

FyreWrap® 0.5 Plenum Insulation

Introduction

Unifrax's FyreWrap® 0.5 Plenum Insulation is a high-temperature insulation blanket specifically designed to provide a single layer, flexible enclosure around combustible items located within fire-rated return air plenums. New construction, building renovations or modifications to the electrical and mechanical systems may result in the installation of plastic pipe or plastic-coated cables that cannot meet the minimum combustibility requirements defined in the Mechanical Code. FyreWrap 0.5 Plenum Insulation provides fire protection for these installed items by preventing flame propagation and smoke development in the plenum area. FyreWrap 0.5 Plenum Insulation offers the following product features:

- Lightweight, flexible product form
- Scrim encapsulated
- Easy to cut, fabricate, wrap around pipes or cables
- Thin, single layer design
- High-temperature, biosoluble fiber

Product Components

Core Material: FyreWrap 0.5 Plenum Insulation incorporates Insulfrax® Thermal Insulation as its core material. Insulfrax is a high-temperature insulation made from a calcia, magnesia, silica chemistry designed to enhance biosolubility. It provides excellent insulation in a noncombustible blanket product form.



FyreWrap 0.5 Plenum Insulation

Encapsulating Material: The core insulation blanket is completely encapsulated in an aluminum foil, fiberglass reinforced scrim covering. This scrim provides additional handling strength as well as protection from moisture absorption and tearing.

Typical System Properties

Intertek Laboratories (OPL) Listed	Applied Fire Protection, File 16341-3
UL 1887 – modified results	Passes; OPL Design No. PP102, PP103
Plastic Pipe and Cable Sheathing	PVC, CPVC, PB, PE, PP, PVDF and ABS
Plastic Pipe Size (minimum)	1" or larger individual pipes or pipe bundles
Plastic Coated Cable Groupings	3 or more multi-stranded telecommunication wires, each containing a min. 26 strands, min. 24-gauge
ASTM E-136 Non-combustibility	Passes
ASTM E-84/UL 723 Surface Burning Characteristics	UL File No. R14514
	Unfaced Blanket Encapsulated
Flame Spread Rating:	Zero <25
Smoke Developed Rating:	Zero <50



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

Refer to the product Material Safety Data Sheet (MSDS) No. M0200 for recommended work practices and other product safety information.

Typical Product Parameters

Thickness	1/2"
Density	8pcf
Covering	Scrim Encapsulated
Product Availability	24"w x 25LF 48"w x 25LF

Installation

FyreWrap 0.5 Plenum Insulation consists of a single layer system applied directly on to the surface of the combustible item. Cut the insulation to a length sufficient to wrap around the combustible item(s) plus provide a minimum 1" perimeter overlap. Seal all cut edges with aluminum foil tape to ensure there is no exposed fiber. Cut the adjacent piece of Plenum Insulation long enough to wrap around the circumference of the item plus a 1" perimeter overlap. This piece shall also be installed with a minimum 1" longitudinal overlap on to the previously installed piece.

To temporarily secure the Plenum Insulation, optional use of 1" wide filament tape is permitted. Space the tape within 1/2" of the blanket edge and approximately 11" on center. Stainless steel tie wire or banding should be utilized as a permanent attachment. Locate the wire or banding 1/2" from the blanket edge and on 11 1/2" centers. Twist tension the wire or tighten banding to firmly hold the wrap system in place, but not so tight as to cut or damage the blanket. Hand tightening of wire is adequate.

Installation drawings are provided below for additional illustration.

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

FyreWrap® 0.5 Plenum Insulation System

Figure 1: Single Plastic Pipe

Figure 2: Plastic Pipe Bundle


Figure 3: Plastic Pipe or Cable Bundle

Figure 4: Plastic Pipe or Cable Bundle

Legend:

1	FyreWrap® 0.5 Plenum Insulation, One Layer
2	SS Tie wire or banding
3	Aluminum foil tape to seal cut edges
4	Longitudinal overlap 1" min.
5	Perimeter overlap 1" min.

Note: Seal all cut edges with aluminum foil tape.



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