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Johns Manville

Material Name:
Fiber Glass Wool Commercial & Industrial Insulation

Material Safety Data Sheet ID: 1009

Section 1 - Chemical Product and Company Identification

Product Name Fiber Glass Wool Insulation
CAS# Not applicable
Generic Name Fiber Glass Wool Product
Formula Not available
Chemical Name: Mixture
Hazard Label FGW-01 or FGW-01-HT or FGW-01-1009 or L1009

Manufacturer Information

Johns Manville
Performance Materials 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:

800 Series Spin-Glas® Board Insulations;
1000 Series Spin Glas® Board;
Blended Blowing Wool;
Fabrication Board;
Grooved Duct Board;
Hullboard (Incombustible);
Hullinsul® Fiber Glass Board;
Incombustible Microlite®;
Insul-SHIELD® Coated Black;
Linacoustic® RC;
Mat-Faced Micro-Aire® Duct Board;
Micro-Flex™ Large Diameter Pipe and Tank Wrap;
Micro-Lok® Pipe Insulation;
Permacote® Linacoustic® (Standard, HP, and R-300);
Precipitator Spin Glas®;
R series Microlite® (plain, FSK, PSK, & vinyl faced);
Spiracoustic™;
Spin Glas® HTB 26 & 23;
Spirocoustic Plus™;
SuperDuct™ Boards;
SuperDuct™ RC Boards;
Zeston Hi-Lo Temp® Insulation Inserts.

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
65997-17-3	Fiber Glass Wool	50-98
Not Available	Non-woven, AP, FSK, PSK, or vinyl facings; or vinyl, acrylic, or latex coatings	0-40
25104-55-6	Urea extended phenol-formaldehyde binder (cured)	2-18*
25212-25-3	Urea extended phenol-melamine formaldehyde binder (cured)	2-18*
25038-59-9	Polyester fiber	1-10**
Not Available	Acrylic Coating	0-10****
Not Available	Continuous Filament Glass Fiber (CAS # 65997-17-3)	1-10***
1163-19-5	Decabromodiphenyl oxide (in coating)	<1*****
1333-86-4	Carbon black	<1**
21564-17-0	Thiocyanic acid, (2-benzothiazolythio)methyl ester	<1**
25637-99-4	Cyclododecane, hexabromo-	<1******
1309-64-4	Antimony trioxide	0.1-3*******

Additional Component Information

* Binder may be either of these.
** Component of black products only.
*** Component of Insul-SHIELD Coated Black, Linacoustic RC, and Mat-Faced Micro-Aire® Duct Board only.
****Acrylic coating is a component of Mat-Faced Micro-Aire® Duct Board only.
***** Decabromodiphenyl oxide is a component of black coated products only.
****** Cyclododecane, hexabromo- is a component of the Spiracoustic product only.
******* Note: Antimony trioxide (fire retardant) may be present in the facings and/or adhesives. Occupational exposure to airborne antimony trioxide is not expected to occur due to product form(s) and intended use(s). Exposure limit is given for reference only.

Section 3 - Hazards Identification

Emergency Overview

APPEARANCE AND ODOR: Gold, yellow, or black fibrous glass blanket, board, or formed shape with or without facings. No significant odor.

Products designed for high temperature applications (above 177ºC/350ºF) may release gases irritating to the eyes, nose and throat during initial heat-up. In tightly confined or poorly ventilated areas, use air supplied respirators during the first heat-up cycles.

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

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. Additional health and safety information is provided in Section 11 of this material safety data sheet.

When subjected to high heat and humidity, this product may release formaldehyde gas. Formaldehyde is irritating to the eyes and respiratory system and may cause cancer (based on animal studies). Formaldehyde may cause skin or respiratory sensitization (allergy).

HMIS (Hazardous Materials Information System) ratings for Health - Flammability - Physical Hazard: *1 - 0 - 0

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.

Ears

Temporary irritation (itching) or redness may occur.

Primary Routes of Entry (Exposure)

Inhalation (breathing dust, fibers, or vapors), skin, and eye contact.

Target Organs

Nose (nasal passages), throat, lungs, skin, 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: Ears

Wash exposed skin with soap and water. If irritation develops in the inner ear, seek medical attention.

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

There is no potential for spontaneous fire or explosion.

Extinguishing Media

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

Fire Fighting Equipment/Instructions

No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

NFPA Ratings for Health - Flammability - Reactivity are: 1 - 0 - 0

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 dry, and protected from moisture.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Glass wool fiber, OSHA voluntary Health and Safety Partnership Program (HSPP): 1 f/cc TWA for fibers longer than 5 µm with a diameter less than 3 µm.

Protective equipment should be used as necessary to prevent irritation of the throat, eyes, and skin, and to keep exposures below the applicable exposure limits identified in Section 8.

