

# 3500SI Intumescent Firestop Spray

## PRODUCT DESCRIPTION

PFP Partners' 3500SI is a highly intumescent firestop sealant based on PFP Partners' environmentally friendly chemistry. 3500SI is a latex-based product designed and tested to firestop through-penetrations, voids and construction joints.

3500SI is virtually odorless also provides a flexible seal which is non-reactive with most substrates.

3500SI can be used on a variety of construction material substrates.

3500SI is non-hazardous, safe for the environment and does not require special shipping procedures. It does not contain solvents and is VOC compliant. Cleaning up is easy with just soap and warm water (non-cured state).

Meets the green building guidelines for adhesives and sealants as specified by both the US and Canada Green Building Council's LEED (Leadership in Energy and Environmental Design) Green Building Rating Systems.

## GENERAL APPLICATIONS AND USES

3500SI has been designed specifically to seal through-penetrations and joints against the spread of fire, smoke, fumes and toxic gases in 1, 2, 3 & 4 hour rated floor and wall assemblies.

3500SI has been tested and listed as an effective firestop by third party testing agencies; Underwriters Laboratories (UL & ULC) and Intertek Testing Services - Warnock Hersey (WHI) and meets the requirements of ASTM E84, ASTM E119, ASTM E814, ASTM E-1399, CAN/ULC S101, CAN/ULC S102, CAN/ULC S115, UL 263, UL 763, UL 1479 & UL 2079.

Refer to UL or WHI respective published Fire Resistance Directories or their websites. PFP Partners recommends that this product be installed by those trained in proper installation procedures (TQ Card) and be able to read and understand a firestop system design listing (i.e. UL and/or WHI listing designs).

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3500SI – Intumescent Spray

SPRAY

## PACKAGING

5 us gal. (18.9 L) pail (tapered)

## COLOR

Blue

## SPECIAL ORDER COLORS

Grey, White and Yellow

### Tested and Classified for use in Fire Rated Assemblies:

- Concrete Floors
- Concrete Walls
- Framed Walls

### Firestopping Penetration Items:

- Voids
- Mechanical ducts
- Metallic pipe, conduit and tubing
- Grouped Penetrations
- Electrical, cables, cable trays

### Firestopping Joints:

- Floor-to-Floor
- Wall-to-Wall
- Floor-to-Wall
- Head of Wall

## PRODUCT FEATURES

- Water based formulation
- Non Toxic – Contains no asbestos fillers or volatile solvents
- Elastic properties – non-hardening
- Environmental Safe – No harmful components, solvent free and is VOC compliant – LEEDs – California Air Resource Board SCM Districts – Rule 113 – South Coast Air Quality Management Districts (SCAQMD)
- Can be shipped without restriction and is environmentally friendly
- Inert formula will not interact with substrates
- Works on virtually every base material
- Improves STC Values and upgrades sound quality
- Product is stable over several freeze/thaw cycles; however, care should be taken to not freeze the product
- Cured product is mold and mildew resistant
- Easily installed
- Accepts primer and paint unlike silicone based sealants
- Easy cleanup with water (in wet stage)
- Post-consumer recyclable

