Section 1 - Chemical Product and Company Identification

Product Name Fiber Glass Insulation
CAS# Mixture/None Assigned
Generic Name Fiber Glass Wool
Formula Not available
Chemical Name: Mixture
Hazard Label FG-02-FA or FGW-01 or L1041

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:
Microlite®, Mat-Faced;
Microlite® Tackboard;
Micromat®;
Whispertone® Micromat;
Whispertone® Tackboard;
Whispertone® Wall Board;
Whispertone® Wall Board, Plain (Unfaced)

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
65997-17-3	Fiber Glass Wool	50-99
NA	Continuous Filament Glass fiber (CAS # 65997-17-3)	0-40*
25104-55-6	Urea extended phenol-formaldehyde resin (cured)	10-25
NA	Acrylic binder	0-10*
9011-05-6	Urea Formaldehyde Binder, Cured	0-10*
50-00-0	Formaldehyde	<0.1*

Additional Component Information

* Components of mat-faced products, i.e., all of the above except Whispertone® Wall Board Plain (Unfaced). Free formaldehyde released only with high temperature and humidity.

Black products may contain carbon black as a colorant encapsulated in the binder. Due to product form, exposure to respirable dust is not expected.

Section 3 - Hazards Identification

Emergency Overview

APPEARANCE AND ODOR: Amber, white, or black fiber glass mat or board. May have off-white facer. No significant odor.

Inhalation of gases released during heat treatment or curing of this product may cause temporary upper respiratory irritation and/or congestion--remove affected individuals to fresh air.

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 is known to cause nasopharyngeal cancer (based on animal and human studies). Formaldehyde may cause skin or respiratory sensitization (allergy).

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.

Absorption

Formaldehyde is a skin sensitizer and may lead to an allergic reaction in some individuals.

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.

First Aid: Notes to Physician

This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

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.

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.

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)

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)

Formaldehyde (50-00-0)

ACGIH: 0.3 ppm Ceiling

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

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.

Where formaldehyde exposure is possible, use a NIOSH-approved full-face formaldehyde respirator with a dust/mist prefilter.

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:	Off-white facing with amber fiber glass core.	**Odor:**	No significant odor
Physical State:	Solid	**pH:**	Not applicable
Vapor Pressure:	Not applicable	**Vapor Density:**	Not applicable
Boiling Point:	Not applicable	**Melting Point:**	>871ºC/1600ºF
Solubility (H_2O):	Nil	**Specific Gravity:**	Variable
Freezing Point:	Not applicable	**Evaporation Rate:**	Not applicable
Percent Volatile:	0	**VOC:**	Not applicable

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

This is a stable material. This product is not reactive.

Hazardous Decomposition

Although fiber glass itself is not combustible, the following decomposition products may be released during burning of the insulation binder: carbon monoxide, carbon dioxide, carbon particles, and small hydrocarbons.

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

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

Urea Formaldehyde Binder, Cured (9011-05-6)
Inhalation LC50 Rat: >167 mg/m3/4H; Oral LD50 Rat: 8394 mg/kg

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

Carcinogenicity

A: General Product Information

The Occupational Safety and Health Administration (OSHA), National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), and American Conference of Governmental Industrial Hygienists (ACGIH) have not classified this product as a carcinogen.

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 2B - Possibly Carcinogenic to Humans (IARC Monograph 43, 1988)

Continuous Filament Glass fiber (CAS # 65997-17-3)

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

Formaldehyde (50-00-0)

ACGIH: A2 - Suspected Human Carcinogen
OSHA: 0.75 ppm TWA; 2 ppm STEL; 0.5 ppm Action Level (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

Chronic Toxicity

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.

Continuous Filament Glass Fiber: No chronic health effects are known to be associated with exposure to continuous filament fiber glass. Long-term epidemiologic studies do not show any increases in respiratory cancer or other disease among employees who manufacture this product. 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.

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.

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 fathead minnow: 24.1 mg/L (flow-through);96 Hr LC50 bluegill: 0.10 mg/L (flow-through)
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
96 Hr EC50 water flea: 20 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the EPA.

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. Immediate (acute) health hazard. 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).

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

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]
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.

Fiber Glass Wool (related to Mineral wool fiber) CAS# 65997-17-3

Formaldehyde CAS# 50-00-0

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.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Fiber Glass Wool	65997-17-3	Yes	Yes	Yes
Urea extended phenol-formaldehyde resin (cured)	25104-55-6	Yes	Yes	No
Urea Formaldehyde Binder, Cured	9011-05-6	Yes	Yes	No
Formaldehyde	50-00-0	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
08/01/00	1041-1.0000	New MSDS authoring system.
08/29/02	1041-2.0000	Update Sections 3, 11 & 15 for IARC 2001 re-classification of fiber glass wool to Group 3, not classifiable as to carcinogenicity to humans. Sect. 1, Trade Names: added Microlite® Tackboard.
04/30/03	1041-2.0001	Sect. 1, Add new trade names, "Whispertone® Tackboard XG" and "Whispertone® Wallboard XG". Sect. 2. Add Acrylic binder to composition.
07/24/03	1041-2.0002	Formaldehyde-free product names moved to MSDS 1201. Sect. 2: Acrylic binder deleted.
09/08/03	1041-2.0003	Sect. 2: added acrylic binder to composition (may be a component of glass facer).
01/23/04	1041-2.0004	Sect. 1 added Whispertone® Micromat to trade names. Regulatory review. Minor edits.
05/07/04	1041-2.0005	Sect. 13 waste edit. Regulatory update. Minor edits.
07/02/04	1041-2.0006	Sect. 11 formaldehyde IARC update from 2A to 1. Sect. 1 label ID edit.
07/14/05	1041-2.0100	Regulatory update: Sections 8, 11, 13, & 15
11/18/05	1041-2.0101	Regulatory update. Minor edits to Section 8 Exposure.

This is the end of MSDS # 1041