

Fiberfrax® Felt Products

Introduction

Fiberfrax® Lo-Con™ felt and Duraset® felt are unique product forms in the Unifrax Corporation's extensive ceramic fiber product family. Felt products extend the performance of Fiberfrax papers in a product form with lower densities and increased mat thickness. Felt products are compressible but resilient; they conform to irregular surfaces yet have sufficient integrity to hold their shape in gaskets and formed parts. Both felt grades are wet laid, uniform, ceramic fiber mats which have been impregnated with a thermosetting resin. In Lo-Con felt, this resin has been precured to produce a semi-flexible rolled sheet available in different densities and thicknesses. The binders in Duraset have been left uncured so they can be molded under heat and pressure to retain a complex shape after processing.

The organic binders remain functional at low and moderate temperatures (to 650°F); however, the core ceramic fiber materials will provide consistent performance at temperatures well in excess of 2000°F, providing excellent thermal insulation in a wide range of applications.

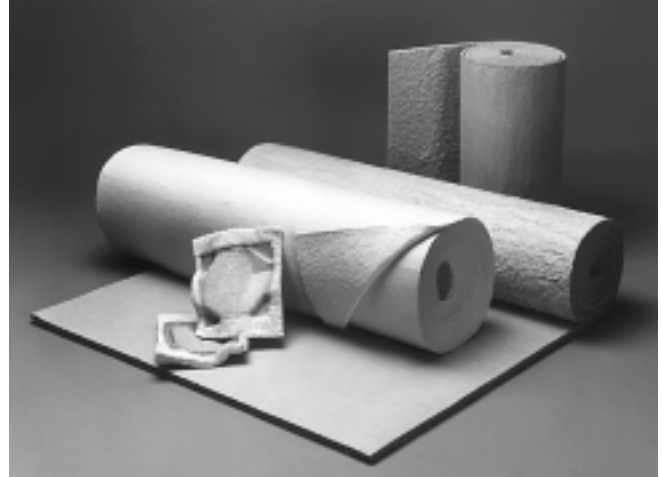
Fiberfrax® Lo-Con™ Felt

Fiberfrax Lo-Con felt is a lightweight, flexible batting created from Fiberfrax Bulk ceramic fibers interlocked to form a strong, resilient insulation. It is manufactured by a unique wet felting process which removes unfiberized particles to produce a clean, efficient ceramic fiber felt insulation.

A small amount of non-flaming organic binder is added to provide improved handling properties for easier installation in applications where organic burnout at low temperatures is acceptable.

Binder Free Lo-Con

Lo-Con felt is also available in a binder free form, Lo-Con Blanket, for applications where organic burnout is unacceptable. Note that Binder Free Lo-Con Blanket is a nonstandard product. Please contact your Fiberfrax distributor or Unifrax Customer Service for product availability and pricing.



Fiberfrax® Duraset® Felt

Fiberfrax Duraset is a lightweight mat made from spun Fiberfrax ceramic fibers which have been impregnated with a thermosetting resin. Supplied in uncured form, it can be formed with the simultaneous application of pressure and heat to achieve complex shapes of rigid consistency for thermal and acoustical shielding.

Use of Fiberfrax spun fibers allows for production of parts with severe draws without tearing during the forming process.

Duraset felt is an excellent insulator with a high temperature use limit. If wet by water or steam, thermal and physical properties remain unaffected after drying. Duraset felt is unaffected by most chemicals except hydrofluoric and phosphoric acids and concentrated alkalis.

Note that Fiberfrax Duraset felt is a nonstandard product. Please contact your Fiberfrax distributor or Unifrax Customer Service for product availability and pricing.

Product Line Advantages

Fiberfrax ceramic fiber felts provide unique advantages in solving thermal management problems. These advantages include:

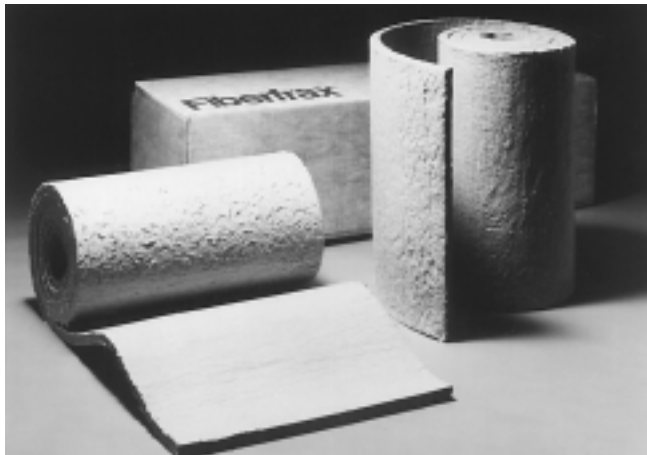
- Formability
- Flexibility
- High temperature stability
- Low thermal conductivity
- Low heat storage
- Weight reduction
- Thermal shock resistance
- High heat reflectance
- Excellent corrosion resistance
- Easy to wrap, shape, and cut

Typical Product Properties

	Lo-Con	Duraset
Temperature Grade:	2300°F (1260°C)	2300°F (1260°C)
Melting Temperature:	3200°F (1760°C)	3200°F (1760°C)
Recommended Operating Temperature:	2300°F (1260°C)	2300°F (1260°C)
Specific Gravity:	2.73 gm/cm ³	2.73 gm/cm ³
Color:	Tan	Yellow/Tan
Cure Temperature:	N/A	400°F-450°F
Cure Time:	N/A	1.5 - 2 minutes

The recommended operating temperature of Felt is determined by irreversible linear change criteria, not melting point.

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



For additional information about product performance or to identify the recommended product for your application, please contact the Unifrax Application Engineering Group at 716-278-3888.

Typical Applications

Lo-Con

- Exhaust Duct Insulation
- Commercial Appliances
- Home Security Boxes
- Expansion Joints
- Domestic Appliances
- Gasketing and Sealing

Duraset

- Automotive Exhaust Heat Shield
- Commercial Fire Protection Applications
- Aerospace Heat Shielding

Typical Product Parameters

	Lo-Con	Duraset
Chemical Analysis		
SiO ₂	50-55%	50-55%
Al ₂ O ₃	40-45%	40-45%
Others	< 5%	< 5%
LOI (Loss on Ignition)		
Total	4%	9%
Fiber Index	70%	70%
Nominal Core Density	4, 6 lbs/ft ³	9.5 lbs/ft ³
Product Dimensions*		
Width	24", 48"	24"
Length	12½', 25', 50'	48"
Thickness	¼", ½", 1"	¾"

*For availability of nonstandard sizes, contact our Customer Service Department at 716-278-3800.



Press-formed parts made from Fiberfrax Duraset felt.