TECHNICAL DATA SHEET

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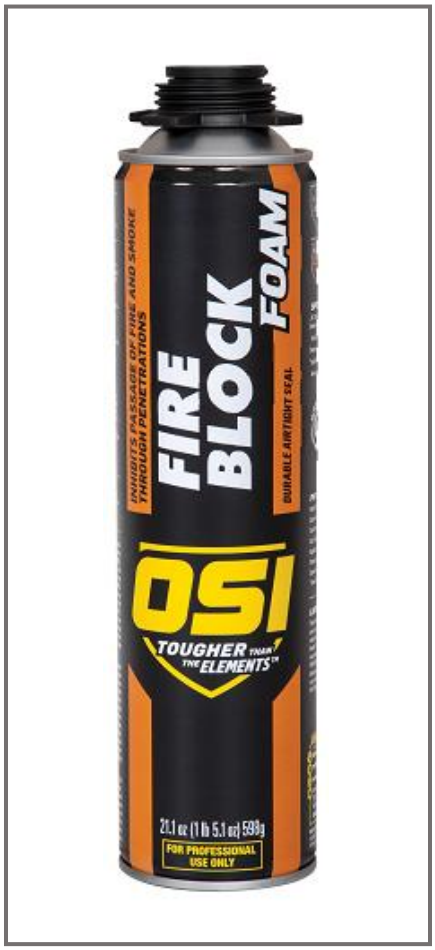


INHIBITS PASSAGE OF FIRE AND SMOKE THROUGH PENETRATIONS

FIRE BLOCK FOAM

DURABLE AIRTIGHT SEAL

DESCRIPTION

OSI® Fire Block Foam is a single component, low-pressure minimal expanding polyurethane foam packaged in a pressurized metal container. Product is designed specifically for use Type V-A, occupancy group R3 and R5 (wood frame) buildings, to seal openings in concealed spaces to resist the migration of fire and hot gases. The Fire Block foam cures upon reaction with moisture to form a flexible, urethane foam that is effective against the passage of smoke and toxic gases through service penetrations. Foam adheres to most types of building materials including wood, concrete, brick, metals, cable jacketing; and will not harm PVC, CPVC and PEX pipe/tubing. It complies with all Federal and State VOC regulations.

Available As:

Item #	Size	Color
2292209	21.1 oz. (598g)	Orange

FEATURES & BENEFITS

- Tested to UL 723 in accordance with ASTM E84
- Tested in accordance with ASTM E814 (modified)
- Conforms to IRC (International Residential Codes) and IBC (International Building Code), fire blocking requirements
- Closed Cell Structure is flexible and will not crack or dry out
- R-Value = 5 per inch (for air-sealing purpose only)
- Orange color identifies OSI® Fire Block as an approved fire block product for Type V-A construction

RECOMMENDED FOR

OSI Fire Block Foam is used to help prevent the spread of fire and smoke through concealed service penetrations in Type V-A, occupancy group R3 and R5 buildings, in accordance with fire blocking requirements outlined in the International Residential Code and International Building Code. “Fire blocking” is defined by the IBC as the use of approved building materials installed in concealed spaces to resist the migration of fire and hot gases.

LIMITATIONS

- Not for use as a “firestop” product and should not be used in hourly fire rated assemblies that require fire stop products.
- Not for use in Type I through Type IV construction
- Some local building codes may restrict the use of polyurethane foams as “fireblocks”. Always check local building codes.
- Do not cut foam. The fire-blocking capabilities are greatly compromised if foam is cut or damaged
- Should not be used in contact with chimneys, heater vents, steam pipes or other areas which could be subject to surface temperatures greater than 187°F.
- For cold-weather applications, product should be stored above 41°F (5° C) at least 12 hours before application
- Cans must be stored upright at all times.
- Does not bond to polyethylene, polytetrafluoroethylene (PTFE)/Teflon® or siliconized surfaces

COVERAGE

Yield per 21.1 oz. can: approximately 29 L (1.02 cu. ft.) maximum	**Approximate yield for a ½” x ½” joint:** 611 ft (186 m)
Please note: Yields shown are based on theoretical calculations, for comparison purposes only, and will vary depending on ambient conditions and particular application use.	

