

Section 1 - Product and Company Identification

Hazard Label WARNING label

Company Information

 Johns Manville
 Insulation Systems
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 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:

 Appliance Spin-Glas® (ASG);
 CM-24;
 CM-26;
 DuraCore™;
 Exact-O-Board®;

 Microlite® MW;
 Microlite® Standard Duct Wrap;
 Microlite®;
 SG Series Spin-Glas®;
 Spin-Glas® Board Equipment Insulation;

 Tuf-Glas™;
 Tuf-Skin® II;
 Tuf-Skin®;
 Valulite™

Section 2 - Hazards Identification

Emergency Overview

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

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

Temporary mechanical irritation may occur upon exposure to dust or fibers released from cutting this product.

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)

Eyes, skin, inhalation (breathing dust and fibers) and ingestion.

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 3 - Composition/Information on Ingredients

CAS #	Component	Percent
Not Available	Fiber Glass Wool	50-99
Not Available	Urea extended phenol-formaldehyde binder (cured)	1-20*
Not Available	Urea extended phenol-melamine formaldehyde binder(cured)	1-20*
1333-86-4	Carbon black (encapsulated)	<10
Not Available	Phenol-formaldehyde binder (cured) (Range Spin-Glas® binder only)	1-6
1309-64-4	Antimony trioxide	<3
50-00-0	Formaldehyde	<1

Component Information

*Binder may be either of these.

Some products have facings of kraft paper, vinyl, or other materials.

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.

Formaldehyde may be released by partial hydrolysis of the urea formaldehyde polymer.

General Product Description

Fibrous glass blanket or board; white, gold-to-yellow, orange, black, or black with an amber or black core; with or without non-woven facings. No significant odor.

Section 4 - First Aid Measures

First Aid: Inhalation

If dust is inhaled in excess of exposure limits referenced in section 8 of this safety data sheet, remove individual to fresh air. Drink water to clear throat, and blow nose to remove dust. A saline spray in the nose may help clear any fibers.

First Aid: Skin

Wash gently with soap and water to remove dust and fibers. Alternatively, fibers can be removed from the skin by use of ordinary masking or wrapping tape. Should irritation persist, seek medical attention.

First Aid: Ingestion

Rinse mouth with water to remove dust and fibers and drink plenty of water to help reduce irritation. If irritation persists, seek medical attention.

First Aid: Eyes

Do not rub or scratch eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water until irritation subsides. If irritation persists, seek medical attention.

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

Dust from the product may cause mechanical irritation of the eyes, skin, and upper respiratory tract. Treat symptomatically.

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

General Fire Hazards

There is no potential for spontaneous fire or explosion. Inorganic glass fibers are naturally non-combustible and non-flammable.

Extinguishing Media

Carbon dioxide (CO₂), 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.

Method Used: Not applicable

Lower Flammable Limit (LFL): Not applicable

Flammability Classification: Not determined

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

JM has adopted the fiber glass industry voluntary Product Stewardship Program (PSP), formerly the NAIMA-OSHA Health and Safety Partnership Program (HSPP). Under the PSP, JM recommends that exposures be limited to the voluntary concentration of 1 f/cc TWA for fibers longer than 5 microns with a diameter less than 3 microns. This will help minimize potential irritation effects. The PSP also includes the PPE recommendations described below.

Carbon black (encapsulated) (1333-86-4)

OSHA: 3.5 mg/m³ TWA

3.5 mg/m³ TWA

ACGIH: 3.5 mg/m³ TWA

Formaldehyde (50-00-0)

OSHA: 0.75 ppm TWA

0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29

CFR 1910.1048)

3 ppm TWA (unless specified in 1910.1048)

ACGIH: 0.3 ppm Ceiling

Exposure Limits for Chemicals which may be generated during processing**Methyl isocyanate (624-83-9)**

ACGIH: 0.02 ppm TWA

Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA: 0.02 ppm TWA; 0.05 mg/m³ TWA

Prevent or reduce skin absorption

NIOSH: 0.02 ppm TWA; 0.05 mg/m³ TWA

Potential for dermal absorption

PERSONAL PROTECTIVE EQUIPMENT**Personal Protective Equipment: Eyes/Face**

Safety glasses with side shields 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 protect against mechanical abrasion. See also Personal Protective Equipment: General, below.

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 referenced in Section 8 of this SDS. Wear a NIOSH-certified disposable or reusable particulate respirator with an efficiency rating of N95 or higher (per 42 CFR 84) when dust or fiber concentrations exceed the applicable exposure limits. 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, milling or other processing to remove airborne dust and fibers.

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 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:	White, gold-to-yellow, orange, black, or black with an amber or black core; fibrous glass blanket or board.	Odor:	No significant odor
Physical State:	Solid	pH:	Not applicable
Vapor Pressure:	Not applicable	Vapor Density:	Not applicable
Boiling Point:	Not applicable	Melting Point:	>704°C/1300°F
Solubility (H₂O):	Nil	Specific Gravity:	Variable
Freezing Point:	Not applicable	Evaporation Rate:	Not applicable
Percent Volatile:	0	VOC:	Less than or equal to 0.00661 g/L

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

These products are not reactive.

Hazardous Decomposition

May form carbon dioxide and carbon monoxide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information**Acute Toxicity****A: General Product Information**

If dust evolves from this product during use it may cause temporary mechanical irritation or scratchiness of the throat and/or itching of the eyes and skin.

Exposure to formaldehyde 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.

B: Component Analysis - LD50/LC50**Carbon black (encapsulated) (1333-86-4)**

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

Antimony trioxide (1309-64-4)

Oral LD50 Rat: >34600 mg/kg

Formaldehyde (50-00-0)

Inhalation LC50 Rat: 0.578 mg/L/4H; Oral LD50 Rat:500 mg/kg

Carcinogenicity**A: General Product Information**

Exposure to formaldehyde 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.

