

TECHNICAL DATA SHEET



Handi Foam® eco foam

Handi Foam® eco foam is a multiple purpose, one-component polyurethane foam designed within the international guidelines for the protection of the ozone layer and with respect to the Montreal Protocol, 1987, and other environmental guidelines for protection of the ozone layer. The propellants (blowing agents) are non-ozone depleting (HC) and environmentally compliant. Refer to the product storage and special handling section of this document for information regarding the use of flammable aerosol propellants. Handi Foam® eco foam has been formulated to contain over 10% soy renewable resources.

Handi Foam® eco foam gun foam is designed to be dispensed through any professional one-component dispensing unit. Handi-Foam® eco foam straw foam is designed to be dispensed through a straw adapter (included with each can).

Application Areas

Apply one-component foam onto a clean surface to fill and seal around gaps, beneath base plates, mud sills, top plate penetrations, corner joints, T-joints, exterior cracks, around utility panels, pipes, duct penetrations, etc. It is specifically designed to be dispensed as a bead for filling cracks, crevices, and to fill smaller cavities.

Properties

The pre-pressurized, portable, one-component foam system, applied in a bead form, expands and cures slowly to a semi-rigid, closed cell foam upon reaction with moisture, such as ambient humidity.

This one-component foam dries tack-free in approximately 5 minutes or less depending on moisture and temperature conditions and fully cures within 24 hours. Expansion of 2–3 times the dispensed bead within the first hour should be expected.

One-component 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 -27°C), but may be applied in cold or hot ambient conditions, as long as the optimal 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).

Handi Foam® eco foam is water resistant and will not harm electrical wire insulations, Romex, rubber, PVC, polyethylene or other plastic (i.e. PEX, CPVC). It is approved for use around wires, plumbing penetrations, etc., and contains no formaldehyde. When cured, polyurethane foam is permanent, chemically inert, non-reactive and stable for an indefinite period of time. Cured foam should be protected against UV rays (i.e. sunlight) by painting or staining to prevent long term discoloration or degradation.

Preparation For Use

Substrate must be clean, firm, free of loose particles and free of dust, grease and mold release agents. Protect surfaces not to be foamed.

Shake cans well before using.

For best results in cavities larger than 3 inches in diameter, dampen substrate to supplement atmospheric humidity to affect consistent cure throughout applied foam.

Application/Use

After following instructions for set-up, cans are ready to use. The foam sealant flow can be metered by means of tilting the one piece straw adapter with the valve pointing downwards. By activating the adapter lever carefully, the extrusion rate can be regulated. Foam application can be interrupted when needed, as outlined in the instructions. The gun foam option can be metered by pulling the dispensing unit trigger for the desired rate, or with the metering screw located in the back of the dispensing unit. Foam application can be interrupted when needed as outlined in the instructions and 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 with a new container. Handi Foam® eco foam is especially useful for irregular voids and on non-linear cracks and crevices, as it will expand up to 200% during curing process. 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 with Handi-Cleaner® (P10083) or solvents such as acetone. Cured foam can only be removed mechanically.

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. Turn off all pilot lights. 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 or store above 120°F (49°C).

Important Note: Use only in well ventilated areas. Wear impervious gloves (i.e. nitrile), eye protection and protective clothing when using. Read all instructions and safety information (MSDS) prior to use of any product. Contains no formaldehyde. Cured foam is non-toxic.

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. **KEEP OUT OF REACH OF CHILDREN.**



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Technical Data

DENSITY-STRAWFOAM ASTM 1622	1.60 lbs/ft ³ (25.6 kg/m ³)
DENSITY-GUNFOAM ASTM 1622	.88 lbs/ ft ³ (14.1 kg/m ³)
R-VALUE ASTM C518	4.4 per inch
AIR BARRIER PROPERTIES ASTM E-283 @6.24 psf (300 Pa) @1.57 psf (75 Pa), extrapolated	0.01 cfm/ft ² (0.05 L/s/m ²) <0.0025 cfm/ft ² (0.0125 L/s/m ²)
Closed Cell Content ASTM D-2856	Approx. 40-45%
TACK-FREE TIME	Approx. 5 minutes
CURE TIME	12-24 hours
CUTTABLE	<1 hour

Approvals / Standards

ASTM E-84 Caulking & Sealants
Tested at 12.5% Surface Coverage Area
Flame Spread Less Than 25
Smoke Developed Less Than 50

Handi Foam® eco foam utilizes environmentally sustainable Materials wherever possible.

LEED: This product may contribute credits for LEED (Leadership In Energy & Environmental Design) categories based on the Following:

- Contains approximately 10% by weight of rapidly renewable materials (Soy based Polyol)
- According to SCAQMD Rule #1168 polyurethane foams are classified as architectural foam sealants– VOC content is limited to 250g/L– Eco Foam has less than 20% VOC content by weight

Theoretical Yield*

Product	Bead Size			Volume
	1/4" (6.3 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	
20oz straw foam	2290 ft (698 m)	1018 ft (310 m)	572 ft (174m)	.78 ft ³
20oz gun foam	4109 ft (1252m)	1826 ft (557m)	1027 ft (313m)	1.4 ft ³

*Yields are based on theoretical calculations, for comparison purposes, and will vary depending on ambient conditions and particular application.

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 manufacture 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 fire hazard if improperly used. 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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