Fire Block Foam

DESCRIPTION

LOCTITE® Fire Block Foam is a specially designed, closed cell, insulating foam used to fill gaps and resist the migration of fire and hot gasses in Type V residential (wood frame) construction. This foam is orange in color and easily identifiable on the jobsite. Best for use where a fire rated foam is needed such as electrical, plumbing, and HVAC penetrations. Fire Block Foam is UL Certified and ASTM tested.

Available as:

Item #	Package	Size	Color
2866858	Metal Aerosol Canister	12 oz. (340 g)	Orange

FEATURES & BENEFITS

- Specially formulated for fire blocking applications
- Orange color identifies Loctite Fire Block Foam as an approved fire block product for Type V-A construction
- Fire rated and tested in accordance to:
  - UL 723 in accordance with ASTM E84
  - ASTM E814 (modified)
  - NFPA 286 (modified)
- Conforms to IRC (International Residential Codes) and IBC (International Building Code) fire blocking requirements

RECOMMENDED FOR

Loctite Fire Block Foam is designed specifically 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. Fire Block Foam may also be used for gap filling purposes around wiring and plumbing penetrations, HVAC duct work, basement and crawl space drafts, sill plate, attic hatch, and is for both interior and exterior use.

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 subjected to surface temperatures greater than 187°F
- For cold weather application, product should be stored above 41°F (5°C) at least 12 hours before application
- Despite significantly higher UV resistance, it is still recommended to protect the foam from UV radiation. Exposed foam should be coated with a protective covering or coating
- Does not bond polyethylene, polytetrafluoroethylene (PTFE)/Teflon® or siliconized surfaces
- Certain materials such as rubbers and plastics may have bonding difficulties. Test before use
- Flexible sheet goods

COVERAGE

A 12 fl. oz. (340 g) can will extrude a ½" bead approximately 349 ft. (106 m)

Note: Yields shown are based on theoretical calculations, for comparison purposes, and will vary depending on ambient conditions and particular application conditions and particular application

TECHNICAL DATA

Typical Uncured Physical Properties

Color:	Orange	
Appearance:	Minimal expansion foam	
Base:	Single component polyurethane	
Flash Point:	-155.2°F (-104°C)	
Specific Gravity:	1	
VOC Content:	16% by weight	CARB
	177 g/l	SCAQMD rule 1168
Shelf Life:	18 months from date of manufacture (unopened)	

Lot Code Explanation:

PROD: MM/DD/YYYY or BEST BY: MM/DD/YYYY (located on bottom of cannister)
MM = month of manufacture
DD = day of manufacture
YYYY = year of manufacture

Example: PROD: 10/31/2022 = October 31, 2022 is the date of manufacture

BEST BY: 10/31/2022 = Product performs best when used by October 31, 2022

Typical Application Properties

Application Temperature:	Ambient conditions should be between 14°F (-10°C) and 95°F (35°C). Can temperature should be between 41°F (5°C) and 86°F (30°C).
Odor:	Slight ether
Gap Size:	¼" min – 1" max (6 mm – 25 mm)
Tack-Free Time:	8 – 10 minutes* at 68-73°F (23°C), 50% relative humidity, and 1" (3 cm) diameter bead
Cure Time:	Approximately 12 – 24 hours*
Clean Up:	Clean up uncured foam residue with acetone. Scrape away cured foam using a sharp-edged tool. Follow solvent manufacturer's precautions for using solvents.

Time is dependent upon temperature, humidity, and depth of sealant applied.

Typical Cured Performance Properties

Color:	Orange
Service Temperature:	-40°F (-40°C) to 194°F (90°C)
Combustible:	This product is organic and therefore 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, in all applications, any exposed foam be protected by plaster, drywall, cement, or other approved facings.
Core Density:	0.87 – 1.12 lb./ft^3 (14-18 kg/m^3)

R40832

Surface Burning Characteristics

Flame Spread:	5	Fire Rating – ASTM E84 / UL 723
Smoke Development:	0	Tested as 2 beads applied at ½" thickness, 8" O.C. covering 5.5% of the exposed test sample area
ASTM E84 / UL 723	UL Classified File #R40832	
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 Number – R39255.	
IRC and IBC conformance	2015 IBC Chapter 7 section 718 and IRC Chapter 3 section 302.11. - fire blocking requirements	

DIRECTIONS

Tools Typically Required:
Utility knife, painter's tape, or foil for protecting surfaces.

