

## FyreWrap® XFP® Expanding Paper

### Introduction

FyreWrap® XFP® Expanding Paper is a flexible, lightweight, high-temperature intumescent mat that expands up to three times its thickness when exposed to temperatures above 620°F (325°C). In the event of a fire, the UL Recognized Component material is designed to expand and fill cracks and voids to prevent the spread of flames, heat, and smoke. Manufactured from high-temperature refractory ceramic fibers, XFP effectively withstands temperatures to 2300°F (1260°C). With the optional addition of an integral radiant foil barrier, the composite material provides:

- High temperature stability
- Low thermal conductivity
- Expansion fills potential heat, fire paths
- Thermal reflectivity
- Superior flexural integrity
- Effective moisture barrier

XFP possesses excellent handling properties and effectively resists flexural damage and compression deformation in service. During installation, it is easy to cut and fabricate.

XFP exhibits excellent chemical stability and resistance to attack from most corrosive agents. Exceptions include hydrofluoric acid, phosphoric acid and strong alkalis.

### Product Forms

FyreWrap XFP Expanding Paper is a composite blend of alumina-silica refractory ceramic fibers, unexpanded vermiculite and an organic binder system. The finished composite material is supplied plain (XFP) or as a laminate of the high-temperature intumescent mat with a choice of either aluminum foil (XFP-A) or stainless steel foil (XFP-S) bonded to one face.

### Applications

XFP has been tested extensively by Underwriter Laboratories (UL) and is a Recognized Component under the Intumescent Mat category, file number R15435. XFP has been used in a variety of passive fire protection systems that have achieved 1- and 2-hour fire ratings. In addition, XFP can be used as an effective sealing material to meet a broad range of high-temperature industrial gasketing requirements. Specific applications for XFP include:

- Expansion joint fire barriers
- Construction corner guards
- Cable tray fire protection
- Fire Dampers/Ceiling Diffusers
- High-temperature gasketing and packing
- Industrial furnace expansion joints
- Fire-rated doors and window seals



### Typical Product Properties

Color	Mottled Gray & White
Temperature Grade	2300°F (1260°C)
Expansion Temperature	620°F (327°C)
Expansion Ratio	3:1
Surface Burning Characteristics (per ASTM E-84)	Flame Spread = 0 Smoke Developed = 0

The continuous use limit of FyreWrap products is determined by irreversible linear charge criteria, not melting point.

### Typical Product Parameters\*

Chemical Analysis	Weight Percent
Alumina-Silica Fibers	30-45%
Unexpanded Vermiculite	45-60%
Organic Binder	5-9%
Nominal Density	39 lbs/ft <sup>3</sup> (0.63 g/cm <sup>3</sup> )
LOI (Loss On Ignition) 1650°F (900°C)	15% Wt. Max.
Product Dimensions	
Thickness	0.10", 0.15", 0.20", 0.25"
Width	24", 49"
Length	20.5', 25', 50'

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

\*For availability of non-standard sizes and thicknesses, contact our Customer Service Department at 716-278-3800.

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

## Other Fire Protection Products and Applications

Unifrax offers many UL listed Fiberfrax® and FyreWrap® product forms and FyreWrap fire protection materials for passive fire protection applications, such as:

Product	UL File Number
FyreWrap® Duct Insulation Products	R14514
Insulfrax® S Blanket	R14514
Fiberfrax® Dura® Ceramic Fiber	R14514
Fiberfrax® Duraboard® Ceramic Fiber Board LD	E75289
Fiberfrax® Ceramic Fiber Papers (110/440)	E75289
Fiberfrax® Ceramic Fiber Papers (970)	MH7030
Fiberfrax® Lo-Con™ Felt	MH7030
Fiberfrax® Moist Pak-D®	E75289

These products offer solutions in applications such as:

- Grease, HVAC Ducts
- Cable Trays, Conduits
- Control System Covers
- Above Ground Storage Tanks
- Marine Bulkheads, Decks
- Structural Steel
- Construction Joints
- Curtain Walls/Safing
- Circuit Protection
- Railroad Tank Cars
- Transit Cars
- Ships
- Expansion Joints
- Fire Door Seals
- Chimney Liners
- Ceiling Air Diffusers
- Hazardous Material Storage Containers



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 to identify the recommended product for your fire protection application, please contact the Unifrax Application Engineering Group at 716-278-3888.



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Page 2 of 2

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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.

# FyreWrap

**Unifrax I LLC**  
Corporate Headquarters  
2351 Whirlpool Street  
Niagara Falls, New York 14305-2413  
Telephone: 716-278-3800  
Telefax: 716-278-3900  
Internet: [www.unifrax.com](http://www.unifrax.com)  
Email: [info@unifrax.com](mailto:info@unifrax.com)