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## TECHNICAL DATA

SPRAY

Base	Acrylic-Vinyl Polymer	Color	Blue
Shelf Life	24 months when product is stored in its original unopened packaging and stored in a cool dry place, 40°F to 90°F (4°C to 32°C). Product and substrates should be warmed to at least 43°F (6°C) prior to installation.	Odor	Mild Latex
Storage Temperature	40°F to 90°F (4°C to 32°C)	Volume Expansion	1200% (free expansion)
Application Temperature	43°F to 90°F (6°C to 32°C)	Intumescent Temperature	320°F (160°C)
In-Service Temperature	Up to 120°F (49°C)	VOC (less water)	0.36 lbs/us. gal (44.6 g/L)
Curing System	One-component – Air cured	Specific Gravity (ASTM D-1475)	1.27 to 1.37
Curing Time (ASTM D-1460)	Dry to touch @ 6 mils 20 to 30 min Fully cured time 7 to 14 days (depended on thickness & environment)	Viscosity (ASTM D-2196)	24,000 to 48,000 cps
Solids Content (wt. %)	70 to 75%	pH (ASTM E-70)	7.5 to 8.5
Aging Test (ASTM D-1791)	Passed	Surface Burning Characteristics (ASTM E-84)	Flame Spread Index <25 Smoke Development Index <50
Chemical Compatibility (ASTM D-543)	Passed	Elasticity	Up to 33%
Corrosion (ASTM D-5894)	Passed	Elongation (ASTM D-2370)	Passed
Freeze-Thaw (ASTM D-2243)	Passed	Fungus Resistance (wet) (ASTM D-2574)	Passed
UV Resistance (QEV High Intensity Cycle) 1500 hrs, 200 cycles	Passed	Fungus Resistance (dry) (ASTM D-3273)	Passed
		STC – Breached Wall Recovery (ASTM E-90)	59 Tested in a U411 wall assembly
		Volume Shrinkage (ASTM D-1241)	Passed
		Water Resistance (28 day Solubility Loss)	3%

## MAINTENANCE

The 3500SI does not require maintenance after installation. If, after installation, the firestop sealant is damaged or cut, repairs should be made with the same sealant. Use only materials approved by through-penetration firestop manufacturer as suitable for repair of original seal. Never mix different manufacturer's firestopping materials.

## CHEMICAL COMPATIBILITY

3500SI is chemically compatible with all types of metal, plastic pipe, plastic jacketed wires and cables listed in the system designs.

## STORAGE, HANDLING, TRANSPORTATION

Manufacturer recommends storage temperatures between 40°F to 90°F (4°C to 32°C). Keep product stored in a protected covered area in its original containers. Storage in high heat, high humidity conditions may reduce products shelf life. A stock rotation program is recommended. Transportation temperatures 45°F to 85°F (7°C to 30°C) **DO NOT ALLOW TO FREEZE**

## WARRANTY

Passive Fire Protection Partners will not accept liability for more than product refund. Any claim regarding product defect must be received in writing within 1 year from date of shipment. Passive Fire Protection Partners makes no other warranty or guarantee, express or implied, including warranties or fitness for a particular purpose or merchantability. The seller shall assume on other liability for incidental or consequential damages arising out of the sale or use of this product.

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**INSTALLATION GUIDELINES AND SUGGESTED USE**

SPRAY

**Application**

- Method: Pressurized pot sprayer, brush or roller
- Cleaning: Warm water immediately after application and before curing. Continuously flush pump and hoses with clean water until water runs clear. Dispose of wastewater as per local wastewater regulations.
- Caution: Do not apply 3500SI to wet mineral wool. Mineral wool may cause eye, skin or respiratory tract irritation consult mineral wool manufacturer's MSDS.

**Installation Preparation**

- 3500SI should be applied to surfaces that are dry, clean and free of dust, dirt and grease.

**Health and Safety**

- Hand and eye protection is highly recommended. As with all sealants, consult the MSDS.

**First Aid**

- In case of contact with eyes, flush with large amount of water and consult a physician. For skin contact, wash thoroughly with soapy water. Contact a physician if skin irritation develops or persists. Consult the MSDS for additional information.

**Chemical Resistance**

- Good resistance to water, aliphatic solvents, mineral oils, grease, diluted inorganic acids and alkalis.
- Good resistance to mineral oils and grease.

**Special Application**

- 3500SI should not be installed in submerged conditions.
- 3500SI may be painted; however, due to the larger number of paints and varnishes available a compatibility test before application is strongly suggested.
- 3500SI can be applied to a wide variety of substrates. Performance with specific substrates, such as plastics, metals, etc, may differ according to manufacturer; therefore, it is suggested that preliminary compatibility tests be conducted.

**LIMITATIONS**

This product is not designed to be a waterproof seal. Do not apply if rain is expected within 12 hours, as exposure to snow, rain, running or standing water before the sealant is fully cured may cause the installed material to washout. Not recommended for continuous submersion or use below the waterline. For best results, store and install above 45°F (7°C).

