTS

### Yorkshire Refractory Products Limited

#### Chemical Analysis (wt.%)

SiO <sub>2</sub>	-	53.0 - 58.0
Al <sub>2</sub> O <sub>3</sub>	-	42.0 - 47.0
Alkalis	-	< 0.25
Fe <sub>2</sub> O <sub>3</sub> + TiO <sub>2</sub>	-	< 0.2

#### Typical Physical Properties

Colour	-	White			
Classification Temperature *	-	1250°C			
Melting Point	-	1760°C			
Fibre Diameter	-	3.25 microns (mean)			
Specific Heat at 1000EC	-	1140 J/kg°C			
<b>Tensile Strength</b>		<b>64 kg/m<sup>3</sup></b>	<b>96 kg/m<sup>3</sup></b>	<b>128 kg/m<sup>3</sup></b>	<b>160 kg/m<sup>3</sup></b>
		35 kPa	55 kPa	75 kPa	90 kPa
<b>Thermal Conductivity Data (W/mEK)</b> (Based on CEN draft method ASTM C-201		<b>64 kg/m<sup>3</sup></b>	<b>96 kg/m<sup>3</sup></b>	<b>128 kg/m<sup>3</sup></b>	<b>160 kg/m<sup>3</sup></b>
600°C Mean Temperature	0.18	0.14	0.12	0.11	
800°C Mean Temperature	0.27	0.22	0.18	0.16	
1000°C Mean Temperature	0.42	0.36	0.28	0.21	
<b>Permanent Linear Shrinkage</b>		<b>1100 °C</b>	<b>1200 °C</b>	<b>1250 °C</b>	
24 hour soak		1.9 %	2.9 %	3.3 %	

\* Classification Temperature is the reference temperature at which permanent linear shrinkage does not exceed 4% during 24 hours continuous exposure (ref. CEN draft recommendations).

#### Fire Test Data

FIBERFRAX DURABLANKET S is non-combustible and is approved for use against cellulosic and hydrocarbon fires and for dry wrapping of structural steel. Certification details can be supplied on request.

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### Availability

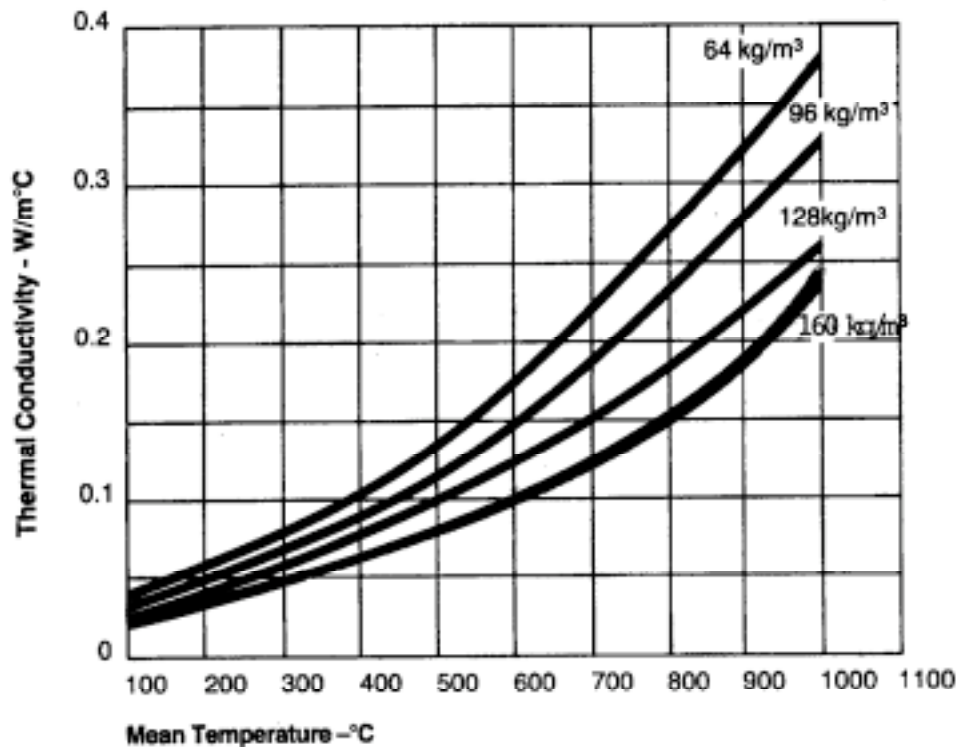
FIBERFRAX DURABLANKET S is available in a range of thicknesses and densities as follows:

Density	Thickness range (mm)					
	6	13	19	25	38	50
Standard Roll Length (m)	21.96	14.64	10.0	7.32	5.0	3.66
64 kg/m <sub>3</sub>			✓	✓	✓	✓
96 kg/m <sub>3</sub>		✓	✓	✓	✓	✓
128 kg/m <sub>3</sub>		✓	✓	✓	✓	✓
160 kg/m <sub>3</sub>		✓	✓	✓	✓	✓

Other thicknesses/sizes may be available on request subject to minimum order requirements.

### FIBERFRAX DURABLANKET S THERMAL CONDUCTIVITY VS MEAN TEMPERATURE (PER BS 1902 PT. 6/ASTM C-

177)\*



\* All thermal conductivity values for FIBERFRAX materials have been measured in accordance with ASTM Test Procedure C-177/BS

## **REFRACTORY FIBER PRODUCTS**

1902 Pt. 6. When comparing similar data it is advisable to check the validity of all thermal conductivity values and ensure the resulting heat flow calculations are based on the same condition factors. Variations in any of these factors will result in significant differences in the calculated data.