

MATERIAL SAFETY DATA SHEET

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

Product Code: 29280

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PRODUCT NAME: ETHAFOAM (R) 220 PLANK BRAND POLYETHYLENE PLASTIC FOAM
(NATURAL OR COLORED)

Effective Date: 11/22/89 Date Printed: 01/04/90

MSDS:003817

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

Polyethylene foam	CAS# 009002-88-4	75-100%
Dichlorodifluoromethane*	CAS# 000075-71-8	0- 4%
Dichlorotetrafluoroethane*	CAS# 000076-14-2	0- 17%
Chlorodifluoroethane*	CAS# 000075-68-3	0- 14%
Stearyl stearamide	CAS# 013276-08-9	0- 2%
Color concentrate in polyethylene		0- 2%

*Blowing agents are fugitive and rapidly leave product after manufacture.

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 applic.
VAP. DENSITY: Not applic.
SOL. IN WATER: Insoluble
SP. GRAVITY: 0.02 - 0.16
APPEARANCE: Cellular solid plastic foam.
ODOR: No odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: Not applic.
METHOD USED: Not applic.

FLAMMABLE LIMITS
LFL: Not applic.

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

UFL: Not applic.

EXTINGUISHING MEDIA: Water fog

FIRE & EXPLOSION HAZARDS: Avoid dense smoke.

FIRE-FIGHTING EQUIPMENT: Wear self-contained, positive pressure breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid fire and temperatures over 625F, 329C.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Under normal combustion conditions carbon monoxide is generated. Additional toxic substances may be released under less than full combustion conditions.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Pick up and handle as any other inert material.

DISPOSAL METHOD: Reuse, or bury in an approved landfill. Follow all local, state, and federal requirements for disposal.

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6. HEALTH HAZARD DATA:

EYE: Solid or dust may cause irritation or corneal injury due to mechanical action. Fumes/vapors released during thermal operations such as hot-wire cutting may cause eye irritation.

SKIN CONTACT: Essentially nonirritating to skin. Mechanical injury only.

SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.

INGESTION: Ingestion is unlikely due to physical state. Physical injury only. May cause choking if swallowed.

INHALATION: Dust may cause irritation to upper respiratory tract. Vapors/fumes generated during thermal operations such as hot wire cutting may cause eye and respiratory irritation. High concentrations of the blowing agents (>5000 ppm) may cause central nervous system, anesthetic or narcotic effects and cardiac sensitization (irregular heartbeats). Blowing agents are fugitive and leave the product within a few weeks after manufacture. In animals, excessive exposure to chlorodifluoroethane has caused low blood pressure, respiratory stimulation and chest tightness (bronchoconstriction). Concentrations of the blowing agents anticipated incidental to proper industrial handling are expected to be well below concentrations which produce the acute inhalation effects listed above for the blowing agents and below the ACGIH TLV and OSHA PEL for

dichlorodifluoromethane and dichlorotetrafluoroethane.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Repeated exposure to dusts may cause respiratory effects. In laboratory animals, repeated excessive exposures to dichlorotetrafluoroethane has caused blood, respiratory and central nervous system effects. Pigments are encapsulated in the product and are not expected to be released under normal processing conditions.

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6. HEALTH HAZARD DATA: (CONTINUED)

CANCER INFORMATION:

When tested separately, dichlorodifluoromethane and chlorodifluoroethane did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS):

Studies in laboratory animals indicate that birth defects are unlikely from exposure to dichlorodifluoromethane and chlorodifluoroethane, blowing agents used in this product.

REPRODUCTIVE EFFECTS:

In laboratory animals, dichlorodifluoromethane did not interfere with reproduction.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):

Results of mutagenicity tests in animals on chlorodifluoroethane and dichlorodifluoromethane have been negative. In vitro studies on dichlorotetrafluoroethane and dichlorodifluoromethane were negative; on chlorodifluoroethane, inconclusive.

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 incidental to proper industrial handling.

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote.

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7. FIRST AID: (CONTINUED)

Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): The ACGIH TLV and OSHA PEL for dichlorodifluoromethane are 1000 ppm. The ACGIH TLV and OSHA PEL for dichlorotetrafluoroethane are 1000 ppm.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

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: Safety glasses should be sufficient for most operations; however, for dusty operations wear chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator.

9. ADDITIONAL INFORMATION:

REGULATORY REQUIREMENTS:

SARA HAZARD CATEGORY: This hazard category classification is listed solely to assist with federal laws under SARA Title III. This classification is not intended nor appropriate for evaluating safe handling and use of this product. The EPA "Hazard Categories" are promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of

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9. ADDITIONAL INFORMATION: (CONTINUED)

1986 (SARA Title III). It is Dow's interpretation that the following category applies to this product:

An immediate health hazard

This determination is based upon potential effects of inhalation of vapors. Dow does not anticipate that adverse health effects will occur as a result of proper industrial handling. Refer to Section 6 of this material safety data sheet under "Inhalation" for further information regarding these effects and concentrations likely to be encountered.

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Practice reasonable care and cleanliness as a common sense safety precaution when handling this product.

Note: When large quantities of this product are stored or fabricated, small quantities of the blowing agent released from the foam may tend to accelerate corrosion of heaters and boilers. Corrosion can eventually create holes in the combustion chamber leading to the release of combustion gases and carbon monoxide, which would endanger the health of persons in the area. Heating equipment should be inspected regularly during every heating season to check for pinholes or larger defects in the combustion chamber.

WARNING: This polyethylene foam is combustible and should not be exposed to flame or other ignition sources. The burning characteristics vary significantly, with the amount of material present and other combustion conditions. Large quantities of foam as might be found in storage or work areas, can burn rapidly with intense heat and produce dense smoke. Under normal combustion conditions, carbon monoxide is generated. Additional toxic substances may be released under less than full combustion conditions. In fire fighting situations, dense smoke should be avoided and positive pressure, self-contained breathing apparatus used.

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9. ADDITIONAL INFORMATION: (CONTINUED)

WARNING: Storage of large quantities of foam in unventilated spaces should be avoided to prevent buildup of combustible vapors.

WARNING: Use of this polyethylene foam in applications involving exposure to children should be reviewed with Dow's Product Steward for polyethylene foam. Choking and/or swallowing of foam by small children may occur.

MSDS STATUS: Revised sections 1, 2, 6, 7, 8, and 9.

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