TECHNICAL DATA

Typical Uncured Physical Properties:

Color:	Orange	**Flash Point:**	-155.2°F (-104°C)	
Appearance	Minimal expansion foam	**% Solids by Weight:**	70%	
Base:	Single component polyurethane	**VOC Content:**	16% by weight	CARB
Odor:	Ether-like		177g/l	SCAQMD rule 1168
Specific Gravity:	1.107	**Shelf Life:**	18 months from date of manufacture (unopened)	

Lot Code Explanation: **BEST BY: MM/DD/YYYY (bottom of canister)**
MM = Month of expiration **DD =** Day of expiration
YYYY = Year of expiration

Example: **BEST BY:** 10/28/2017 = Product is best before (expires on) October 28, 2017

Typical Application Properties:

Application Temperature:	Product should be stored above 41°F (5°C) at least 12 hours before application. During application, working environment and substrates should be between 14°F (-10°C) and 95°F (35°C).	
Tack-free Time:	Approx. 8 to 10 minutes*	At 68-73°F, 50% relative humidity and 3 cm diameter bead
Gap Size:	1/4" min. – 1-1/2" max	
Cure Time:	Approx. 24 hours*	*Cure time is dependent on temperature, humidity and depth of sealant applied

Typical Cured Performance Properties:

Color:	Orange		
Temperature Resistance:	-40°F (-40°C) to 248°F (120°C)	Short-term exposure resistance	
Combustible:	This product is organic and therefore is combustible and may constitute a fire hazard if improperly used or installed. It should not be left exposed or inadequately protected. It is strongly recommended that in all applications any exposed foam be protected by plaster, drywall, cement or other approved facings		
Core Density:	.87 – 1.12 lb./ft3 (14-18 kg/m3)		
CLASSIFIED UL R25507 **Surface Burning Characteristics:**	**Flame Spread:** 5 **Smoke Development:** 0	Fire Rating - ASTM E84 / UL 723 Caulking & Sealant Tested - 3 beads applied @ ½" Thickness, 8 in. O.C. covering 5.5% of the exposed test sample area	
R-Value:	4.1 to 5 per inch	ASTM C518	Range can vary due to environmental conditions at time of application
Applicable Specifications:	▪ ASTM E84 / UL 723	UL Classified File # R25507	
	▪ ASTM E 814 (modified)	Alternative for maintaining the integrity of penetrations of fire-blocking - Type V-A, 1-hour fire resistance rated construction only - **File # SV31011**	
	▪ IRC and IBC conformance	2015 IBC Chapter 7 section 718 and IRC Chapter 3 section 302.11. - fire blocking requirements	

DIRECTIONS

Tools Typically Required: OSI Foam Gun (IDH #1413066), OSI Foam Clean (IDH # 1427512).

Safety Precautions: Always wear eye protection, gloves and proper work clothes when using OSI QUAD Fire block. Wash hands after use. Cured foam is difficult to remove from skin, clothing and other substrates. Product may discolor skin.

DIRECTIONS

Preparation: Read all operating instructions packaged with the dispensing unit before using. All surfaces must be free of dust, dirt, oil and other foreign materials. Cover surfaces not intended to be foamed as cured foam is difficult to remove. The temperature of the product must be kept at 41°F (5°C) and for best results between 68°F and 77°F (20°C and 25°C) for at least 12 hours before application (see storage below). Under these conditions, the product can be applied when the surfaces and working area are between 14°F and 86°F (-10°C to 30°C). Shake can well before use. Screw applicator onto coupling unit until it will go no further. Do not over tighten. Shake can well before use (minimum of 15 times).

