Section 1 - Product and Company Identification

Hazard Label WARNING label

Company Information

Johns Manville
Insulation Systems
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:

1000 Series Spin Glas® Board;
800 Series Spin-Glas® Board Insulations;
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® HP;
Micro-Lok® Pipe Insulation;
Micromat Rx™;
Permacote® Linacoustic® (Types: 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
Not Applicable	Continuous Filament Glass Fiber	1-10**
Not Applicable	Fiber Glass Wool	50-98
Not Available	Non-woven, AP, FSK, PSK, or vinyl facings; or vinyl, acrylic, or latex coatings	0-40
Not Available	Urea extended phenol-formaldehyde binder (cured)	2-18*
Not Available	Urea extended phenol-melamine formaldehyde binder (cured)	2-18*
Not Available	Acrylic Coating (present in Mat-Faced Micro-Aire Duct Board only)	0-10
25038-59-9	Polyester fiber (present in black products only)	1-10
Not Available	Methylene Diurea	<2
50-00-0	Formaldehyde	<1
25637-99-4	Cyclododecane, hexabromo- (present in Spiracoustic only)	<1
1333-86-4	Carbon black (present in black products only)	<1
1309-64-4	Antimony trioxide	0.1-3***

* Binder may be either of these.
** Component scrim facings
*** 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.

Free formaldehyde released only with high temperature and humidity. Temperatures >32°C/90°F.

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.

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.

In high temperature applications, treatment, curing, or in geographic areas of high heat and humidity, this product may release gases irritating to the eyes, nose and throat. In confined or poorly ventilated areas, use air supplied respirators during the first heat-up cycles.

Inhalation

Irritation of the upper respiratory tract, coughing, and congestion may occur in extreme exposures. Severe irritation of the mouth, nose, and throat, as well as signs of central nervous system depression (drowsiness, dizziness, headache), may occur upon inhalation of vapors or gases.

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 warm 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.

First Aid: Notes to Physician

Irritating gases may be released under conditions of high heat or humidity. At high levels, these could cause severe upper respiratory and eye irritation. Formaldehyde gas is a skin and respiratory sensitizer. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

Section 5 - Fire Fighting Measures

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

Section 6 - Accidental Release Measures

Clean-Up Procedures

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

Section 7 - Handling and Storage

Handling Procedures

Use protective equipment as described in Section 8 of this safety data sheet when handling uncontained material. Handle in accordance with good industrial hygiene and safety practices.

Storage Procedures

Warehouse storage should be in accordance with package directions, if any. Material should be kept clean, dry, and in original packaging.

Section 8 - Exposure Controls / Personal Protection

The Occupational Safety and Health Administration (OSHA) has not adopted specific occupational exposure standards for fiber glass. Fiber glass is treated as a nuisance dust and is regulated by OSHA as a particulate not otherwise regulated (total dust) shown in CFR 1910.1000 Table Z-3.
Respirable fraction 5 mg/m3
Total dust 15 mg/m3

Formaldehyde (50-00-0)

ACGIH: 0.3 ppm Ceiling
OSHA: 0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29 CFR 1910.1048)

Carbon black (present in black products only) (1333-86-4)

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

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Safety goggles are recommended to keep dust, fibers, gases, and vapors 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.

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
VOC:	Not determined		

Section 10 - Stability & Reactivity Information

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, and carbon particles. Formaldehyde gas may also be released during decomposition.

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.

Gases released under conditions of high heat and humidity can cause severe eye and respiratory irritation.

B: Component Analysis - LD50/LC50

Formaldehyde (50-00-0)

Inhalation LC50 Rat: 0.578 mg/L/4H; Inhalation LC50 Rat: 250 ppm/4H; Oral LD50 Rat: 100 mg/kg; Dermal LD50 Rabbit: 270 mg/kg

Carbon black (present in black products only) (1333-86-4)

Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

Cyclododecane, hexabromo- (present in Spiracoustic only) (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

Fiber Glass Wool

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])

Formaldehyde (50-00-0)

ACGIH: A2 - Suspected Human Carcinogen
OSHA: 0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29 CFR 1910.1048)
NTP: Reasonably Anticipated To Be A Carcinogen (Possible Select Carcinogen)
IARC: Group 1 - Known Human Carcinogen (IARC Monograph 88 [2006], Monograph 62 [1995], Supplement 7 [1987])

Carbon black (present in black products only) (1333-86-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 93 posted, 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

Exposure to formaldehyde gas (in high temperature applications, treatment, curing, or in geographic areas of high heat and humidity) may cause eye and upper respiratory irritation, and possible respiratory or skin sensitization (allergy). If sensitization occurs, subsequent exposures to formaldehyde may worsen asthma or other respiratory problems, and cause allergic-type reactions.