This product is water-based and cures naturally through the evaporation of its water content as a result, slower curing times may occur in low temperature as well as high humidity environments. Also, any materials used in the firestop installation for damming, insulation or support may affect curing times.

Application of this product is not recommended when frost or moisture is present on the surface to be sealed.

**ESTIMATING CHARTS**

**IMPORTANT NOTE:** Estimating charts are for estimating only. Please consult applicable third party testing agency's Fire Resistance Directory for specific installation instructions and requirements.

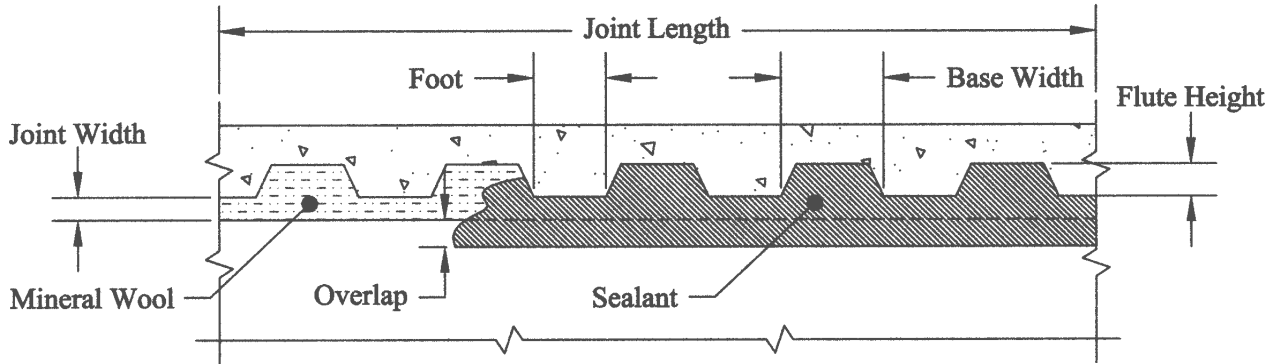
**General Joint Estimating – Imperial – Calculated with 1/2 inch overlap on both sides of joint**

Joint Width (inches)	Linear Feet / Gallon				Joint Width (inches)	Linear Feet / Gallon			
	Sealant Depth (inches)					Sealant Depth (inches)			
	3/32	1/8	3/16	1/4		3/32	1/8	3/16	1/4
1/2	137	103	68	51	4-1/2	37	28	19	14
1	103	77	51	39	5	34	26	17	13
1-1/2	82	62	41	31	5-1/2	32	24	16	12
2	68	51	34	26	6	29	22	15	11
2-1/2	59	44	29	22	6-1/2	27	21	14	10
3	51	39	26	19	7	26	19	13	10
3-1/2	46	34	23	17	7-1/2	24	18	12	9
4	41	31	21	15	8	23	17	11	9

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### General Fluted Metal Deck Joint Estimating – Imperial Sizes



**SPRAY**

**Calculations Include:**

- Both sides of wall assembly
- Variable flute heights
- 3/4 inch construction gap
- 1 inch overlap (1 inch on deck and 1 inch on wall assembly)
- 3/32 of an inch thickness of spray
- 10 percent wastage factor

100 Lineal feet of decking Flute Size (Inches)			Quantity Required	
Height	Base Width	Foot	US gallons	Liters
1-1/2	4.3	1.7	4.6	17.5
3	3.9	2.2	6.1	22.9
3	5.9	2.2	6.1	23.0

**3500SI - Volumes**

Packaging Size	Volume
5 us gal. (18.9 L) pail (tapered)	1155 cu. in. (18900 cm <sup>3</sup> )

## ORDERING INFORMATION

**3500SI - Packaging**

Code	Packaging Size	Color	Dispenser	Units per Case	Units per Skid
SI4	5 us gal. (18.9 L) pail (tapered)	Blue	Spray Machine / Brush or Roller	1	36

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