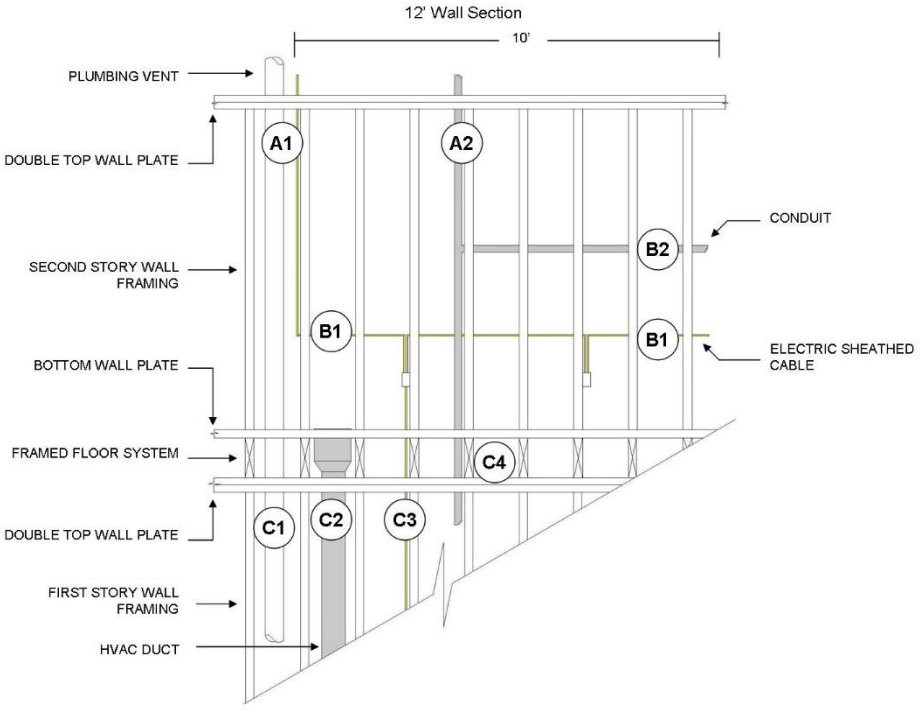
Application: Using the OSI Foam Gun apply foam to fill voids and gaps 1/4" to 1-1/2" in size. Foam is tack-free in 8 - 10 minutes* and fully cured in approximately 24 hour*. Protect foam from prolonged exposure to sunlight, as it will adversely affect the performance of the foam. **Do not cut cured foam**, as fireblocking capabilities are greatly reduced if cut.

Notes:

- Insufficient air, humidity and/or substrate moisture during application may cause delayed curing or improper cell formation of the foam material. Lightly spraying the cavities with a water atomizer in dry or low humidity climates will allow the foam to cure and develop proper cell structure.
- If possible, avoid direct sunshine to the joint during application. Direct sunshine and high temperatures may cause the foam to sag and flow out of the joint during application and before curing. Cooling the can down prior to application may help to prevent this issue.
- If idle for more than 10 minutes, shake can 15-20 times before starting to apply foam.

Application Requirements: OSI Fire Block Foam must be applied in accordance with 2015 IBC Chapter 7 section 718 and IRC Chapter 3 section 302.11. *(NOTE: Some local building codes may restrict the use of polyurethane foams as "firebocks". User is responsible for checking local buildings prior to use this product)*

Concealed Wall Spaces Example: The wall design below summarizes the proper use and placement of the OSI Fire Block Foam for various penetrations identified:



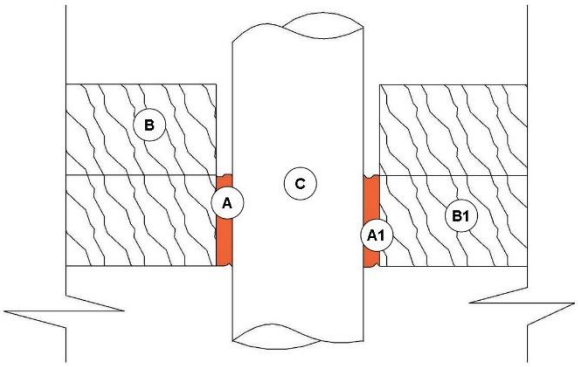
A1: PVC plumbing vent and electric sheathed cable at vertical penetration at ceiling level, trough double top plate, must be sealed with fire block foam
A2: CPVC conduit at vertical penetration at ceiling level, through double top plate, must be sealed with fire block foam
B1: Electric sheathed cable at horizontal penetration through wall studs must be sealed with fire block foam at 10-foot intervals
B2: CPVC conduit at horizontal penetration through wall studs must be sealed with fire block foam at 10-foot intervals
C1: PVC plumbing vent at vertical penetration at ceiling and floor level must be sealed with fire block foam at first story wall double first top plate and second story wall bottom plate
C2: HVAC duct at vertical penetration at ceiling and floor level must be sealed with fire block foam at first story wall double first top plate and second story wall bottom plate
C3: Electric sheathed cable at ceiling and floor level must be sealed with fire block foam at first story wall double first top plate and second story wall bottom plate
C4: CPVC conduit at ceiling and floor level must be sealed with fire block foam at first story wall double first top plate and second story wall bottom plate