B: Component Exposure Limits

Fiber Glass Wool (65997-17-3)

ACGIH: 1 fiber/cm3 TWA (respirable fibers: length > 5 µm, aspect ratio equal to or greater than 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.)

Continuous Filament Glass Fiber (CAS # 65997-17-3) (Not Available)

ACGIH: 1 fiber/cm3 TWA (respirable fibers: length > 5 µm, aspect ratio equal to or greater than 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)

Carbon black (1333-86-4)

ACGIH: 3.5 mg/m3 TWA
OSHA: 3.5 mg/m3 TWA

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

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

Personal Protective Equipment: Ears

Use ear protection (earplugs, hood, or earmuffs) to prevent airborne dust or fibers from entering the ear, if necessary.

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 respirator should be used if ventilation is unavailable, or is inadequate for keeping dust and fiber levels below the applicable exposure limits. In those cases, use a NIOSH-certified disposable or reusable particulate respirator with an efficiency rating of N95 or higher (under 42 CFR 84) when working with this product. For exposures up to five times the established exposure limits use a quarter-mask respirator, rated N95 or higher; and for exposures up to ten times the established exposure limits use a half-mask respirator (e.g., MSA's DM-11, Racal's Delta N95, 3M's 8210), rated N95 or higher. Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber concentrations requiring a higher level of respiratory protection. For exposures up to 50 times the established exposure limits use a full-face respirator, rated N99 or higher.

Products designed for high temperature applications (above 177ºC/350ºF) may release gases irritating to the eyes, nose and throat during initial heat-up. In tightly confined or poorly ventilated areas, use air supplied respirators during the first heat-up cycles.

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

Wear a cap, a loose-fitting, long-sleeved shirt and long pants to protect skin from irritation. Exposed skin areas should be washed with soap and warm water after handling or working with fiber glass. 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 fiber glass being transferred to other clothing.

Section 9 - Physical & Chemical Properties

Appearance:	Gold, yellow, or black fibrous glass blanket, board, or formed shapes, with or without facings.	**Odor:**	Mild formaldehyde
Physical State:	Solid	**pH:**	Not applicable
Vapor Pressure:	Not applicable	**Vapor Density:**	Not applicable
Boiling Point:	Not applicable	**Melting Point:**	>704ºC/1300ºF
Solubility (H_2O):	Nil	**Specific Gravity:**	Variable
Percent Volatile:	No data	**VOC:**	Not applicable

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

This is a stable material.

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.

Products designed for high temperature applications (above 177ºC/350ºF) may release gases irritating to the eyes, nose and throat during initial heat-up. In tightly confined or poorly ventilated areas, use air supplied respirators during the first heat-up cycles.

B: Component Analysis - LD50/LC50

Urea extended phenol-formaldehyde binder (cured) (25104-55-6)
Oral LD50 Rat: 7 g/kg

Decabromodiphenyl oxide (in coating) (1163-19-5)
Inhalation LC50 Rat: >48.2 mg/L/1H; Oral LD50 Rat: >2000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Carbon black (1333-86-4)
Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

Thiocyanic acid, (2-benzothiazolythio)methyl ester (21564-17-0)
Oral LD50 Rat: 2 g/kg; Dermal LD50 Rabbit: 10 g/kg

Cyclododecane, hexabromo- (25637-99-4)
Inhalation LC50 Rat: >200 mg/L/1H; Oral LD50 Rat: >10000 mg/kg; Dermal LD50 Rabbit:>8000 mg/kg

Antimony trioxide (1309-64-4)
Oral LD50 Rat: >34600 mg/kg

Carcinogenicity

A: General Product Information

No additional information available.

B: Component Carcinogenicity

Fiber Glass Wool (65997-17-3)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans
NTP: Reasonably Anticipated To Be A Carcinogen (respirable size)
IARC: Group 3 - Not Classifiable (IARC Monograph 43, 1988; Monograph 81, 2002)

Continuous Filament Glass Fiber (CAS # 65997-17-3) (Not Available)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 3 - Not Classifiable (IARC Monograph 43, 1988; Monograph 81, 2002)

Decabromodiphenyl oxide (in coating) (1163-19-5)

IARC: Group 3 - Not Classifiable (IARC Monograph 71, 1999; Monograph 48, 1990

Carbon black (1333-86-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 65, 1996)

Antimony trioxide (1309-64-4)

ACGIH: A2 - Suspected Human Carcinogen (production)
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 47, 1989)

Chronic Toxicity

Antimony trioxide causes pneumoconiosis in humans. Antimony trioxide was tested for carcinogenicity by inhalation exposure in male and female rats. Evidence for pulmonary cancer in the rat studies was inconsistent. In the earlier studies, rats were exposed to extremely high dose levels; exposed female rats, but not males, had an increased cancer incidence. However, in later studies using more advanced techniques, the rats did not show increased cancers. USEPA and CalEPA concluded that these studies are inadequate for use in quantitative cancer risk assessment. According to USEPA's recently proposed cancer risk assessment guidance, a margin of exposure (MOE) analysis is more appropriate when, as with antimony trioxide, the carcinogenicity of a chemical may be a secondary effect of toxicity or of an induced physiological change. The MOE approach was adopted after conferring with CalEPA scientists involved in the Proposition 65 program who suggested using USEPA's "Proposed Guidance for Carcinogen Risk Assessment." An independent laboratory conducted a risk analysis using the MOE approach; the results indicated that the potential levels of exposure to antimony trioxide in JM products pose no significant cancer risk to the end-user of these products.

