Thermafiber® FRF 114 & FRF 514

High-Performance Milled Fiber

+ Economical high-performance fiber and filler
+ Excellent reinforcement strength
+ Superior fire and heat resistance
+ Abrasion and friction properties
+ Increases viscosity of liquid and semi-liquid products
+ Available with water-absorbent and repellent surface treatments

Milled mineral wool fibers are commonly used in brake pads and other friction components for cost-effective reinforcement strength and friction properties.

FRF fibers are used in the manufacturing of gaskets, paints, caulks, mastics and adhesives.

High-Performance Milled Fibers are easily poured and blended into batching systems.

Minimum 70% Recycled Content

Made in the USA

Thermafiber® FRF 114 & FRF 514

Description:

THERMAFIBER High-Performance Milled Products provide a top quality mineral wool fiber with properties that enhance the performance of a host of products. These economical filler/reinforcement fibers retain their integrity at high temperatures and provide excellent wear resistance. FRF 514 is a standard milled product, while the new FRF 114 is further refined to provide a non-fibrous content of less than 5%.

Typical End Uses:

Brake Shoes/Clutches	Wear resistance/abrasion
Cement Coatings	Reinforcement/filler
Plastics	Shape retention
Auto Gaskets	Heat resistance
Roofing Asphalt	Wear resistance/resilience
Paint	Viscosity modification

Product Options:

Product	Finish	Treatment*	Bag Weight
FRF 114	Milled	S, A	50 lbs (22.7 kg)
FRF 514	Milled	S, A	50 lbs (22.7 kg)

*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 114	< 5%	7.5 - 9.5	0	5
FRF 514	< 20%	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[1]	Approximately 2,200° F (1,204° C)

[1]For continuous temperatures above 1,200° F, consult with your Thermafiber sales representative.

Chemical Composition	
Oxide	Percent by Weight
SiO_2	38-46
Al_2O_3	9-12
CaO	31-40
MgO	8-15
Fe_2O_3	0-2

Standards Compliance:

ASTM E 136 Rated Non-combustible per NFPA Standard 220

For Further Information:

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

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Submittal Approvals:

Project	
Approval	Date

Owens Corning Thermafiber

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