B: Component Carcinogenicity**Fiber Glass Wool**

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Synthetic Vitreous Fibers)

NTP: Reasonably Anticipated To Be A Human Carcinogen (respirable size)

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

Carbon black (encapsulated) (1333-86-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 93 [in preparation], 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])

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 Human Carcinogen (Possible Select Carcinogen)

IARC: Group 1 - Known Human Carcinogen

Chronic Toxicity

The U.S. Department of Health and Human Services, National Toxicology Program (NTP 1998, 2000, 2002) classified glass wool (respirable size) as reasonably anticipated to be a human carcinogen, based on sufficient evidence of carcinogenicity in animals. This assessment was originally prepared in 1993-1994 for the 7th Report on Carcinogens (NTP 1994), but has not been updated since then in the 8th, 9th, or 10th Reports on Carcinogens (NTP 1998, 2000, 2002).

Section 12 - Ecological Information**Ecotoxicity****A: General Product Information**

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity**Carbon black (encapsulated) (1333-86-4)**

24 Hr EC50 Daphnia magna: >5600 mg/L

Antimony trioxide (1309-64-4)

96 Hr LC50 Pimephales promelas: >80 mg/L [static]; 96 Hr LC50 Brachydanio rerio: >1000 mg/L [static]

72 Hr EC50 Selenastrum capricornutum: 67 mg/L

48 Hr EC50 Daphnia magna: >1000 mg/L

Formaldehyde (50-00-0)

96 Hr LC50 Pimephales promelas: 22.6-25.7 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1510 µg/L [static]; 96 Hr

LC50 Brachydanio rerio: 41 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 0.032-0.226 ml/L [flow-through]; 96 Hr LC50

Oncorhynchus mykiss: 100-136 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.2-29.7 mg/L [static]

96 Hr EC50 water flea: 20 mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L

Section 13 - Disposal Considerations**US EPA Waste Number & Descriptions****A: General Product Information**

This product is not expected to be a hazardous waste when it is disposed of according to the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Product characterization after use is recommended to ensure proper disposal under federal and/or state requirements.

Disposal Instructions

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

Section 14 - Transport Information**International Transport Regulations**

These products are not classified as dangerous goods according to international transport regulations.

Section 15 - Regulatory Information**US Federal Regulations****A: General Product Information**

SARA 311 Status. The following SARA 311 designations apply to this product: Delayed (chronic) health hazard.

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

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

State Regulations**A: General Product Information**

The glass fibers in this product are not known to be regulated.

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
Carbon black (encapsulated)	1333-86-4	Yes	No	Yes	Yes	Yes	Yes
Antimony trioxide	1309-64-4	Yes	No	Yes	Yes	Yes	Yes
Formaldehyde	50-00-0	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 Glass wool fiber) (2related to Fibrous glass)	Not Available
Antimony trioxide	1309-64-4
Formaldehyde	50-00-0

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, these products 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 Available	1 % (related to Fibrous glass)
Carbon black (encapsulated)	1333-86-4	1 %
Antimony trioxide	1309-64-4	1 %
Formaldehyde	50-00-0	0.1 %

WHMIS Classification

Controlled Product Classification: D2A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations. This SDS contains all the information required by the Controlled Products Regulations.

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
08/01/00	1001-1.0000	New MSDS authoring system.
01/08/01	1001-1.010	Minor regulatory update (per LOLI)
1/9/02	1001-2.0000	Update Sections 3, 11, 15 for IARC 2001 re-classification of fiber glass wool to Group 3, not classifiable as to carcinogenicity to humans.
06/05/02	1001-2.0001	Sect. 2, added acrylic resin for Formaldehyde-free product. Sect. 3 APPEARANCE, inserted "white" for Formaldehyde-free product.
02/27/03	1001-2.0002	Sect. 11 corrected for IARC 2002.
04/30/03	1001-2.0003	Sect. 1: Add "Range-Glas® XG" and "Microlite® XG" new trade names.
06/02/03	1001-2.0004	Sect. 1: Changed manufacturer to Performance Materials Div. Moved XG products to separate MSDS 1201. Updated for carbon black Prop. 65: Sect. 2 and 11.
01/07/04	1001-2.0005	Sect. 1 Changed OEM to Specialty, Sect. 11 Deleted carcinogen statement.
04/30/04	1001-2.0006	Minor regulatory update (LOLI)
06/21/04	1001-2.0007	Sect 3 removed 'green' and replaced it with 'amber or black core'. Updated hazard label from 'FBG-003' to 'FGW-01'.
08/02/05	1001-2.0008	Section 2 addition of trade name Tuf-Glas™. Minor edits throughout.
10/06/05	1001-2.0009	Section 1, removed Microlite AWP from trade names. Obsolete product.
01/16/07	1001-2.0011	Added Methyl Isocyanate to sections 8 and 10 based on analysis. Section 9 added VOC content for products based on analysis. Added article statement in Section 15.
07/02/07	1001-2.0112	Added Microlite Duct Wrap to trade names. Addition of WHMIS classification.
05/01/08	1001-2.0113	Updated SDS to GHS format.
12/19/08	1001-2.0114	Addition of new product, DuraCore.
06/10/09	1001-2.0115	Removed the following trade names: Flex Glas PC, Microlite Duct Wrap, Microlite TC, Microlite WH, Range Spin-Glas, Spin-Glas (SG) 22-32, Spin-Glas All Types, Spin Glas WH, and Microlite XP. Added Microlite® Standard Duct Wrap and SG Series Spin-Glas to trade names.

End of Sheet 1001