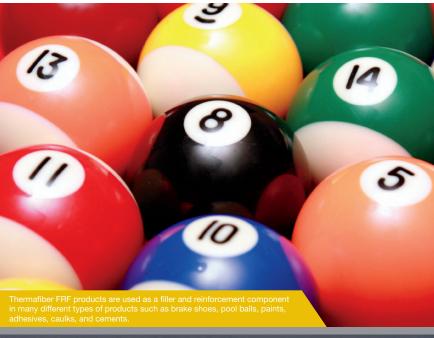
## Thermafiber® FRF™ Products







## Filler / Reinforcement Fiber

- + Superior fire and heat resistance
- + Water-absorbent and repellent surface treatments available
- + Economical fiber and filler that can be used in a variety of applications
- + Available in a different sizes and colors
- + Contains no asbestos









Description:

Typical End Uses:

Thermafiber® FRF™ Products

Thermafiber FRF Filler/Reinforcement Fiber is a top quality mineral wool fiber with properties that enhance the performance of a variety of different products due to it's fire and heat resistance capabilities. This cost-effective fiber retains its integrity at higher temperatures than glass fiber and demonstrates excellent wear resistance. Thermafiber FRF does not contain asbestos.

Paint Auto Gaskets
Plastics Brake Shoes/Clutches

Reinforcement/filler Shape retention Wear resistance/resilience Viscosity modification

Pool Balls Wear resistance/abrasion

Heat resistance

**Product Options:** 

Product	Finish	Treatment*	Bag Weight	Bale Weight**
FRF 501	Regular	S, A	30 lbs (13.61 kg)	750-1100 lbs (340.19- 498.96 kg)
FRF 502	Small	S, A	40 lbs (18.14 kg)	750 lbs (340.19 kg)
FRF 503	Milled	S, A	50 lbs (22.7 kg)	N/A
FRF 504	Milled	S, A	50 lbs (22.7 kg)	N/A
FRF 511	Regular	S, A	30 lbs (13.61 kg)	750 lbs (340.19 kg)
FRF 512	Small	S, A	40 lbs (18.14 kg)	750 lbs (340.19 kg)
FRF 513	Milled	S, A	50 lbs (22.7 kg)	N/A
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<sup>\*</sup>Treatments can be added upon request. S = Silicone, A = Surfactant

## Technical Data:

			Tested to ASTM E 84	
Product	Non-Fibrous Content per ASTM C 1335 (% of weight)	Poured Density (pcf)	Flame Spread	Smoke Developed
FRF 501, FRF 511	<50%	2.8 – 3.7	0	5
FRF 502, FRF 512	<50%	3.7 – 5.0	0	5
FRF 503, FRF 513	<50%	5.0 – 7.4	0	5
FRF 504	<50%	8.2 – 10.5	0	5

Performance Characteristics				
Color	White to Gray			
Density (Specific Gravity)	2.8-3.0 g/cc			
Hardness	6.0 Mohs			
Fiber Diameter	5 Microns, average			
Fiber Diameter Range	1.73 – 8.65 microns			
Fiber Length	0.1 – 4.0 mm, average			
Fiber Tensile Strength	80,000 psi			
Fiber Tensile Modulus	1,500 – 5,000 kpsi			
Refractive Index	1.62 – 1.64			
Devitrification Temperature	1,550° F (843° C)			
Melting Point***	Approximately 2,200° F (1,204° C)			

 $<sup>^{\</sup>star\star\star}$  For continuous temperatures above 1,200°F, consult with your Thermafiber sales representative

Chemical Composition				
Oxide	Percent by Weight			
SiO <sub>2</sub>	38-46			
$Al_2O_3$	9-12			
CaO	31-40			
MgO	8-15			
Fe <sub>s</sub> O <sub>s</sub>	0-2			

Date

Standards Compliance:

For Further Information:

Notice:

Submittal Approvals:



**ASTM E 136** Rated Non-combustible per NFPA Standard 220 **Contains No Asbestos** 

For additional information about these or other Thermafiber products contact us at 1-888-834-2371 or visit our website www.thermafiber.com.

THERMAFIBER, inc. shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. THERMAFIBER liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing within thirty (30) days from date it was or reasonably should have been discovered.

Job Name

Contractor

8-834-2371 or visit sed by application of these d to replacement of defective

3711 Mill Street | Wabash, IN 46992 | 888-TFIBER1 [834-2371] | [260] 563-2111 | www.thermafiber.com

<sup>\*\*</sup> May vary +/- 10%