

FyreWrap® Marine Blanket

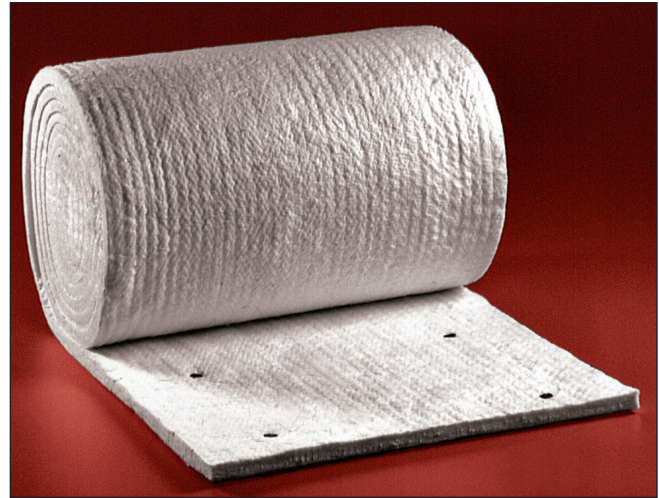
Introduction

FyreWrap Marine Blanket from Unifrax is a totally inorganic, flexible, high-temperature insulation blanket specifically designed to provide passive fire protection for marine applications. The Alkaline Earth Silicate (AES) chemistry is designed to enhance biosolubility. Unifrax's proprietary fiber spinning technology combined with mechanical needling of the fibers eliminates the need for binders in the product. This results in a material with high tensile strength and superior thermal and acoustical properties. FyreWrap Marine Blanket is chemically stable and its thermal properties are unaffected after water immersion or exposure to high humidity.

FyreWrap Marine Blanket provides passive fire protection insulation for a variety of rated assemblies on marine structures and vessels. New thinner, lighter weight systems combined with a flexible product form result in even lower installation costs and significant weight savings. This offers builders and owners reduced structure weight, which may yield increased vessel speed, fuel savings and available payloads.

Product Features

- Passive structural fire protection insulation for steel and aluminum bulkheads and decks
- Complies with SOLAS Safety Objectives and IMO FTP Code; Res. A.754(18)
- Non-combustible per IMO FTP Code Part 1
- Fire Resisting Division for High Speed Craft (HSC); Res. MSC.45(65)
- Type Approval and MED Module B Certs with US Coast Guard (USCG) Approval Numbers
- Lloyd's Register (LR) MED Module D Certificate for North American manufacturing facility
- USCG Compliant per 46 CFR 164.107, 109, 207
- ABS (American Bureau of Shipping) Approvals
- **Systems using new 4 lb/ft³ blanket density offer significant weight savings**
- Flexible blanket is easy to cut and contour wrap around stiffeners and beams
- Combined fire, thermal and acoustic insulation
- **Made in the USA**



Applications

FyreWrap Marine Blanket is utilized to insulate bulkheads and decks on commercial and military vehicles and offshore oil structures. Typical vessel types & applications include:

- Fast ferries, water taxis
- Naval vessels
- Luxury yachts
- Oil platforms, FPSO Units
- Accommodation modules
- Engine rooms
- Vehicle loading bays
- Storage areas
- Non-combustible insulation
- Exhaust ducts and pipes

Typical Product Properties

Melting Point	2390°F (1310°C)
Temperature Grade ⁽¹⁾	2300°F (1260°C)
Non-combustible	Per EN ISO 1182
Surface Burning	Per ASTM E84 Flame Spread = 0 Smoke Developed = 0
Marine Certifications	Lloyd's Register, ABS, DNV, BV USCG compliant

⁽¹⁾Temperature Grade based upon European Norm 1094 (EN1094).



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Typical Product Parameters

Standard Roll Sizes		
Thickness (in)	Length (ft)	Density (lb/ft ³)
0.5	25	6
1.0	25	4, 6, 8, 9
1.5	12.5	6, 8
2.0	12.5	4, 6, 8, 9
2.2	12.5	4, 6

Standard width is 24". Aluminum foil facing (.0015") is available upon request. For availability of nonstandard dimensions, contact Customer Service at 716-768-6500. Minimum order quantity may apply.

Thermal Characteristics		
Ambient Insulation Performance, 4 lb/ft ³		
Blanket Thickness (in)	R-Value	U-Value
1.0	0.78	1.28
1.5	1.19	0.84
2.0	1.59	0.63
2.2	1.72	0.582
Ambient Insulation Performance, 6 lb/ft ³		
Blanket Thickness (in)	R-Value	U-Value
1.0	0.73	1.37
1.5	1.11	0.90
2.0	1.46	0.68
2.2	1.61	0.62

Based on thermal conductivity of FyreWrap Blanket measured to BS EN 12667 at 10°C of 0.0342 W/mK. For blanket densities greater than 6 lb/ft³, the same values may be used.

Acoustic Characteristics					
Sound Absorption Coefficient					
Frequency (Hz)	FyreWrap Blanket				
	1.0 in x 6 lb/ft ³	1.5 in x 6 lb/ft ³	2.0 in x 6 lb/ft ³	1.0 in x 8 lb/ft ³	2.0 in x 8 lb/ft ³
125	0.00	0.14	0.31	0.02	0.11
250	0.18	0.56	1.08	0.40	0.93
500	0.61	1.05	1.17	0.96	1.10
1000	0.90	1.16	1.13	1.06	1.06
2000	1.04	1.09	1.08	1.05	1.10
4000	1.09	1.06	1.03	1.06	1.12
5000	1.12	1.08	0.95	1.08	1.12
NRC	0.68	0.96	1.12	0.87	1.05

Test method BS EN ISO 354:2003 or BS EN 20354:1993 using plain blanket. Foil facing will reduce the sound absorption performance.

Installation

FyreWrap Marine Blanket is available in a variety of thicknesses and densities. The material selected and its installation parameters depend upon the specific application and required fire rating. Copies of current marine certifications (with USCG Approval Numbers) and system drawings are available on the Unifrax website at <http://www.unifrax.com/product-resources/certifications/>.

Additional information on thermal, acoustical and shock performance is available in the FyreWrap Marine Guide, Form U-710 EN available at <http://www.unifrax.com/product-resources/brochures/>.

Refer to the product Safety Data Sheet (SDS) for recommended work practices and other product safety information.

Unifrax has a wide range of FyreWrap fire protection materials available to provide passive fire protection solutions in a variety of applications in the commercial building, industrial facility and transportation industries.

For additional information about product performance or assistance identifying the recommended product for your fire protection application, please contact Unifrax Fire Protection Application Engineering at 716-768-6298.

FyreWrap®

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The test data shown are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes. Product Information Sheets are periodically updated by Unifrax. Before relying on any data or other information in this Product Information Sheet, you should confirm that it is still current and has not been superseded. A Product Information Sheet that has been superseded may contain incorrect, obsolete and/or irrelevant data and other information.

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