Fiber Glass Wool: In October 2001, IARC classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans." The 2001 decision was based on current human and animal research that shows no association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease. This is a reversal of the IARC finding in 1987 of a Group 2B designation (possibly carcinogenic to humans) based on earlier studies in which animals were injected with large quantities of fiber glass. NTP and ACGIH have not yet reviewed the IARC reclassification or the most current fiber glass health research; at this time, both agencies continue to classify glass wool based on the earlier animal injection studies.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Antimony trioxide (1309-64-4)

96 Hr LC50 fathead minnow: 833.0 mg/L; 96 Hr LC50 bluegill: 530 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

This product is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations.

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

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).

Antimony trioxide (1309-64-4)

CERCLA: 1000 lb final RQ; 454 kg final RQ

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
Fiber Glass Wool ([1]related to Mineral wool fiber) ([2]related to Glass wool fiber)	65997-17-3	Yes[1]	No	Yes[1]	Yes	No	Yes[2]
Decabromodiphenyl oxide (in coating)	1163-19-5	No	No	Yes	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	No	Yes	Yes	Yes	Yes
Thiocyanic acid, (2-benzothiazolythio)methyl ester	21564-17-0	No	No	Yes	No	Yes	No
Antimony trioxide	1309-64-4	Yes	No	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains a chemical known to the state of California to cause cancer.

Fiber Glass Wool (related to Mineral wool fiber) CAS# 65997-17-3
Carbon black CAS# 1333-86-4
Antimony trioxide CAS# 1309-64-4

A: TSCA Status

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

The following components listed in this product are listed on the TSCA Export Notification 12(b) list.

TSCA 12(b)

Component	CAS	TSCA 12 (b)
Decabromodiphenyl oxide (in coating)	1163-19-5	Yes

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Fiber Glass Wool	65997-17-3	Yes	Yes	Yes
Urea extended phenol-formaldehyde binder (cured)	25104-55-6	Yes	Yes	No
Urea extended phenol-melamine formaldehyde binder (cured)	25212-25-3	Yes	No	No
Polyester fiber	25038-59-9	Yes	Yes	No
Decabromodiphenyl oxide (in coating)	1163-19-5	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	Yes	Yes
Thiocyanic acid, (2-benzothiazolythio)methyl ester	21564-17-0	No	Yes	Yes
Cyclododecane, hexabromo-	25637-99-4	Yes	No	Yes
Antimony trioxide	1309-64-4	Yes	Yes	Yes

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Section 16 - Other Information

Other Information

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The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Date	MSDS #	Reason
03/18/03	1009-2.0002	Sect. 1: deleted "Theatre-SHIELD". Added HMIS & NFPA (Sect. 3 & 11).
07/01/03	1009-2.0004	Sect. 1: deleted discontinued trade names: Micro-Aire Duct Board, Microlite Duct Wrap.
08/28/03	1009-2.0005	Sect. 1: added "Micro-Flex™ CTS", new product.
10/22/03	1009-2.0105	Section 15, TSCA 12b, add Decabromodiphenyl oxide
04/28/04	1009-2.0106	Regulatory update. Minor edits.
05/20/04	1009-2.0107	Sect. 1 Removal of discontinued trade names: 824 CAN Spin-Glas®; 830 CAN Spin-Glas®; Acoustic Backing Board; BS 476, EcoTherm™ Industrial Pipe Insulation; Fabricated Duct Board; Permacote Spiracoustic™; Pipe and Tank Insulation; Rigid Round™ (faced); Spiracoustic™; SuperRound®.
08/05/04	1009-2.0108	Sect. 1 Label ID edit. Removal of discontinued trade name, Micro-Flex CTS.
03/22/05	1009-2.0109	Sect. 1 addition of Insul-SHIELD® Coated Black from MSDS 1010. Addition of Blended Blowing Wool. Edits to Sect. 2 for new additions.

10/03/05	1009-2.0110	Section 1, SuperVane was removed. Discontinued product.
11/17/05	1009-3.0000	Regulatory update. Minor edits in Sections 8, 11, & 15. Removed all revision notes prior to 2003. Revision notes are stored in database archives.

This is the end of MSDS # 1009