Section 1 - Chemical Product and Company Identification

Product Name Polyisocyanurate Foam Insulations
CAS# None Assigned
Generic Name Insulation (Polyisocyanurate Foam)
Formula Polymer
Chemical Name: Proprietary
Hazard Label PI-01 or L2070

Manufacturer Information

Johns Manville Insulation Group
Building Insulation Division
P.O. Box 5108
Denver, CO 80127 USA

Telephone: 303-978-2000 8:00AM-5:00PM M-F
Internet Address: http://www.jm.com
Emergency: 800-424-9300 (Chemtrec, In English)

Trade Names:

AP Foil-Faced;
extRa;
IsoVent;
R-Panel;
VentBoard
CI Max

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
Not Available	Polyisocyanurate foam	25-45
Not Available	Foil Facing	0-30*
Not Available	Foil Glass Mat Facing	0-30*
Not Available	Paper or Polymer Facing	0-30*
	Pentane	0-5**
287-92-3	Cyclopentane	0-5**
78-78-4	Isopentane	0-5**
65997-17-3	Continuous filament glass fibers	***

Additional Component Information

* Facing is one or the other of these materials.
**Pentane (blowing agent) concentration in product: all isomers $\leq$ 6% mass.
*** Reinforcement in paper or polymer facings.

Section 3 - Hazards Identification

Emergency Overview

APPEARANCE AND ODOR: Tan foam board. Facings include foil, glass mat reinforced foil facer, or reinforced paper or polymer sheets. No significant odor.

Inhalation of excessive amounts of dust from the product may cause temporary upper respiratory irritation and/or congestion--remove individual to fresh air.

Product is combustible. Burning products may produce thick black smoke.

Potential Health Effects

Summary

Breathing dust from this product may cause a scratchy throat, congestion, and slight coughing. Getting dust or fibers on the skin, or in the eyes may cause itching, rash, or redness. Breathing large amounts of dust or fibers from this product may lead to chronic health effects as discussed in Section 11 of this material safety data sheet.

Inhalation

Irritation of the upper respiratory tract (scratchy throat), coughing, and congestion may occur in extreme exposures.

Skin

Temporary irritation (itching) or redness may occur.

Ingestion

This product is not intended to be ingested (eaten). If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.

Eyes

Temporary irritation (itching) or redness may occur.

Primary Routes of Entry (Exposure)

Inhalation (breathing dust), skin, and eye contact.

Target Organs

Upper respiratory passages, skin, and eyes.

Medical Conditions Aggravated by Exposure

Pre-existing chronic respiratory, skin, or eye diseases or conditions.

Section 4 - First Aid Measures

First Aid: Inhalation

Remove to fresh air. Drink water to clear throat, and blow nose to remove dust.

First Aid: Skin

Wash gently with soap and water to remove dust. Wash hands before eating or using the restroom.

First Aid: Ingestion

Product is not intended to be ingested or eaten. If this product is ingested, irritation of the gastrointestinal (GI) tract may occur, and should be treated symptomatically. Rinse mouth with water to remove fibers, and drink plenty of water to help reduce the irritation. No chronic effects are expected following ingestion.

First Aid: Eyes

Do not rub or scratch your eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water for 5-15 minutes. If irritation persists, contact a medical professional.

First Aid: Notes to Physician

This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

Section 5 - Fire Fighting Measures

Flash Point: Not applicable
Method Used: Not applicable
Upper Flammable Limit (UFL): Not applicable
Lower Flammable Limit (LFL): Not applicable
Auto Ignition: Not determined
Flammability Classification: Not determined
Rate of Burning: Not determined

General Fire Hazards

Product is combustible. Avoid direct contact with flame.

Hazardous Combustion Products

Product is combustible. Burning of this material will produce thick, black smoke.

Extinguishing Media

Carbon dioxide (CO_2), water, water fog, dry chemical.

Fire Fighting Equipment/Instructions

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

Section 6 - Accidental Release Measures

Containment Procedures

Pick up large pieces. Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation or use compressed air for clean-up. These procedures will help to minimize potential exposures.

Clean-Up Procedures

Avoid the generation of dusts during clean-up.

Section 7 - Handling and Storage

Handling Procedures

Use protective equipment as described in Section 8 of this material safety data sheet when handling uncontained material.

Storage Procedures

Warehouse storage should be in accordance with package directions, if any. Material should be kept clean, dry, and protected from moisture. Eliminate all sources of ignition.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

No information available for the product.

B: Component Exposure Limits

Cyclopentane (287-92-3)

ACGIH: 600 ppm TWA
OSHA: 600 ppm TWA; 1720 mg/m3 TWA

Isopentane (78-78-4)

ACGIH: 600 ppm TWA (listed under Pentane, all isomers)

Continuous filament glass fibers (65997-17-3)

ACGIH: 1 fiber/cm3 TWA (respirable fibers, length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination); 5 mg/m3 TWA (inhalable fraction)

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Safety glasses with sideshields are recommended to keep dust out of the eyes.

Personal Protective Equipment: Skin

Leather or cotton gloves should be worn to prevent skin contact and irritation. Barrier creams may also be used to reduce skin contact and irritation caused by fiber glass.

Personal Protective Equipment: Respiratory

A NIOSH-certified respirator should be used if ventilation is unavailable, or is inadequate for keeping dust and fiber levels below the applicable exposure limits.

Ventilation

In fixed manufacturing settings, local exhaust ventilation should be provided at areas of cutting to remove airborne dust and fibers. General dilution ventilation should be provided as necessary to keep airborne dust and fibers below the applicable exposure limits and guidelines. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

Personal Protective Equipment: General

Loose-fitting, long-sleeved clothing should be worn to protect skin from irritation. Work clothing should be washed separately from other clothes, and the washer should be rinsed thoroughly (run empty for a complete wash cycle). This will reduce the chances of dust being transferred to other clothing.

