Fiberfrax®

Product Information Sheet

Fiberfrax® Durablanket® LT and Durablanket LT Z

Description

Fiberfrax® Durablanket® LT and Durablanket LT Z are the latest addition to the well-established Fiberfrax ceramic fiber product family. Durablanket LT and LT Z offer the same benefits as previous Fiberfrax blanket grades, now with physical properties enhanced to improve both thermal performance and handling. These lightweight needled blankets combine innovative proprietary processing technology with Fiberfrax proven performance to create the best alumina-silicate blanket available from Unifrax today. Durablanket LT and LT Z needled blankets are completely inorganic and retain their strength, flexibility and thermal properties in many working environments, without the generation of smoke or fumes. Durablanket LT and LT Z blanket can be used in a wide variety of high-temperature applications and provide effective solutions to a variety of thermal management challenges.

The enhanced performance of Durablanket LT and LT Z fibers helps end users reduce their energy costs and meet increasingly strict carbon emission targets, without increasing the amount of insulation required. Their lower thermal conductivity provides enhanced thermal performance and energy savings benefits. Durablanket LT and LT Z will allow the use of a reduced lining thickness to achieve the same, or an improved insulation performance.

Durablanket LT and LT Z have excellent chemical stability and are unaffected by most chemicals except hydrofluoric and phosphoric acids and concentrated alkalis. If wet by water or steam, thermal and physical properties remain unaffected after drying.

General Characteristics

Fiberfrax Durablanket LT and Durablanket LT Z have the following outstanding characteristics:

- High temperature stability
- Low thermal conductivity
- Thermal shock resistance
- Good handling strength
- Low heat storage
- High tensile strength and resilience
- Resistance to chemical attack
- Good sound absorption

Typical Applications

- High temperature kiln and furnace linings
- Billet/slab reheat furnaces
- Furnace door linings and seals
- Boiler insulations
- Soaking pit seals
- Pipe and duct insulation
- Chemical process heaters
- Heat shields
- High temperature seals and gaskets
- Glass tank crown insulation

Information on other applications available upon request. Any new and/or special use of these products, whether or not in an application listed in our literature, must be submitted to our technical department for their prior written approval.

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Typical Product Parameters

Fiberfrax		Durablanket LT	Durablanket LT Z
Typical Chemical Analysis (wt. %)			
Al_2O_3		43.0 - 47.0	29.0 - 31.0
SiO_2		53.0 - 57.0	53.0 - 55.0
ZrO_2		----	15.0- 17.0
Na_2O_3		<0.5	----
Leachable Chlorides		<10ppm	<10ppm
Physical Properties			
Colour		White	White
Temperature Grade*		2400 °F (1316 °C)	2600 °F (1430 °C)
Recommended Operating Temperature		2200 °F (1204 °C)	2450 °F (1343 °C)
Melting Point		3200 °F(1760 °C)	3200 °F (1760 °C)
Fibre Diameter		2.65 microns (mean)	2.65 microns (mean)
Specific Heat @1093 °C (2000 °F)		1130 J/kg °C	1130 J/kg °C
Speciifc Gravity		2.73 g/cm²	2.73 g/cm²
Permanent Linear Shrinkage (%) 24 Hour Soak			
2282 °F (1250 °C)		2.6%	
2552 °F (1400 °C)			2.7%
Density		6 PCF (96 kg/m³)	8 PCF (128 kg/m³)
Tensile Strength - Durablanket LT		9.4 lb/in² (65 kPa)	13 lb/in² (90 kPa)
Thermal Conductivity ASTM C-201		Btu in/hr ft² °F(W/mK)	
Mean Temperature			
392 °F	200 °C	0.38 (0.055)	0.35 (0.051)
752 °F	400 °C	0.56 (0.080)	0.51 (0.074)
1112 °F	600 °C	0.83 (0.120)	0.71 (0.103)
1472 °F	800 °C	1.28 (0.185)	1.01 (0.146)
1832 °F	1000 °C	1.84 (0.265)	1.43 (0.206)
2192 °F	1200 °C	2.66 (0.383)	2.07 (0.298)

*The maximum continuous use limit temperature for these products depends upon operating and application conditions, and also the engineered design of the insulation lining. For additional information and support regarding product performance or to identify the recommended product for your application, please contact your nearest Unifrax Application Engineering office.

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

Availability

Thickness	Density		Roll length
	6 PCF (96 kg/m³)	8 PCF (128 kg/m³)	
0.5” (13mm)	✓	✓	25 LF (7.62m)
1.0” (25mm)	✓	✓	25 LF (7.62m)
1.5” (38mm)	*	*	12.5 LF (3.81m)
2.0” (50mm)	✓	✓	12.5 LF (3.81m)

Standard roll width is 24” (610mm).

Products in the table above listed with a checkmark (✓) are stocked and available.
Products marked with an asterisk (*) are not stocked as standard but are available on request subject to minimum order requirements.

Other thicknesses/sizes and versions with aluminium foil and other coverings are available upon request.

Handling Information

A Safety Data Sheet (SDS) 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.

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