

Section 1 - Product and Company Identification

Hazard Label CAUTION label

Company InformationJohns Manville Engineered Products Group
Mats and Reinforcements Division
P.O. Box 5108
Denver, CO 80127 USATelephone: 303-978-2000 8:00AM-5:00PM M-F
Internet Address: <http://www.jm.com>
Emergency: 800-424-9300 (Chemtrec, in English)

Trade Names: DuraGlass® 8824G Mat; DuraGlass® 8924G Mat

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.

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 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

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

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	Newly developed biosoluble fine reinforcement fiber - JM designation 481	0-25
Not Available	Continuous filament glass fibers	35-80
Not Available	Acrylic Based Binder with Urea Formaldehyde Crosslinker, Cured	20-40
Not Available	Non-hazardous green pigment	<1
50-00-0	Formaldehyde	<0.1

Component Information

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

General Product Description

Green-colored glass fiber mats in rolls. Mild formaldehyde 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

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 determined

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 determined

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**Exposure Guidelines****A: General Product Information**

The Occupational Safety and Health Administration (OSHA) has not adopted specific occupational exposure standards for any form of 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 µm with a diameter less than 3 µm. This will help minimize potential irritation effects. The PSP also includes the PPE recommendations described below.

B: Component Exposure Limits**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

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 (OSHA respirable fraction 5 mg/m³, OSHA total dust 15 mg/m³, or the industry voluntary limit of 1 fiber/cc). 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 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

<p>Appearance: Green-colored glass fiber mat</p> <p>Physical State: Solid</p> <p>Vapor Pressure: Not applicable</p> <p>Boiling Point: Not applicable</p> <p>Solubility (H₂O): Nil</p> <p>Freezing Point: Not applicable</p> <p>Percent Volatile: 0</p>	<p>Odor: Mild formaldehyde</p> <p>pH: Not applicable</p> <p>Vapor Density: Not applicable</p> <p>Melting Point: >871°C/1600°F</p> <p>Specific Gravity: Variable</p> <p>Evaporation Rate: Not applicable</p> <p>VOC: Not determined</p>
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Section 10 - Stability & Reactivity Information
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Stability

These products are not reactive.

Hazardous Decomposition

May form carbon dioxide and carbon monoxide. 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.

B: Component Analysis - LD50/LC50**Formaldehyde (50-00-0)**

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

Carcinogenicity**A: General Product Information**

European Union:

Micro-Strand® Type 481 glass fibre is exempt from classification as a possible carcinogen in the European Union and Germany (per German TRGS 905) because the Na₂O+ K₂O+CaO+MgO+BaO content is greater or equal to 18% by weight and a short-term biopersistence test by intratracheal instillation has shown that the fibres longer than 20 µm have a weighted half-life of less than 40 days.

B: Component Carcinogenicity**Continuous Filament Glass Fiber**

ACGIH: A4 - Not Classifiable as a Human Carcinogen (listed under Synthetic Vitreous Fibers)

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

Newly developed biosoluble fine reinforcement fiber - JM designation 481

This fiber has not been specifically evaluated by any regulatory authority or other classification entity, such as the American Conference of Governmental Industrial Hygienists (ACGIH), the International Agency for Research on Cancer (IARC) or the National Toxicology Program (NTP).

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 (IARC Monograph 88 [2006], Monograph 62 [1995], Supplement 7 [1987])

Chronic Toxicity

Continuous Filament Glass Fiber: No chronic health effects are known to be associated with exposure to continuous filament fiber glass. 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.

Newly developed biosoluble fine reinforcement fiber: Intratracheal instillation tests conducted in July 2006 per European Commission protocol ECB/TM 27 Rev. 7, 1998 has shown that both the fibres longer than 20 µm and World Health Organization (WHO) fibres have a weighted half-life of less than 40 days.

Exposure to formaldehyde gas (released under conditions of high heat or 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.

Epidemiology

This product has not been the subject of epidemiological study. Long-term epidemiologic studies of glass wool products show no increases in either respiratory cancer or non-malignant respiratory /disease among employees who manufacture glass wool products.

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

Not expected to be dangerous to the environment.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity**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.

B: Component Waste Numbers**Formaldehyde (50-00-0)**

RCRA: waste number U122

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
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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

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. Contact your local regulatory agency.

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
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 #
Formaldehyde	50-00-0
Methyl carbamate (trace)	598-55-0
Acrylamide (trace)	79-06-1

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, the products and their ingredients 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
Continuous Filament Glass Fiber	Not Available	1 % (related to Fibrous glass)
Newly developed biosoluble fine reinforcement fiber - JM designation 481	Not Available	1 % (related to Fibrous glass)

WHMIS Classification

This is not a WHMIS controlled product. 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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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
11/06/07	1117-1.0000	New MSDS authoring system.
12/14/07	1117-1.0001	Changed 'special purpose glass fiber, biosoluble' to 'Newly developed biosoluble fine reinforcement fiber - JM designation 481' in Section 2. Referenced fiber type in Section 11 Chronic Toxicity statements. Edited fire hazard statement in Section 5. Changed 'Acrylic Based Binder' in Section 2 to 'Acrylic Based Binder with Urea Formaldehyde Cross linker, Cured'. Addition of HSPP statement in Section 8. Added new carcinogenicity statement in Section 11 for the biosoluble fiber. Addition of state regulated statement in Section 15 for fibers.

01/09/08	1117-1.0002	Changed trade name from DuraGlass 8700G Mat to 8922G Mat in order to reflect that this is product with 481 fiber.
08/26/08	1117-1.0003	Trade name changed from 8922G to 8924G. Now producing 2.4 lbs/csqt rather than the original 2.2 lbs/csqt. SDS updated to GHS format.
01/16/09	1117-1.0004	Trade name changed from 8924G to 8824G due to change in binder composition.
11/04/09	1117-1.0005	Addition of Acrylamide to Section 15
11/09/09	1117-1.0006	Minor edit to trade names.
06/25/10	1117-1.0007	Minor edit to composition.

End of Sheet 1117