Section 9 - Physical & Chemical Properties

Appearance:	Tan foam board with various facings.	**Odor:**	No significant odor
Physical State:	Solid	**pH:**	Not applicable
Vapor Pressure:	Not applicable	**Vapor Density:**	Not applicable
Boiling Point:	Not applicable	**Melting Point:**	Not determined
Solubility (H_2O):	None	**Specific Gravity:**	0.03
Freezing Point:	Not applicable	**Evaporation Rate:**	Not applicable
Viscosity:	Not applicable	**Percent Volatile:**	Negligible
VOC:	Not applicable		

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

This is a stable material. This product is not reactive.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

Acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, and dimethyl formamide.

Hazardous Decomposition

The decomposition products from this material are those that would be expected from any organic (carbon-containing) material, and are mainly derived from pyrolysis, or burning, of the resin. These decomposition products may include carbon monoxide, carbon dioxide, carbon particles, and traces of hydrogen cyanide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Acute Toxicity

A: General Product Information

Dust from this product is a mechanical irritant, which means that it may cause temporary irritation or scratchiness of the throat, and/or itching of the eyes and skin.

Isopentane, cyclopentane, and n-pentane may be released at very low concentrations (well below their lower flammability limits) from these products when they are cut or crushed. These pentanes are nontoxic at levels below their lower flammability limits.

B: Component Analysis - LD50/LC50

Cyclopentane (287-92-3)

Oral LD50 Mouse: 12800 mg/kg

Isopentane (78-78-4)

Inhalation LC50 Rat: 280000 mg/m3/4H

Carcinogenicity

A: General Product Information

The Occupational Safety and Health Administration (OSHA), National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), and American Conference of Governmental Industrial Hygienists (ACGIH) have not classified this product as a carcinogen.

B: Component Carcinogenicity

Continuous filament glass fibers (65997-17-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 3 - Not Classifiable (IARC Monograph 81 [2002] (listed under Man-made mineral fibres), Monograph 43 [1988])

Chronic Toxicity

Polyisocyanurate Foam: There is no evidence that dust from this material causes disease in man. There are no known animal studies of the chronic health effects of breathing dust from polyisocyanurate foam. However, a subchronic inhalation study showed no adverse respiratory effects in rats as a result of breathing 9 mg/m3 of dust from a similar foam (polyurethane foam) for 3 months (Thyssen et al., 1978). In 1987, IARC designated polyurethane as Group 3, not classifiable as to carcinogenicity to humans (Monograph 19).

Continuous Filament Glass Fiber: No chronic health effects are known to be associated with exposure to continuous filament fiber glass. Long-term epidemiologic studies do not show any increases in respiratory cancer or other disease among employees who manufacture this product. In 1987, the International Agency for Research on Cancer (IARC) classified continuous filament fiber glass as a Group 3 substance, "not classifiable as to its carcinogenicity to humans." In 2001, IARC re-affirmed this designation. Because of the large diameter of continuous filament fibers, these fibers are not considered respirable.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No additional information available.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Cyclopentane (287-92-3)

48 Hr EC50 Daphnia magna: 10.5 mg/L

Isopentane (78-78-4)
48 Hr EC50 Daphnia magna: 2.3 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the EPA.

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

Shipping Name: This product is not classified as a hazardous material for transport.

Section 15 - Regulatory Information

US Federal Regulations

A: General Product Information

SARA 311/312: This product is not classified as hazardous under SARA 311/312.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

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

Component	CAS #	CA	FL	MA	MN	NJ	PA
Cyclopentane	287-92-3	Yes	No	Yes	Yes	Yes	Yes
Isopentane	78-78-4	No	No	Yes	No	Yes	Yes
Continuous filament glass fibers	65997-17-3	No	No	No	Yes	No	No

Other Regulatory Information

A: General Product Information

No information available for the product.

B: TSCA Status

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

C: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Cyclopentane	287-92-3	Yes	Yes	Yes
Isopentane	78-78-4	Yes	Yes	Yes
Continuous filament glass fibers	65997-17-3	Yes	Yes	Yes

Component Analysis - WHMIS IDL

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

Component	CAS #	Minimum Concentration
Cyclopentane	287-92-3	1 %

Section 16 - Other Information

Other Information

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As of the date of preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state law(s). However, no warranty or representation with respect to such information is intended or given.

Date	MSDS #	Reason
08/01/00	2070-1.0000	New MSDS authoring system.
04/08/03	2070-1.0100	Section 1: Added blowing agents, HCFC or pentanes. All other sections updated for these components.
11/26/03	2070-1.0101	Section 16 division change RID to BID
02/10/04	2070-1.0102	Sect. 2, Dichlorofluoroethane no longer a component of these products.
07/15/05	2070-1.0103	Regulatory updates: Sections 8, 11, & 15
12/07/05	2070-1.0104	Regulatory update. Minor edits in Section 8 Exposure and Section 15 WHMIS.
01/15/07	2070-1.0105	Section 15 TSCA 12b info was edited and Pentane removed. This product is an article under TSCA. Pentane does not need to be reported under TSCA 12b per 40CFR §707.60(b).
12/28/11	2070-1.0106	MSDS Update.
08/10/12	2070-1.0206	Updated composition information and added trade name CI Max.
07/14/14	2070-1.0207	Updated composition by removal of Antimony Oxide.

This is the end of MSDS # 2070