DIRECTIONS

Fire Block Foam Application Details:

The fire block penetration details below demonstrate the minimum gap size and amount of fire block foam that must be applied to a penetration, whether vertical or horizontal

OSI® FIRE BLOCK FOAM
VERTICAL PENETRATION

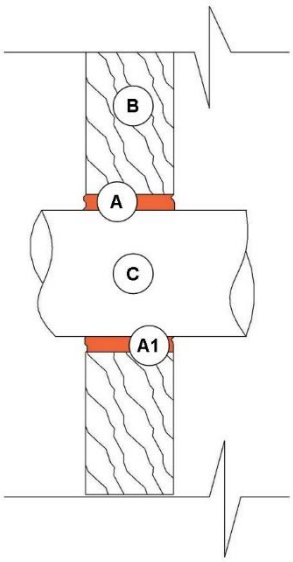


A and A1: OSI Fire Block Foam applied between gap at horizontal double top plate framing and vertical pipe. Gap between framing and penetration material must be a minimum of a 1/4" inch. Fire Block Foam must fill gap. Do not cut expanded foam after cure.

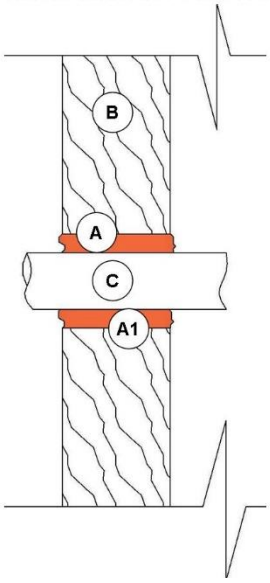
B and B1: Horizontal double top plate wood framing

C: Vertical penetration material (pipe)

OSI® FIRE BLOCK FOAM
HORIZONTAL PENETRATION



OSI® FIRE BLOCK FOAM
HORIZONTAL PENETRATION - CONDUIT

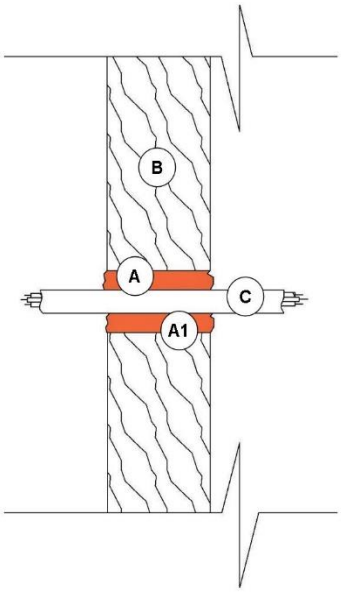


A and A1: OSI Fire Block Foam applied between gap at vertical framing and horizontal penetration material. Gap between framing and penetration material must be a minimum of a 1/4" inch. Fire Block Foam must fill gap. Do not cut expanded foam after cure.

B: Vertical wood framing

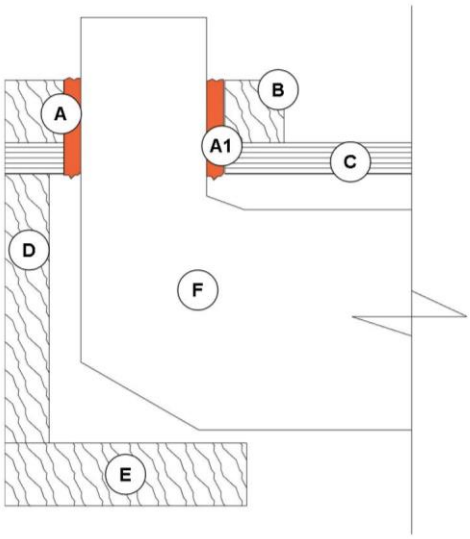
C: Horizontal penetration material (pipe, conduit or sheathed cable)

