

Folage

1961.

235-0005 thru 235-0100
235-0120, 235-0125,
235-0405 thru 235-0500

MATERIAL SAFETY DATA SHEET

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

Product code: 81568

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Product Name: STYROFOAM (R) BRAND FLORAL & CRAFT WHITE FULLY PLANED BILL
EXTRUDED POLYSTYRENE (6.25 INCH)

Effective Date: 03/13/91 Date Printed: 03/19/91

MSDS:001636

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

Polystyrene	CAS# 009003-53-6	Balance
Hexabromocyclododecane (HBCD)	CAS# 025637-99-4	0- 2%
Ethyl chloride	CAS# 000075-00-3	0- 4%
Chlorodifluoroethane	CAS# 000075-68-3	0-10.0%

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: None
SP. GRAVITY: .027 To .064
APPEARANCE: Rigid cellular foam board.
ODOR: No odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 670F, 354C Flash Ignition Temperature.
METHOD USED: ASTM D1629 Proc. B.

FLAMMABLE LIMITS
LFL: Not applicable
UFL: Not applicable

EXTINGUISHING MEDIA: Water spray.

FIRE & EXPLOSION HAZARDS: Emits dense, black smoke when burned.

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

Certain operations, such as grinding or cutting, may lead to a build-up of dust suspended in air which can cause an explosion if ignited. Provide adequate ventilation, and appropriate dust handling systems.

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

Apply large volume of water directly on flame or burning surface.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid fires and high temperatures. Temperatures over 300C (572F) will release combustible gases.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Aromatic hydrocarbons, higher (>C5) aliphatic hydrocarbons, esters, amines, higher aldehydes.

HAZARDOUS DECOMPOSITION PRODUCTS: Does not normally decompose. In smoldering or flaming conditions, carbon monoxide, carbon dioxide, carbon are generated. Evolution of small amounts of hydrogen bromide, hydrogen chloride and hydrogen fluoride occurs when burned or heated over 250C (482F); under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated.

Studies have found that the products of combustion of this polystyrene foam insulation are no more acutely toxic than the products of combustion of other common building material such as wood.

HAZARDOUS POLYMERIZATION: Will not occur.

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5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Pick up, or if dust or in small pieces, sweep up, and place in suitable container for disposal.

DISPOSAL METHOD: Bury in an approved landfill, or burn in an adequate incinerator with excess oxygen, in accordance with all 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: Mechanical injury only. Essentially nonirritating to skin.

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. Excessive exposure to chlorodifluoroethane and/or ethyl chloride blowing agents may cause central nervous system depression, anesthetic effects and irregular heartbeats (cardiac sensitization). In animals, excessive exposure to chlorodifluoroethane has caused low blood pressure, respiratory stimulation and chest tightness (bronchoconstriction).

Concentrations of the ethyl chloride and chlorodifluoroethane blowing agents anticipated incidental to proper handling are expected to be well below those which cause the acute inhalation effects listed above, as well as below the OSHA PEL and Dow Industrial Hygiene Guide.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Repeated exposures to

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6. HEALTH HAZARD DATA: (CONTINUED)

dusts of this material are not anticipated to result in systemic toxicity or permanent lung injury; however, such exposures may cause less severe respiratory effects.

CANCER INFORMATION: An increase in uterine tumors has been reported in female mice exposed for their lifetimes to 15,000 ppm ethyl chloride. Such tumors did not occur in rats similarly exposed. These results are of unknown relevance to humans. Neither polystyrene foam dust nor chlorodifluoroethane caused cancer in long-term animal studies.

TERATOLOGY (BIRTH DEFECTS): No birth defects were seen in animal studies with ethyl chloride or chlorodifluoroethane.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results for hexabromocyclododecane (HBCD) are negative. Ethyl chloride

and chlorodifluoroethane have been shown to be negative in some in vitro ('test tube') mutagenicity tests and positive in others. Mutagenicity tests in animals on chlorodifluoroethane have been negative.

7. FIRST AID:

EYES: Flush eyes with plenty of water; mechanical effects only.

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

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

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

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8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): Ethyl chloride: Dow IHG is 150 ppm;
ACGIH TLV and OSHA PEL are 1000 ppm. Dow IHG for
chlorodifluoroethane is 1000 ppm.

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

RESPIRATORY PROTECTION: When exposure guidelines may be exceeded,
or in dusty atmospheres, use an approved 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.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Limited industrial hygiene measurements of ethyl chloride in
ventilated warehouses and production facilities indicate that
ethyl chloride present in the air is below the current 150 ppm
IHG for ethyl chloride.

Gas fired recirculating air furnaces or heaters, gas water
heaters, etc., drawing air from areas where there may be a
presence of ethyl chloride and chlorodifluoroethane gases from
storage or fabrication of extruded polystyrene foam, can be
subjected to rust and corrosion problems as a result of thermal
decomposition of the blowing agents to hydrogen chloride.

This extruded polystyrene foam insulation is combustible and
should be handled and installed properly. Use only as directed
by the specific instructions for this product. This plastic
foam contains a flame retardant additive to inhibit accidental
ignition from small fire sources. During shipping, storage,
installation and use this material should not be exposed to

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9. ADDITIONAL INFORMATION: (CONTINUED)

flame or other ignition sources.

This foam product should not be stored or used in confined, virtually airtight spaces to prevent build-up of combustible vapors.

MSDS STATUS: Revised section 1, 3, 6, 8.

For information regarding state/provincial and federal regulations see The Regulatory Information Section.

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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
CHLOROETHANE (ETHYL CHLORIDE)	000075-00-3	<4 %

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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REGULATORY INFORMATION (CONTINUED)

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. Refer to the body of this material safety data sheet for health and safety information.

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The information herein is given in good faith, but no warranty, express or implied, is made. Consult The Dow Chemical Company for further information.

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