

TECHNICAL DATA SHEET



Fireblock One-Component Polyurethane Foam

Handi-Foam® Fireblock is a multiple purpose UL classified one-component polyurethane foam designed within the international guidelines for protection of the ozone layer, and with respect to the Montreal Protocol, 1987 and other environmental guidelines. The propellants/blowing agents are non-ozone depleting (non-CFC, non-HCFC) and environmentally compliant. Refer to the Product Storage and Special Handling sections of this document for information regarding the use of flammable aerosol propellants. It is designed to be dispensed through any of the professional one-component dispensing units specifically designed for dispensing Handi-Foam Polyurethane Gun Foam. Alternately, the product may also be obtained in a "straw foam" version, which is dispensed through the straw adapter supplied with each can.

Application Areas

Fireblocking is required by the International Residential Code, Section R602.8 to be provided in wood frame construction in various locations. Handi-Foam is recognized as an alternative to the methods prescribed by the code for maintaining the integrity of penetrations of fireblocking. See ICC-ES Report # ESR-1868.

Many of the traditionally specified fireblocking prescriptive approaches are tedious, time-consuming and difficult to apply. These prescriptive approaches include dimensional lumber, wood structural panels, particle board, gypsum board, cement millboard, mineral wool or fiberglass. Using Hand-Foam Fireblock instead of these prescriptive methods provides significant savings in labor costs, in addition to providing a more efficient and effective seal which also prevents air infiltration. Handi-Foam is engineered for a clean and metered application of one-component polyurethane foam.

Properties

Handi-Foam Fireblock meets ICC Evaluation Service testing standards for fireblocking. It has been tested in accordance with ASTM E 814 (modified) to establish that the integrity of the fireblocking is maintained when the fireblocking is penetrated. In addition, Fomo offers unsurpassed sales and technical service, and a quality management system that is registered to the internationally recognized ISO 9001:2000 standard.

Handi-Foam dries tack-free in approximately 5 minutes, is cuttable in 1 hour and fully cured in 12-24 hours depending on moisture and temperature conditions.

Handi-Foam adheres to almost all building materials with the exception of surfaces such as polyethylene, Teflon®, silicone, oils and greases, mold release agents, and similar materials.

Optimum chemical temperature is between 65°F and 80°F (18°C to 27°C), but may be applied in cold or hot ambient conditions, as long as the working chemical temperature range is maintained. Cured foam is dimensionally stable, and known to be resistant to temperatures ranging between -200°F to +240°F (-129°C to + 115°C).

Cured PU foam is chemically inert and non-reactive in approved applications, and will not harm electrical wire insulations, Romex®, rubber, PVC, polyethylene (i.e. PEX) or other plastic. It is approved for use around wires, plumbing penetrations, etc., and contains no formaldehyde. Cured foam should be protected against UV rays (i.e. sunlight) by painting or staining to prevent long term discoloration or degradation.

Handi-Foam Polyurethane Foam systems require no outside mechanical or electrical power source and are disposable. When applied, the foam will seal bond, and protect against dust, air infiltration, pests, etc.

Preparation For Use

Read all applicable instructions for the foam system and dispensing unit, which are included with each product. Substrate must be clean, firm, free of loose particles and free of dust, grease, mold release agents and similar material. Protect surfaces not to be foamed.

Application / Use

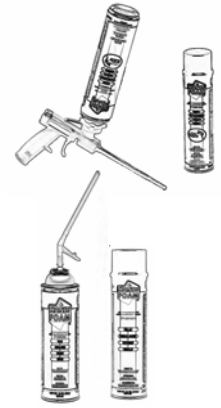
The foam sealant flow can be metered either by pulling the dispensing unit trigger for the desired extrusion rate, or by regulating the amount of valve opening by tilting the straw adapter, if using the straw foam. Foam application can be interrupted when needed as outlined in the instructions. When using gun foam, the dispensing unit will be ready for immediate use, as long as it remains attached to a pressurized container. Empty gun foam container must be replaced immediately with a new container. Filling excessively large cavities can result in a prolonged curing process. Also, insufficient air or substrate moisture during cure may cause delayed expansion.

Remove fresh foam over spray from color safe surfaces with Handi-Cleaner™ (P10083) or solvents such as acetone. Cured foam can only be removed mechanically. This multi-purpose polyurethane solvent is also designed for cleaning the dispensing unit internally for long-term storage and application interruption.

Special Handling

The propellant is extremely flammable during dispensing and cure. Provide sufficient cross-ventilation to remove any buildup of vapors. Keep away from heat, sparks and sources of ignition. Vapors may cause flash fire if ignited. Contents are under pressure. Do not puncture or incinerate. Do not place in hot water or near radiators, stoves or other sources of heat.

