



SAFETY DATA SHEET

JOHNS MANVILLE

Version: 1.0

Revision Date: 2019-12-20

1. IDENTIFICATION

Product name: Pipe Insulation Billets Extruded 7, 8 & 10 Inch

Recommended use of the chemical and restrictions on use

Identified uses: For industrial use. Thermal insulation. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION

Johns Manville
PO Box 5108
Denver, CO 80127
USA

Customer Information Number: +1 (303) 978-2000
Emergency Number: +1 (800) 424-9300 (CHEMTREC)
Product Information: ProductSafety@jm.com

Johns Manville Canada Inc.
5301 42 Avenue
Innisfail, AB T4G 1A2
Canada

Customer Information Number: +1 (303) 978-2000
Emergency Number: +1 (800) 424-9300 (CHEMTREC)
Product Information: ProductSafety@jm.com

2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)

Not a hazardous substance or mixture.

Other hazards

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
2-Propenenitrile, polymer with ethenylbenzene	9003-54-7	> 60.0 - < 100.0 %
Styrene, polymers	9003-53-6	>= 0.0 - < 10.0 %
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	>= 1.0 - <= 10.0 %
1,1-Difluoroethane (HFC-152a)	75-37-6	>= 0.0 - <= 10.0 %

Note: Extruded styrenic polymer foam containing a halogenated flame retardant system.

4. FIRST AID MEASURES

Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. May cause injury due to mechanical action.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include and are not limited to: Hydrogen halides. Based on combustion toxicity testing, the effects of combustion from this foam are not more acutely toxic than the effects of combustion from common building materials such as wood.

Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. When product is stored in closed containers, a flammable atmosphere can develop. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product contains a flame retardant to inhibit accidental ignition from small fire sources. This plastic foam product is combustible and should be protected from flames and other high heat sources. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: There are no special required instructions.

Environmental precautions: There are no special required instructions.

Methods and materials for containment and cleaning up: Recover spilled material if possible. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Fabrication methods which involve cutting into this product may release the blowing agent(s) remaining in the cells. Provide adequate ventilation to assure localized concentrations in release areas are maintained below the lower flammable limit. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product is combustible and may constitute a fire hazard if improperly used or installed. When installed, this product should be adequately protected as directed by national building regulations or instructions in the specific application brochure. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. When large quantities of this product are stored or fabricated, blowing agents may be released. Released blowing agents may thermally decompose to form gases which may accelerate corrosion or rust formation of heaters, boilers, gas fired recirculating air furnaces or heaters, or gas water heaters. Flammable vapors may accumulate in some storage situations. In order to prevent buildup of combustible vapors, do not store large quantities of this product in unventilated spaces. Transport bulk shipments of this product in ventilated vehicles. During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
1,1,1,2-Tetrafluoroethane	US WEEL	TWA	1,000 ppm
1,1-Difluoroethane	US WEEL	TWA	1,000 ppm

Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Eye protection should not be necessary. For fabrication operations safety glasses (with side shields) are recommended. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin protection

Hand protection: Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

Other protection: No precautions other than clean body-covering clothing should be needed.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use a NIOSH-approved particulate respirator. When respiratory protection is required for certain operations, including but not limited to saw, router or hot-wire cutting, use a NIOSH-approved air-purifying respirator. The following should be effective types of air-purifying respirators: Particulate filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Billet
Color	Blue
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	100 - 115 °C (212 - 239 °F) <i>Estimated.</i>
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point closed cup	Not applicable
Evaporation Rate (Butyl Acetate=1)	Not applicable
Flammability (solid, gas)	No
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable

Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	0.02 - 0.06 <i>Estimated.</i>
Water solubility	not soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	450 °C (842 °F) <i>ASTM D1929</i>
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	No
Oxidizing properties	No
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Avoid temperatures above 300 °C
Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Aldehydes. Amines. Esters. Liquid fuels. Organic solvents.

Hazardous decomposition products: Does not normally decompose. Evolution of small amounts of hydrogen halides occur when heated over 250°C (482°F). Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aromatic compounds. Aldehydes. Hydrogen halides. Polymer fragments. Toxic flammable gases can be released during decomposition. Under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
Single dose oral LD50 has not been determined.

Acute dermal toxicity

Skin absorption is unlikely due to physical properties.
The dermal LD50 has not been determined.

Acute inhalation toxicity

Dust may cause irritation to upper respiratory tract (nose and throat). Fumes/vapors released during thermal operations such as hot wire cutting may cause respiratory irritation.
As product: The LC50 has not been determined.

Skin corrosion/irritation

Mechanical injury only.
Essentially nonirritating to skin.

Serious eye damage/eye irritation

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

Sensitization

For skin sensitization:
Relevant data not available.

For respiratory sensitization:
Relevant data not available.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Carcinogenicity

Relevant data not available.

Teratogenicity

Contains a component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency

Reproductive toxicity

Contains a component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency

Mutagenicity

Relevant data not available.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

2-Propenenitrile, polymer with ethenylbenzene

Acute oral toxicity

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

The LC50 has not been determined.

Styrene, polymers

Acute oral toxicity

Single dose oral LD50 has not been determined.

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

Dust may cause irritation to upper respiratory tract (nose and throat). Vapors released during thermal processing may cause respiratory irritation.

The LC50 has not been determined.

1.1.1.2-Tetrafluoroethane

Acute oral toxicity

Single dose oral LD50 has not been determined.

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

LC50, Rat, 4 Hour, gas, > 500,000 ppm (2,080,000 mg/m³)

1.1-Difluoroethane

Acute oral toxicity

LD50, Rat, > 1,500 mg/kg

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. May cause central nervous system effects. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats).

LC50, Rat, male, 4 Hour, gas, > 437,500 ppm

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

Persistence and degradability

Biodegradability: Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Bioaccumulative potential

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Mobility in soil

In the terrestrial environment, material is expected to remain in the soil.
In the aquatic environment, material is expected to float.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

14. TRANSPORT INFORMATION

Classification for LAND transport (DOT / TDG):

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

15. REGULATORY INFORMATION

GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)

Non-hazardous according to 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015), when used as intended.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product does not require a warning under the California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

United States TSCA Inventory (TSCA)

The product meets the definition of an article and is exempt from inventory requirements.

CEPA - Domestic Substances List (DSL)

The product meets the definition of an article and is exempt from inventory requirements.

16. OTHER INFORMATION

Revision

Revision Date: 2019-12-20

Legend

TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.