www.tigerfoam.com

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TECHNICAL DATA SHEET

Tiger Foam™ Open Cell Spray Foam
Applies to Product ID# TF450 and TF1350. Portable Spray Foam Insulation Systems by Commercial Thermal Solutions, Inc.

Product Description
Tiger Foam™ Spray Foam is a multiple purpose open cell, low density polyurethane spray foam that utilizes a non-flammable blowing agent. Tiger Foam™ Spay Foam is excellent for sound deadening and reducing noise levels.

Approvals and Standards
Tiger Foam™ Open Cell Spray Foam conforms to the requirements of ASTM E84 as a "Class 2" material, tested at 4" thickness.

Flame Spread: 50
Smoke Developed: 450

The **STC rating** indicates how well a wall assembly blocks airborne sound. Our wall assembly was comprised of 5/8" OSB (exterior), one layer of type X gypsum wallboard (interior), 2" x 4" studs with 3 inches of ® **Tiger Foam™ Open Cell Spray Foam**.

The **NRC** is a single number index for rating how absorptive a material is. **Tiger Foam™ Open Cell Spray Foam** has an NRC of .70 at 3 inches in thickness. It will absorb 70% of the sound that comes into contact with it and will reflect 30% of the sound back into space.

Applications
Spray foam onto any dry, clean surface in any direction; even to the underside of a floor or roof deck, to insulate, fill and seal various size voids, deaden sound or reduce vibration. This product will adhere to practically any substrate except Teflon®, oily surfaces, greases, polypropylene, polyethylene, silicone, seals, mold release agents & similar materials. Protect surfaces not to be foamed. Always read all safety data sheets and operating instructions including use of proper personal protective equipment prior to use. **Tiger Foam™ Open Cell Spray Foam** has a free-rise density of 0.75 lbs/ft$^{3.}$ (See page 2 of this document for complete technical data). This product is not recommended for "flash and batt" applications (ex: "Hybrid").

Properties
Two-part, low density, open cell foam systems will begin to expand immediately upon chemical reaction of the "A" component (a polymeric isocyanate) and "B" component (a polyol blend with proprietary additive ratios) chemicals. The foam will cure to a semi-rigid open cell foam. Optimum application temperature is 90°F (32.2°C) but may be sprayed onto colder or warmer substrates, with slight effects on the foam characteristics. Cured foam is resistant to heat and cold, -200 to +240°F (-129 to +115°C), and to aging, but not UV rays (i.e. sunlight) unless painted, covered or coated. 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), CPVC or other plastic. It is approved for use around wires, plumbing penetrations, etc., and contains no added formaldehyde.

Tiger Foam™ Open Cell Spray Foam fully expands and dries tack-free within 30-45 seconds, and fully cures within 1 hour.

Tiger Foam™ Open Cell Spray Foam systems are available in three non-refillable sizes to meet specific job applications requirements. When sprayed, the foam will create a seamless, continuous seal to insulate and protect against dust, air infiltration and pests.

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

Shake kits well *before* using.

Read the enclosed operating instructions available in every kit or they can be found on our website www.tigerfoam.com. Carefully read all cautions and warnings before use. Always refer to the local building codes before application of product.

Use
Warm tanks to 85°F-95°F (29°C-35°C). After following instructions for setup, attach appropriate hose to tanks A and B if needed (II-1350 size). Shake kits well before using. Open tank valves as directed. Materials are dispensed through the hoses. Attach the static cone nozzle to the end of the dispensing unit. The A-component and the B-component meet and mix in the disposable nozzle. With a nozzle attached to the two-component froth dispensing unit, dispense foam by squeezing the trigger of the unit. To interrupt or stop foaming process, release the trigger. Once foaming process has stopped, the dispensing unit must be reactivated within 30 seconds or a new nozzle **must** be installed. Fresh foam may be applied in several stages to reduce overfilling of void or damage to non-rigid, confined cavities. Cured foam can only be removed manually.
* For best results, warm kit for a minimum of 1 day at 85-95°F (29-35°C)

Technical Data (Metric data shown in parentheses)

FIRE RATING: ASTM E-84 (Tested according to ASTM E-84 at a maximum thickness of 4 inches)