Safety Precautions:
Always wear eye protection, gloves, respiratory protection, and proper work clothes when using LOCTITE Fire Block Foam. Protect surrounding work area from accidental foam overspray. Cured foam is difficult to remove from skin, clothing, and other substrates. May discolor skin. When transporting cans by passenger car, leave the container wrapped in a cloth in the trunk, never in the passenger compartment. Maximum temperature should never exceed 120°F (49°C).

Surface Preparation:
Ensure all surfaces are clean and free from dirt, dust, oil, and other contaminants likely to impair adhesion. Surfaces can be moist but not frosted or iced. Cover surfaces not intended to be foamed. To ensure full and even curing of the foam on porous substrates (i.e., brickwork, concrete), moisturize surfaces with water spray before application.

General Preparation:
The temperature of the product must be kept above 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 95°F (-10°C to 35°C). Shake can vigorously before use. Screw straw dispenser trigger completely onto can valve. Use caution to avoid activating the valve. Shake can well before use (approximately 1 minute).

Application:
To become familiar with product, test on an experimental surface. With valve end of can down, squeeze trigger to dispense foam into voids and gaps ¼" – 1" (6 mm – 25 mm) in size. Fill gaps to approximately 30% initially. Shake can regularly during use. Slight misting with water can speed cure. If necessary, cured foam can be trimmed with a knife, however, fire blocking capabilities are greatly reduced if cut. Foam will be fully cured in approximately 24 hours. It is recommended foam be protected from UV radiation by a protective covering or coating, such as paint, plaster, mortar, etc. to avoid discoloration.

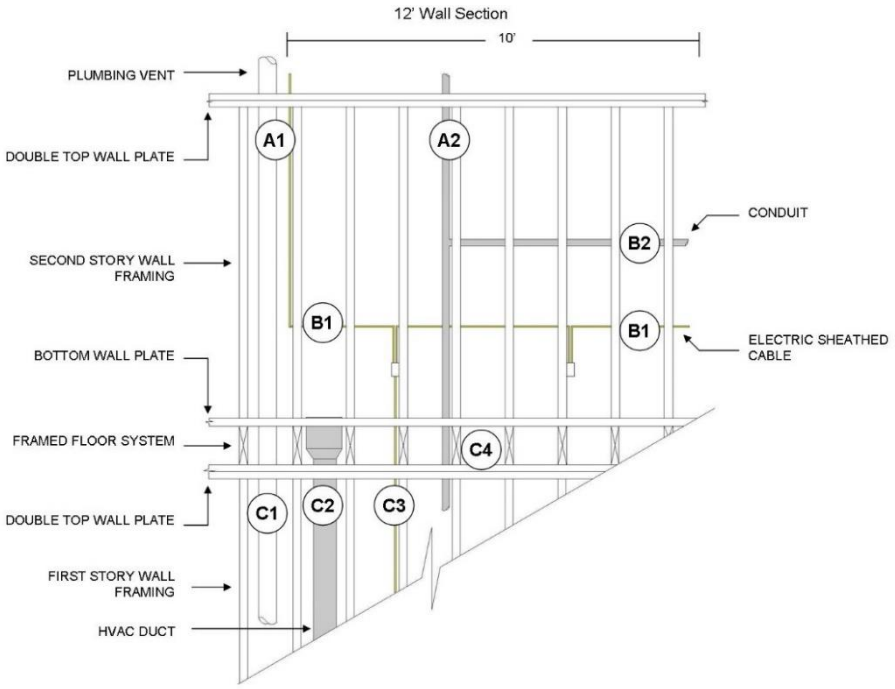
Notes:

-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.

Concealed Wall Spaces Example: The wall design below summarizes the proper use and placement of LOCTITE Fire Block Foam for fire blocking purposes on various penetrations identified:

DIRECTIONS



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

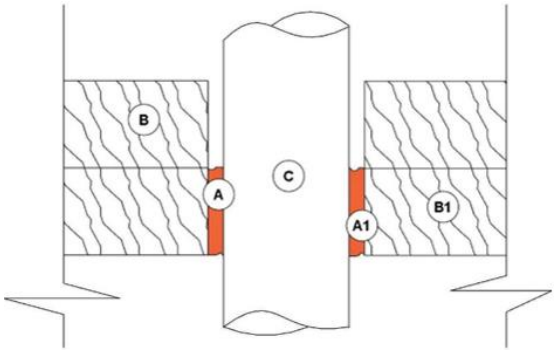
C3: Electric sheathed cable at ceiling and floor level must be sealed with Fire Block Foam at first story wall double first top plate and second story wall bottom plate

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

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.