OSI® FIRE BLOCK FOAM
HORIZONTAL SHEATHED CABLE PENETRATION



DIRECTIONS

OSI® FIRE BLOCK FOAM
FLOOR TO BOTTOM WALL PLATE PENETRATION



A and A1: OSI Fire Block Foam applied between gap at horizontal bottom wall plate framing and vertical penetration material. Gap between framing and penetration material must be a minimum of a 1/4" inch. Fire Block Foam must fill gap. Do not cut expanded foam after cure.

B: Horizontal bottom wall plate framing

C: Plywood floor sheathing

D: Floor rim joist framing

E: First floor horizontal top plate

F: Vertical penetration material (duct)

Maintenance:
If Fire Block Foam is damaged, the damaged section should be removed and reinstalled with a minimum ½" overlapping the adjacent material.

Clean-up:
Clean tools and uncured product residue immediately with OSI Foam Clean. Cured foam is not affected by solvents and is extremely difficult to remove.

STORAGE & DISPOSAL

NOT DAMAGED BY FREEZING. Store away from heat, flame and spark in a cool, dry, well-ventilated area. Storing product in too hot or too cold of conditions will considerably reduce Shelf Life of unopened containers. Use an approved hazardous waste facility for disposal.

LABEL PRECAUTIONS

DANGER! EXTREMELY FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. VAPOR AND SPRAY MIST HARMFUL. OVEREXPOSURE MAY CAUSE LUNG DAMAGE. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. CONTENTS UNDER PRESSURE.

DANGER! Contains polyurethane prepolymer, methylenediphenyldiisocyanate, dimethylether and hydrocarbon propellant mixture. **EXTREMELY FLAMMABLE**. Do not use near sparks, heat or open flame. Vapors may accumulate readily and ignite explosively. Ventilate area during use and until all vapors are gone. **DO NOT SMOKE**. Extinguish all ignition sources. If burned, dried foam may release hazardous decomposition products. Dried foam may be combustible if exposed to flame or temperatures above 325°F. **CONTENTS UNDER PRESSURE.** Avoid prolonged exposure to sunlight or heat from radiators, stoves, hot water and other sources that may cause bursting. Do not puncture, incinerate, burn or store above 120°F. Do not discard empty can in garage compactor.
VAPORS AND SPRAY MIST HARMFUL. Gives off harmful vapor of solvents and isocyanates. Do not use if you have chronic lung or breathing problems, or if you have ever had a reaction to isocyanates. Use with adequate ventilation. Use appropriate respiratory protection when potential to exceed limits exists. If you have breathing problems during use, leave the area and get fresh air. If symptoms persist, call a doctor or obtain medical treatment; have this label with you**. EYE AND SKIN IRRITANT**. Avoid contact with eyes and skin. Prolonged or repeated skin contact may lead to sensitization and dermatitis. Wash hands after using. Do not swallow. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
FIRST AID: For eye contact flush with water for 15 minutes. Call a physician if irritation develops and persists. For skin contact, wipe off excess uncured foam with clean rag or paper towel immediately. Get medical attention if irritation develops and persists. If affected by inhalation, remove to fresh air and contact a physician. If swallowed, do not induce vomiting. Call a physician or Poison Control Center immediately. For professional use only. See SDS for more safety and health information. **KEEP OUT OF REACH OF CHILDREN.**

⚠ **WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov.**

Refer to the Safety Data Sheet (SDS) for further information.

DISCLAIMER

The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Henkel recommends purchasers/users should test the products to determine acceptable quality and suitability for the intended use. All adhesive/sealant applications should be tested under simulated or actual end use conditions to ensure the adhesive/sealant meets or exceeds all required project specifications. Since assembly conditions may be critical to adhesive/sealant performance, it is also recommended that testing be performed on specimens assembled under simulated or actual production conditions. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

LIMITED WARRANTY

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For Technical Assistance call: 1-800-624-7767 – Mon-Fri - 9:00a – 4:00p ET
www.ositough.com

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