

Material Safety Data Sheet

Material Name: Extruded Polystyrene

Potential Health Effects

Inhalation:

Dusts produced by cutting or drilling of this product may cause irritation of the nose, throat, and respiratory tract.

Skin Contact:

Dust produced from cutting or drilling from this product may cause itching and short-term irritation

Eye Contact:

Dust produced from cutting or drilling of this product may cause slight irritation to the eyes.

Ingestion:

Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Medical Conditions Aggravated by Exposure:

Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.

*** Section 4 - First Aid Measures ***

Inhalation:

If dust from cutting or drilling is inhaled, immediately remove the affected person to fresh air. If symptoms persist, get medical attention. If irritation persists get medical attention.

Skin Contact:

For skin contact, wash with mild soap and running water. If irritation persists get medical attention.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.

Ingestion:

Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur. Do not induce vomiting unless directed to do so by medical personnel.

*** Section 5 - Fire Fighting Measures ***

Flash Point: >615°F (324°C)
Upper Flammability Limit: Not applicable
Flammability Classification: Non-flammable

Flash Point Method: Method - ASTM D 1929
Lower Flammability Limit: Not applicable
Auto Ignition Temp.: Not applicable

Extinguishing Media:

Water, carbon dioxide, or dry chemical

Unusual Fire & Explosion Hazards:

Produces dense black smoke while burning. Grinding, sawing or fabrication activities of the foamular board can produce dust particles, which may under certain conditions form explosive dust atmospheres that can be ignited.

Fire-Fighting Instructions:

Use self-contained breathing apparatus (SCBA) and full bunker turnout gear in a sustained fire.

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Hazardous Combustion Products:

Primary combustion products are carbon monoxide, carbon dioxide, and styrene. The HCFC-142B and HCFC-22 ingredients thermally decompose at temperatures in the order of 430°C (805°F). The decomposition products include hydrogen fluoride, hydrogen chloride, carbon monoxide, carbon dioxide, fluorine, and chlorine. Other undetermined hydrocarbon fractions could be released in small quantities.

***** Section 6 - Accidental Release Measures *****

Containment Procedures:

Dust from cutting or drilling this material will settle out of the air. If concentrated on land, it can then be scooped up for disposal as a non-hazardous waste. In water this material will float and disperse with wind and current. Contain the material with booms and pick up with absorbents or adsorbent materials, or remove with a vacuum truck.

Clean-Up Procedures:

Scoop up material and put into a suitable container for disposal as a non-hazardous waste.

Response Procedures:

Isolate area. Keep unnecessary personnel away.

Special Procedures:

None.

***** Section 7 - Handling and Storage *****

Handling Procedures:

No special procedures are required for this material.

Avoid inhaling dusts or vapors. Avoid eye and excessive skin contact. Use only with adequate ventilation. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Special care must be taken to avoid buildup of dusts.

Storage Procedures:

No special procedures are required for this material.

***** Section 8 – Exposure Controls / Personal Protection *****

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits.

B: Component Exposure Limits

ACGIH and OSHA exposure limit lists have been checked for those components with CAS registry numbers.

Polystyrene (9003-53-6)

ACGIH: 10 mg/m³ TWA (inhalable particulate); 3 mg/m³ TWA (respirable particulate) (These values are for particulate matter containing no asbestos and <1% crystalline silica) (related to Particulates not otherwise classified (PNOC))

OSHA: Total dust: 15 mg/m³ TWA; respirable fraction: 5 mg/m³ TWA (related to Particulates not otherwise regulated)

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Chlorodifluoromethane (HCFC-22) (75-45-6)

ACGIH: 1000 ppm TWA
OSHA: 1000 ppm TWA; 3500 mg/m3 TWA

Ventilation:

Provide sufficient general and/or local exhaust ventilation to maintain exposures below the PELs or TLVs. Grinding sawing or fabrication activities of the foamular board can produce dust particles, which may under certain conditions form explosive dust atmospheres that can be ignited.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection:

A properly fitted NIOSH approved disposable N 95 series dust respirator such as the 3M model 8210 (formerly 8710) or model 8271 (formerly 9900) in high humidity environments or equivalent should be used under the following conditions: 1) any dust environment; 2) when mechanically altering product (mechanical transfer, crushing, grinding, milling or other similar dust generating process. Use respiratory protection in accordance with your company's respiratory protection program, local regulations and OSHA regulations under 29 CFR 1910.134.

Skin Protection:

Normal work clothing (long sleeved shirts and long pants) is recommended.

Eyes/Face Protective Equipment:

Wear safety glasses or goggles.

***** Section 9 - Physical & Chemical Properties *****

Appearance:	Blue foam	m	Odor:	None
Physical State:	Solid		pH:	Not applicable
Vapor Pressure (mm Hg @ 20 C):	Not applicable		Vapor Density (Air=1):	Not applicable
Boiling Point:	Decomposes over 600°F (316°C)		Solubility (H2O):	Insoluble
Specific Gravity (Water=1):	0.021-0.064		Freezing Point:	Softens @ 220°F (104°C)
Evaporation Rate (n-Butyl Acetate=1):	Not available			

Physical Properties: Additional Information

No additional information available.