Vertical Penetration



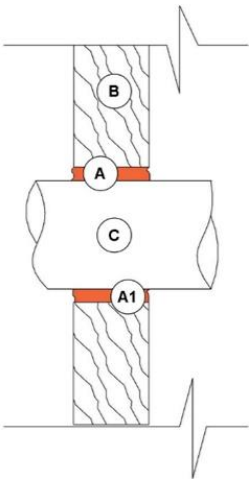
A and A1: Fire Block Foam applied between gap at horizontal double top plate framing and vertical pipe. Gap between framing and penetration material must be a minimum of ¼" (6 mm). Fire Block Foam must fill gap. Do not cut expanded foam after cure.

B and B1: Horizontal double top plate wood framing

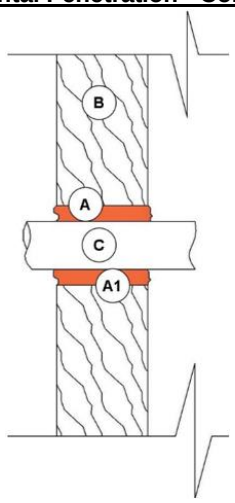
C: Vertical penetration material (pipe)

DIRECTIONS

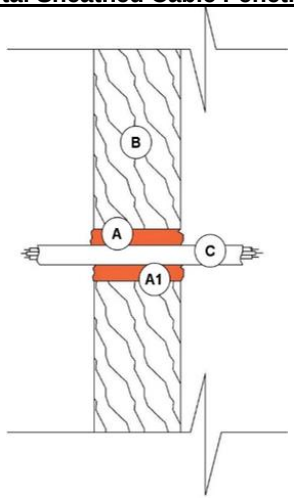
Vertical Penetration



Horizontal Penetration - Conduit



Horizontal Sheathed Cable Penetration

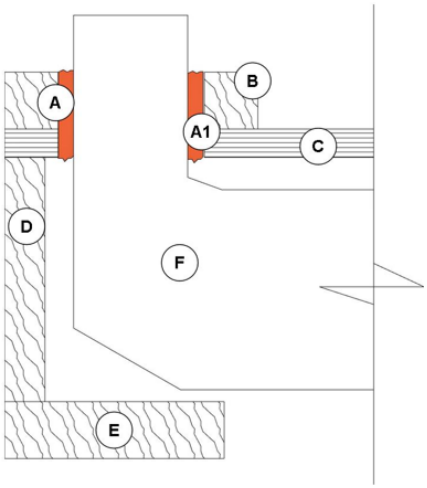


A and A1: Fire Block Foam applied between gap at vertical framing and horizontal penetration material. Gap between framing and penetration material must be a minimum of ¼". Fire Block Foam must fill gap. Do not cut expanded foam after cure.

B: Vertical wood framing

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

Floor to Bottom Wall Plate Penetration



A and A1: 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 ¼". 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 acetone. Cured foam is not affected by solvents and is extremely difficult to remove.

STORAGE & DISPOSAL

Product must be stored vertically, not horizontally on its side.

Store in a cool, dry place. For maximum performance and shelf life, store between 41°F (5°C) and 77°F (25°C). The product can be stored for a maximum of 1 week at -4°F (-20°C). Do not store below -4°F (-20°C); below this temperature product valve may spontaneously open, resulting in leakage.

Containers are under pressure. Do not expose to open flame or temperatures above 120°F (49°C). Do not store under direct sunlight. Excessive heat can cause bursting and premature aging of components resulting in shorter shelf life. When containers are empty, vent off any excess pressure. DO NOT discard empty can in garbage compactor. DO NOT incinerate. DO NOT puncture, cut, or weld container.

Recommended method of disposal for unused product: Vent off excess pressure and dispose of in an appropriate waste receptacle. Dispose of according to federal, state, and local governmental regulations.

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

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