

Folger

Truro Maple Farm

112-0100



MATERIAL SAFETY DATA SHEET

Dow Chemical U.S.A. Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 02841

Page: 1

Product Name: TRYMER (R) 160 UNDERYIELD RIGID FOAM INSULATION

Effective Date: 09/20/90 Date Printed: 09/25/90

MSDS:002256

1. INGREDIENTS: (% w/w, unless otherwise noted)

Polymerized polyurethane modified poly-
 isocyanurate rigid cellular plastic 85-97%
 Trichlorofluoromethane CAS# 000075-69-4 3-15%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary Ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: Not applicable
 VAP. PRESS: Not applicable
 VAP. DENSITY: Not applicable
 SOL. IN WATER: Not applicable
 SP. GRAVITY: Not applicable
 APPEARANCE: Rigid cellular plastic.
 ODOR: None.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: Not applicable
 METHOD USED: Not applicable

FLAMMABLE LIMITS
 LFL: Not applicable
 UFL: Not applicable

EXTINGUISHING MEDIA: If stored or in-place polyurethane or polyisocyanurate foam should ignite, extinguish fire immediately by drenching with water spray from a fire hose. For small fires, use water spray, foam, carbon dioxide, or dry chemical extinguishers.

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

FIRE AND EXPLOSION HAZARDS: Rigid polyurethane and polyiso-

cyanurate foams, in common with other organic materials such as paper, wood, cotton and rubber, can present unreasonable fire risks in certain misapplications when exposed to ignition sources in air. Once ignited, such fires can burn rapidly and produce intense heat, dense smoke and irritating or toxic gases. Rigid polyurethane foams autoignite at about 650-800F (343-427C) and rigid polyisocyanurate foams at about 900-1000F (482-538C).

Carbon dioxide, carbon monoxide, possible traces of hydrogen cyanide, halogen acids, and nitrogen oxides evolved under fire conditions.

The probability of dust explosions from polyurethane or polyisocyanurate dust is very low, however, do not smoke or use naked lights, open flames, space heaters or other ignition sources near rigid foam fabricating operations or near stored buns or sheets.

Install foam only after all welding, cutting or other hot work has been completed. If hot work must be done after foam has been installed, the hot work trade must be warned: Remove foam from immediate work area to a sufficient distance that heat transmitted from the torch or through the metal will not ignite the foam. Remove all combustible material from vicinity of and immediately below work area. Post a fire watcher equipped with a fire extinguisher during and for 30 minutes after hot operations. Stop work immediately if foam begins to smoke and remove more foam from the work area.

When hot-wire cutting rigid polyurethane or polyisocyanurate foam, keep a fire extinguisher nearby. Work should be carried out in well ventilated area - do not breathe fumes.

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus and protective turnout clothing.

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

Protect all indoor bun and sheet storage areas with fusible sprinklers. Maintain a minimum clearance of six feet between tops of foam stacks and sprinkler heads.

4. REACTIVITY DATA:**STABILITY: (CONDITIONS TO AVOID)** Stable.**INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)** None known.**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide, carbon monoxide, possible traces of hydrogen cyanide, halogen acids and nitrogen oxides under fire conditions.**HAZARDOUS POLYMERIZATION:** Will not occur.**5. ENVIRONMENTAL AND DISPOSAL INFORMATION:****ACTION TO TAKE FOR SPILLS:** Not applicable.**DISPOSAL METHOD:** Incinerate or bury in an approved landfill according to local, state, and federal regulations.**6. HEALTH HAZARD DATA:****EYE:** Solid or dust may cause irritation or corneal injury due to mechanical action.**SKIN CONTACT:** Essentially nonirritating to skin. Mechanical injury only.**SKIN ABSORPTION:** Skin absorption unlikely due to physical properties.**INGESTION:** Ingestion is unlikely due to physical state. Physical

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6. HEALTH HAZARD DATA: (CONTINUED)

Injury only. May cause choking if swallowed.

INHALATION: Dust may cause irritation to upper respiratory tract. Vapors/fumes generated in thermal operations such as hot-wire cutting may cause irritation unless area is adequately ventilated. Small amounts of the blowing agent trichlorofluoromethane are released from the material, especially when it is cut. In man, exposures to concentrations > 2500 ppm can cause central nervous system, anesthetic or narcotic effects; at levels > 5000 ppm, it may increase sensitivity to epinephrine and increase irregular heartbeats. Concentrations of the blowing agent anticipated incidental to proper industrial handling are expected to be well below the exposure guidelines.

SYSTEMIC & OTHER EFFECTS: Repeated excessive exposures to dusts may cause respiratory irritation and possibly other respiratory effects.

CANCER INFORMATION: Component trichlorofluoromethane did not cause cancer in laboratory animals in long-term animal studies.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of in vitro ('test tube') mutagenicity tests with trichlorofluoromethane have been negative.

7. FIRST AID:

EYES: Irrigate immediately with water for at least 5 minutes. Mechanical effects only.

SKIN: Wash off in flowing water or shower.

INGESTION: No adverse effects anticipated by this route of exposure.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

8. HANDLING PRECAUTIONS:

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8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE (S): Fluorotrichloromethane (Freon 11; trichlorofluoromethane): ACGIH TLV and OSHA PEL are 1000 ppm Ceiling. None established for the foam. For particulates which have no specific guideline, the ACGIH TLV is 10 mg/m³ and the OSHA PEL is 15 mg/m³ total, 5 mg/m³ respirable.

VENTILATION: Control airborne concentrations below the exposure guideline. Use local exhaust ventilation for dusty operations or when hot-wire cutting.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

SKIN PROTECTION: No skin protection should be needed.

EYE PROTECTION: Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Potential risks associated with rigid polyurethane and polyisocyanurate foams arise from DUST, FIRE and TOXIC THERMAL DECOMPOSITION PRODUCTS and may result from improper storage, inadequate ventilation, improper disposal and/or misapplication.

DUST: The probability of dust explosions from polyurethane or polyisocyanurate dust is very low. Finely divided dust can cause health risks and can irritate the eyes, nose and throat, as can any other nuisance dust. Avoid exposure to any dust, including foam dust. Conduct rigid foam fabrication operations (sawing, routing, fly-cutting, etc.) in areas reserved exclusively for such operations. Do not allow dust to accumulate.

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9. ADDITIONAL INFORMATION: (CONTINUED)

Use cyclone dust collectors on all fabricating power tools. Keep work areas clean. Remove settled dust by vacuuming, not blowing.

FIRE: Polyurethane or polyisocyanurate foam used as a wall or ceiling insulation must not be left exposed, but must be covered as soon as practicable with a fire-resistive thermal barrier of one-half inch gypsum wallboard or the equivalent. If covering is not immediately possible or practicable, post signs that fire risk exists because of the exposed foam. Do not install foam in any flue-like configuration. Do not allow combustible trash or scrap foam to accumulate on the job site. Dispose of scrap foam according to good industrial practice and in accordance with environmental protection regulations. Provide protection for BOTH surfaces of foam used as ceiling insulation. Foam plastic must not remain exposed in attics or crawl spaces.

Store polyurethane and polyisocyanurate foam buns and sheets with adequate aiseways to permit access to all areas.

For more detailed information on precautions for the proper

handling and storage of polyurethanes, polyisocyanurates, and related materials, contact the Urethanes Product Department, The Dow Chemical Company, Midland, Michigan.

MSDS STATUS: Revised Regulatory Information (SARA 313).

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REGULATORY INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
TRICHLOROFUOROMETHANE (CFC-11)	000075-69-4	3 -15 %

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the

Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Not to have met any hazard category

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