Tested @ 4”	Flame Spread = 50 Smoke Developed = 450
R-Value (Metric RSI in parentheses): Aged 28 days @ 70°F	3.7 per inch (RSI=1.05/inch)
Density:	
ASTM D-1622 (Free Rise)	0.75 lbs/ft³ (12 kg/m³)
K-Factor (per inch): **ASTM C-518** - aged 90 days @ 140° F	0.270 BTU·inch / ft²·h·°F (0.0 W/m·K)
Air Barrier Properties: ASTM E-283	
@1.57 psf (75 Pa)	<0.0025 cfm/ft² (<0.0125 L/s/m²)
@6.24 psf (300 Pa)	<0.01 cfm/ft² (<0.05 L/s/m²)
Perm Rating: ASTM E-96 method A	
1" (2.54 cm)	31 perms
3” (7.62 cm)	16 perms
Dimensional Stability: ASTM D2126	
Heat Age: +158°F (70°C) Humid Age: +158°F (70°C), 100% RH Cold Age: -4°F (-20°C)	<5% change for all conditions
Sound Transmission Class	STC 35
Noise Reduction Coefficient	NRC .70
Tack Free/Expansion Time:	30-45 seconds
Cuttable:	3-5 minutes
Fully Cured:	1 hour

Theoretical Yield:

TF450 = 450 board feet = 37.5 cu. ft. (1.06 m³)

TF1350 = 1350 board feet = 112.5 cu. ft. (3.18 m³)

*Yields are based on theoretical calculations, for comparative purposes, and will vary depending on ambient conditions and particular application. For calculating actual yield, it is recommended to reduce this theoretical yield by 10-12% to allow for these variations.

Tank Specifications: DOT—39 Approved Cylinder

TF1350: 58 lbs per tank, 116 lbs per kit

Box Dimensions:

H: 18" (45.7 cm)

W: 13" (33 cm)

L: 13” (33 cm)

TF450: 21 lbs per tank, 42 lbs per kit

Box Dimensions:

H: 16” (40.6 cm)

W: 9” (22.9 cm)

L: 16” (40.6 cm)

*Filled tank weights are approximate for estimation purposes only. Actual gross weight is formulation specific and may be slightly higher or lower.

Product Storage: Store in dry area below 120° F (49°). Do not expose to open flame or temperatures above 120° F (49° C). Excessive heat or cold can cause premature aging of components resulting in a shorter shelf life. Tiger Foam™ is reusable as long as it is stored in a warm place, nozzle tip is changed, and product is shaken before using.

Cold Weather: For best results, the foam chemical temperature must be between 85°F-95°F (29°-35°C). Warm kits for a minimum of 1 day at room temperature. In extreme cold conditions during shipment or storage are encountered, warm tanks for several days at room temperature and shake well, prior to warming chemical for spray application.

Disposal Procedures

1. DO NOT INCINERATE TANKS.
2. After tanks are empty, the hose must be removed and the tanks must be vented. **CAUTION**: Tanks will still be under pressure. Turn valves to the off position before removing hoses. Protective glasses with side shields or goggles, nitrile gloves, clothing that protects against dermal exposure and a certified respirator must be worn during this procedure. With tank inverted, slowly open tank valve, point tank away from face and allow pressure to completely vent. **CAUTION**: Empty tank could contain potential vapor toxicity hazard. Dispose cylinders in a well ventilated area with certified respiratory protection. (Consult MSDS).
3. DISPOSE OF EMPTY CYLINDERS ACCORDING TO APPLICABLE FEDERAL, STATE, LOCAL AND PROVINCIAL REGULATIONS. **CHECK WITH YOUR LOCAL WASTE DISPOSAL SERVICE FOR GUIDANCE**.

Important Note
Warning: Use only in well-ventilated area with certified respiratory protection. Wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Read all instructions and safety information (MSDS) prior to use, which can be found on www.tigerfoam.com or inside the box. The urethane foam produced from these ingredients will support combustion and may present a fire hazard if exposed to a fire or excessive heat about 240°F (116°C). The product contains NO FORMALDEHYDE. Cured foam is non-toxic.

KEEP OUT OF REACH OF CHILDREN

Always read all operating, application, and safety instructions before using any products from Tiger Foam. 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 Tiger Foam from all liability with respect to the materials or use thereof. For additional information, please call Commercial Thermal Solutions, Inc. 1-800-664-0063.

Note: Physical properties shown are typical and 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. 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) at www.tigerfoam.com for specific information. Prolonged inhalation exposure may cause respiratory irritation/sensitization and/or reduce pulmonary function in susceptible individuals. Onset may be delayed. Pre-existing respiratory conditions may be aggravated. Use only in a well ventilated area and with certified respiratory protection. NIOSH approved positive pressure supplied air respirator is recommended if exposure guidelines may be exceeded (see MSDS). Contents may be very sticky and irritating to skin and eyes, therefore wear safety glasses or goggles, nitrile gloves, and clothing that protects against dermal exposure 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. Do not induce vomiting. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration. Products manufactured or produced from these chemicals are organic and, therefore, combustible. 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 from all liability with respect to the materials or 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.