Exposure to formaldehyde gas has been associated with the development of nasopharyngeal cancer in laboratory animals and humans. Formaldehyde has been classified as a known human carcinogen, Group 1, by the International Agency for Research on Cancer (IARC). The US Occupational Safety and Health Administration (OSHA) and the US National Toxicology Program (NTP) consider formaldehyde to have carcinogenic potential. OSHA specifically regulates formaldehyde under 29 CFR 1910.1048.

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

Formaldehyde (50-00-0)

96 Hr LC50 Pimephales promelas: 24.1 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 0.10 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 41 mg/L [static]
5 min EC50 Photobacterium phosphoreum: 9.0 mg/L; 15 min EC50 Photobacterium phosphoreum: 7.26 mg/L; 25 min EC50 Photobacterium phosphoreum: 6.81 mg/L; 30 min EC50 Photobacterium phosphoreum: 16.5 mg/L; 1 Hr EC50 Vibrio harveyi: 1.2 mg/L; 5 Hr EC50 Vibrio harveyi: 3.7 mg/L; 72 Hr EC50 Colpoda aspera: 5.39 mg/L
96 Hr EC50 water flea: 20 mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L

Carbon black (present in black products only) (1333-86-4)

24 Hr EC50 Daphnia magna: >5600 mg/L

Cyclododecane, hexabromo- (present in Spiracoustic only) (25637-99-4)

96 Hr LC50 Lepomis macrochirus: >100 mg/L [semi-static]
72 Hr EC50 Skeletonema costatum: 0.0093-0.37 mg/L

Antimony trioxide (1309-64-4)
96 Hr LC50 Pimephales promelas: 833.0 mg/L; 96 Hr LC50 Lepomis macrochirus: 530 mg/L; 96 Hr LC50 Brachydanio rerio: >1000 mg/L [static]
72 Hr EC50 Selenastrum capricornutum: 67 mg/L
7 Hr EC50 Pseudomonas putida: >3.5 mg/L
48 Hr EC50 Daphnia magna: >1000 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

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.

Disposal Instructions

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

Section 14 - Transportation Information

International Transportation Regulations

This product is not classified as a hazardous material for transport.
Mineral Wool Batts Batting or Blankets, Plain or Saturated
2299918001

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).

Formaldehyde (50-00-0)
SARA 302: 500 lb TPQ
SARA 313: 0.1 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ

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 (¹related to Mineral wool fiber) (²related to Fibrous glass)	Not Applicable	Yes¹	No	Yes¹	Yes	Yes²	Yes¹
Formaldehyde	50-00-0	Yes	No	Yes	Yes	Yes	Yes
Carbon black (present in black products only)	1333-86-4	Yes	No	Yes	Yes	Yes	Yes
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.

Component	CAS #
Fiber Glass Wool (¹related to Mineral wool fiber) (²related to Fibrous glass)	Not Applicable
Formaldehyde	50-00-0
Carbon black (present in black products only)	1333-86-4
Antimony trioxide	1309-64-4

A: 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.

International Regulations

A: General Product Information

These products are considered articles under both U.S. and international product regulations and as such, they do not require registration or notification on the various country-specific inventories.

B: Component Analysis - WHMIS IDL

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

Component	CAS #	Minimum Concentration
Fiber Glass Wool	Not Applicable	1 % (related to Fibrous glass)
Formaldehyde	50-00-0	0.1 %

WHMIS Classification

Controlled Product Classification: D2A, based on the IARC classifications for antimony trioxide (Group 2B) and formaldehyde (Group 1).

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
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	1009-2.0108	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	1009-2.0111	Regulatory update. Minor edits in Sections 8, 11, and 15. Removed all revision notes prior to 2004. Revision notes are stored in database archives.
01/31/07	1009-2.0112	Addition of Micro-Lok HP to trade names. Updates made throughout SDS for current trade names listed on this SDS. Section 15 TSCA 12b edits. Removed DBDO. These products are articles under TSCA and DBDO does not need to be reported under TSCA 12b.
06/26/07	1009-2.0113	Addition of Micromat Rx to trade names. Minor edits throughout. Addition of WHMIS classification in section 15.

This is the end of MSDS # 1009