Important Note: Use only in well ventilated areas. Wear impervious gloves, protective eyewear and suitable work clothes. Read all instructions and safety information (MSDS) prior to use of any



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Fomo Products, Inc.
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management system registered to ISO 9001:2000



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Technical Data

(METRIC SHOWN IN PARENTHESES)

CORE DENSITY*	1.0 lbs / ft ³ (17.6 kg/m ³)
R-VALUE	4-5 per inch, typically
RSI (METRIC R-VALUE)	(0.7-0.8/inch, 0.005-0.006/mm)
AIR BARRIER PROPERTIES ASTM E-283	
@6.24 psf (300 Pa)	<0.01 cfm/ft ² (0.05 L/s/m ²)
@1.57 psf (75 Pa), extrapolated	<0.0025 cfm/ft ² (0.0125 L/s/m ²)
Closed Cell Content ASTM D-2856	>70%
TACK-FREE TIME 70°F (21°C), 60% RH	Approx. 5 min.
CURE TIME	12 - 24 hours
CUTTABLE (1" Bead)	<1 hour

Approvals / Standards

Handi-Foam Fireblock Polyurethane Foam is approved by the following classifications, codes and standards:

ICC-ES Report # ESR-1868

UL Classified - File # R13919 Caulking and Sealants

ASTM E-84 (12.5%)
Flame Spread 25
Smoke Developed 50

ODP (Ozone Depletion Potential): Contains non-ozone depleting hydrocarbon propellant.

VOC Content: Contains less than 20% by weight VOC's.

NFPA 30B Classification: Level 2 Aerosol

Theoretical Yield*

Product	Bead Size			VOLUME
	1/4" (6.3 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	
24 oz. (680 g) Gun Foam P30181	4403 ft. (1342 m)	1957 ft. (596 m)	1101 ft. (336 m)	1.50 ft. ³ (42 liters)
24 oz. (680 g) Straw Foam P30192	3992 ft. (1217 m)	1774 ft. (541 m)	998 ft. (304 m)	1.36 ft. ³ (39 liters)

*Yields are based on theoretical calculations, for comparison purposes, and will vary depending on ambient conditions and particular application. Theoretical yield is based on published core density (an inverse relationship). Note that straw foam core density may be approximately 5-10% higher than gun foam, and consequently, the theoretical yield is reduced accordingly, based on 1.1 lbs/ft³.

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product. The product contains no formaldehyde. Cured foam is non-toxic. **KEEP OUT OF REACH OF CHILDREN.**

Product Storage

Store in cool, dry area. Do not expose to open flame or temperatures above 120°F (49°C). Excessive heat can cause premature aging of components resulting in a shorter shelf life. Handi-Foam is reusable by following product instructions. Always store dispensing unit with a pressurized container attached to assure correct functioning of gun.

Always read all operating, application and safety instructions before using any products. Use in conformance with all local, state and federal regulations and safety requirements. Failure to strictly adhere to any recommended procedures and reasonable safety precautions shall release the manufacturer of all liability with respect to the materials or the use thereof.

NOTE: Physical properties shown are typical and are to serve only as a guide for engineering design. Results are obtained from specimens under ideal laboratory conditions and may vary upon use, temperature and ambient conditions. Right to change physical properties as a result of technical progress is reserved. This information supersedes all previously published data.

Yields shown are based on theoretical calculations and will vary depending on ambient conditions and particular application. Read all product directions and safety information before use. This product is organic and therefore may constitute a fire hazard if improperly installed. Consult local building codes for specific requirements regarding the use of cellular plastics or urethane products in construction.

WARNINGS: Follow safety precautions and wear protective equipment as recommended. Consult Material Safety Data Sheet (MSDS) for specific information. Prolonged inhalation exposure may cause respiratory irritation/sensitization and/or reduced pulmonary function in susceptible individuals. Onset may be delayed. Pre-existing respiratory conditions may be aggravated. Use only with adequate ventilation or certified respiratory protection. NIOSH approved positive pressure supplied air respirator or a negative pressure half mask with organic vapor cartridge and dust/mist prefilters is recommended if exposure guidelines may be exceeded. Contents may be very sticky and irritating to skin and eyes, therefore wear protective eyewear, impervious gloves, and suitable work clothes when operating. If liquid chemical comes in contact with skin, first wipe thoroughly with dry cloth, then rinse affected area with water. Wash with soap and water afterwards, and apply hand lotion if desired. If liquid comes in contact with eyes, immediately flush with large volume of clean water for at least 15 minutes and get medical help at once. If liquid is swallowed, get immediate medical attention. Products manufactured or produced from these chemicals may present a serious fire hazard if improperly used or allowed to remain exposed or unprotected. Each user of any product should carefully determine whether there is a potential fire hazard associated with such product in a specific usage. **KEEP OUT OF REACH OF CHILDREN.**

LIMITED WARRANTY: The Manufacturer warrants only that the product shall meet its specifications: This warranty is in lieu of all written or unwritten, expressed or implied warranties and the manufacturer expressly disclaims any warranty of merchantability, or fitness for a particular purpose. The buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the replacement of the material. Failure to strictly adhere to any recommended procedures shall release the manufacturer of all liability with respect to the materials or the use thereof. User of this product must determine suitability for any particular purpose, including, but not limited to, structural requirements, performance specifications and application requirements prior to installation and after product is applied.



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