Product Information Sheet

Fiberfrax

Fiberfrax® Durablanket® LT & Durablanket LTZ

Description

Fiberfrax® Durablanket® LT and Durablanket LTZ are the newest additions to the highly regarded Fiberfrax ceramic fiber product line. Durablanket LT and LTZ maintain the advantages of previous Fiberfrax blanket grades, but with enhanced physical properties that improve both thermal performance and handling. These lightweight needled blankets integrate innovative proprietary processing technology with Fiberfrax's proven performance to create Alkegen's best alumina-silicate blanket available today.

Durablanket LT and LTZ needled blankets are entirely inorganic and maintain their strength, flexibility, and thermal properties in various work environments, without generating smoke or fumes. They can be utilized in a wide range of high-temperature applications, offering effective solutions to diverse thermal management challenges.

The improved performance of Durablanket LT and LTZ fibers helps end users lower their energy costs and meet increasingly stringent carbon emission targets, without necessitating more insulation. Their lower thermal conductivity provides enhanced thermal performance and energy savings benefits. Durablanket LT and LTZ enable the use of a thinner lining to achieve the same, or even superior, insulation performance.

Durablanket LT and LTZ exhibit excellent chemical stability and remain unaffected by most chemicals except hydrofluoric and phosphoric acids, and concentrated alkalis. If they get wet due to water or steam, their thermal and physical properties are retained after drying.

General Characteristics

Fiberfrax Durablanket LT and Durablanket LTZ possess 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
ZrO2		----	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		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 Alkegen 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.

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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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