***** Section 10 - Chemical Stability & Reactivity Information *****

Stability:

This is a stable material.

Conditions to Avoid:

Avoid dispersion of dust in air.

Incompatible Materials:

Hydrocarbons, esters and amines.

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Hazardous Decomposition Products:

Primary combustion products are carbon monoxide, carbon dioxide, and styrene. Other undetermined hydrocarbon fractions could be released in small quantities. The HCFC-142B and HCFC-22 ingredients thermally decompose at temperatures in the order of 430°C (805°F). The decomposition products include hydrogen fluoride, hydrogen chloride, carbon monoxide, carbon dioxide, fluorine, and chlorine.

Hazardous Polymerization:

Will not occur.

***** Section 11 - Toxicological Information *****

Acute and Chronic Toxicity:

A: General Product Information

Dusts from cutting and drilling may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion, and chest tightness.

B: Component Analysis - LD50/LC50

1-Chloro-1,1-difluoroethane (HCFC-142B) (75-68-3)

Inhalation LC50 Rat: 2050 gm/m³/4H

Inhalation LC50 Mouse: 1758 gm/m³/2H

Chlorodifluoromethane (HCFC-22) (75-45-6)

Inhalation LC50 Rat: 35 pph/15M

Inhalation LC50 Mouse: 1380 mg/m³/2H

Carcinogenicity:

A: General Product Information

Note: There are no known chronic health effects connected with long-term use or contact with these products.

B: Component Carcinogenicity

ACGIH, IARC, OSHA, and NTP carcinogen lists have been checked for those components with CAS registry numbers.

Polystyrene (9003-53-6)

IARC: Supplement 7, 1987; Monograph 19, 1979 (Group 3 (not classifiable))

Chlorodifluoromethane (HCFC-22) (75-45-6)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71, 1999; Supplement 7, 1987; Monograph 41, 1986 (Group 3 (not classifiable))

***** Section 12 - Ecological Information *****

Ecotoxicity:

No data available for this product. This material is not expected to cause harm to animals, plants or fish.

Environmental Fate:

No data available for this product.

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***** Section 13 - Disposal Considerations *****

US EPA Waste Number & Descriptions:

A: General Product Information

Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions:

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

***** Section 14 - Transportation Information *****

US DOT Information

Shipping Name: Not regulated for transport.

Hazard Class: None

UN/NA #: None

Packing Group: None

Required Label(s): None

Additional Info.: None

TDG Information

Shipping Name: Not regulated for transport.

Hazard Class: None

UN/NA #: None

Packing Group: None

Required Label(s): None

Additional Info.: None

Additional Transportation Regulations:

No additional information available.

***** Section 15 - Regulatory Information *****

US Federal Regulations:

A: General Product Information

No information available for the product.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

1-Chloro-1,1-difluoroethane (HCFC-142B) (75-68-3)

SARA 313: Form R reporting required for 1.0% de minimis concentration

Chlorodifluoromethane (HCFC-22) (75-45-6)

SARA 313: Form R reporting required for 1.0% de minimis concentration

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SARA 311/312

Acute Health Hazard: No
Chronic Health Hazard: No
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

C: Clean Air Act

None of this product's components are listed on the Clean Air Act-1990 Hazardous Air Pollutants List.

State Regulations:

A: General Product Information

No additional information available.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	MA	MN	NJ	PA
1-Chloro-1,1-difluoroethane (HCFC-142B)	75-68-3	No	Yes	No	Yes	Yes
Chlorodifluoromethane (HCFC-22)	75-45-6	Yes	Yes	Yes	Yes	Yes

Other Regulations:

A: General Product Information

No additional information available.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Polystyrene	9003-53-6	Yes	Yes	No
1-Chloro-1,1-difluoroethane (HCFC-142B)	75-68-3	Yes	Yes	Yes
Chlorodifluoromethane (HCFC-22)	75-45-6	Yes	Yes	Yes
Hexabromocyclododecane	3194-55-6	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	
1-Chloro-1,1-difluoroethane (HCFC-142B)	75-68-3	1% item 357 (425)
Chlorodifluoromethane (HCFC-22)	75-45-6	1% item 358 (426)

WHMIS Status: Not controlled

WHMIS Classification: None

*** Section 16 - Other Information ***

HMIS and NFPA Hazard Ratings:	Category	HMIS	NFPA
	Acute Health	0	0
	Flammability	1	1
	Reactivity	0	0

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NFPA Unusual Hazards: None

HMIS Personal Protection: To be supplied by user depending upon use.

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Key/Legend:

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act; DSL = Canadian Domestic Substance List; EINECS = European Inventory of New and Existing Chemical Substances; WHMIS = Workplace Hazardous Materials Information System; CAA = Clean Air Act

Revision Summary:

This is a revised MSDS with updated contact information and product names. Read this information carefully.

This is the end of MSDS