

MATERIAL SAFETY DATA SHEET

MSDS Number: T040087

Revision Date: May 2007

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Glass Mat

USE & DESCRIPTION:

CHEMICAL FAMILY: Mixture

MANUFACTURED FOR:

TAMKO Building Products, Inc.
P.O. Box 1404
Joplin, MO 64802-1404

EMERGENCY TELEPHONE NUMBERS;

General Information: 1-624-6644 (8 a.m. - 5 p.m. EST)
Chemtrec: 1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Cas No.	% by Wt.	Exposure Limits*				
			OSHA		ACGIH		Unit
			TWA	STEL	TWA	STEL	
Fiber Glass (Non-Respirable)	65997-17-3	70 - 90	15 mg/m ³ (total dust)	NE	1 fiber/cc (for respirable fibers longer than 5 um with a diameter less than 3 um)	NE	mg/m ³
Urea Formaldehyde Binder	9011-05-6	10 - 30	0.75 ppm	2 ppm	5 mg/m ³ (inhalable particulate)	0.3 ppm	mg/m ³ ppm
Formaldehyde	50-00-0	< 0.1					

*See Section 8 for additional relevant exposure limits

NE = Not established

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Glass filaments, Fibrous glass and Nuisance particulates.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

No unusual conditions are expected from this product.

HMIS Rating: Health - Flammability - Reactivity -	NFPA Rating: Health - Flammability - Reactivity -
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Potential Health Effects:

EYE CONTACT: Fibers from this product may cause eye irritation.

SKIN CONTACT: Fibers from this product may cause skin irritation.

INGESTION: Ingestion may cause irritation of the gastrointestinal tract.

INHALATION: Fiber glass fibers are a mechanical irritant. Breathing fibers may cause irritation of the mouth, nose and throat.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

SKIN CONTACT: For skin contact, wash immediately with soap and water. Do not rub or scratch affected areas, as this may force fibers into the skin. If irritation persists, get medical attention.

INGESTION: Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that intestinal blockage does not occur.

INHALATION: If inhaled, immediately remove the affected person to fresh air. If person continues to experience respiratory distress, get medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD): Not applicable

FLAMMABLE LIMITS (% VOLUME IN AIR - SOLVENT COMPONENT): Not applicable

AUTOIGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: Use any extinguishing media appropriate, for the surrounding fires.

SPECIAL FIRE FIGHTING PROCEDURES: Use SCBA and protective clothing in a sustained fire.

UNUSUAL FIRE OR EXPLOSION HAZARDS: None expected.

HAZARDOUS COMBUSTION PRODUCTS: Primary combustion products are carbon monoxide, carbon dioxide, nitrogen oxides and water. Other undetermined compounds could be released in small quantities.

6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED: This material will settle out of the air. If concentrated on land, it can then be scooped up for disposal as a non-hazardous waste. This material will sink and disperse along the bottom of waterways and ponds. It cannot easily be removed after it is waterborne; however, the material is non-hazardous in water.

WASTE DISPOSAL METHODS: Clean up and put into a suitable container for disposal as per regulatory requirements.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Store below 250 ° F (121 ° C)

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in dry, well ventilated place. Although binder is fully cured, under certain conditions, such as elevated temperature and high humidity, formaldehyde may be released and accumulate in poorly ventilated areas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Use respiratory protection in accordance with your company's respiratory protection program, local regulations and OSHA regulations under 29 CFR 1910.134.

Formaldehyde: In some applications these products may release formaldehyde. Airborne formaldehyde concentrations should be assessed to determine the appropriate type of respiratory protections to be used.

EYE PROTECTION: Wear safety glasses or goggles.

SKIN: Long sleeved shirts and long pants are recommended. Use protective gloves. Skin irritation usually occurs at pressure points such as the neck, wrists, waist, and between the fingers.

VENTILATION: General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits.

WORK PRACTICES: Handle using good industrial hygiene and safety practices. Avoid unnecessary contact with dusts and fibers. Remove material from the skin and eyes after contact. Remove material from clothing using vacuum equipment (never use compressed air and always wash work clothes separately from other clothing. Wipe out the washer or sink to prevent loose glass fibers from getting on other clothing). Keep the work area clean of dusts and fibers made during fabrication by using vacuum equipment to clean up dusts and fibers (avoid dry sweeping or using compressed air as these techniques re-suspend dusts and fibers into the air.) Have access to safety showers and eye wash stations.

EXPOSURE GUIDELINES: As manufactured, continuous filament glass fibers are not respirable. Continuous filament glass products that are chopped, crushed or severely processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards.

Potentially relevant exposure limits are listed below:

Components	CAS No.	Exposure Limits				Unit
		OSHA		ACGIH		
		TWA	STEL	TWA	STEL	
Fiber Glass Continuous (non-respirable)	65997-17-3	15 mg/m ³ (total dust) 5 mg/m ³		1 fiber/cc (for respirable fibers longer than 5 um with a diameter less than 3 um)		
Formaldehyde	50-00-0	0.75 ppm	2 ppm	5 mg/m ³ (inhalable particulate)	0.3 ppm	

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: White to yellow fiberglass mat

ODOR: Chemical

PHYSICAL STATE: Glass mat

BOILING POINT: Not applicable

Ph: Not applicable

MELTING POINT: Not applicable

SPECIFIC GRAVITY: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY (AIR = 1): Not applicable

% VOLATILE, BY VOLUME: Not applicable

SOLUBILITY IN WATER: Not applicable

EVAPORATION RATE (BUTYL ACETAT = 1): Not applicable

OTHER PHYSICAL AND CHEMICAL DATA: No additional information available.

10. STABILITY AND REACTIVITY

STABILITY: This is a stable material

CONDITIONS TO AVOID: Temperatures over 572°F (300°C) may cause decomposition.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (MATERIALS TO AVOID): None expected.

HAZARDOUS DECOMPOSITION PRODUCTS: Primary combustion products are nitrogen oxides, carbon monoxide, carbon dioxide and water. Other undetermined compounds could be released in small quantities.

11. TOXICOLOGICAL INFORMATION

ACUTE AND CHRONIC TOXICITY: NE

GENERAL PRODUCT INFORMATION: Fibers may cause mechanical irritation to eyes and skin. Ingestion may cause irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion and chest tightness.

COMPONENT ANALYSIS - LD50/LC50

Urea, polymer with Formaldehyde (9011-05-6)

Inhalation LC50 Rat : > 167 mg/m³/4H

Oral LD50 Rat: 8394 mg/kg

Oral LD50 Mouse: 6361 mg/kg

Formaldehyde (50-00-0)

Inhalation LC50 Rat: 203 mg/m³

Inhalation LC50 Mouse: 454 mg/m³/4H

Oral LD50 Rat: 100 mg/kg

Oral LD50 Mouse: 42 mg/kg

Dermal LD50 Rabbit: 270 uL/kg

CARCINOGENICITY

A: GENERAL PRODUCT INFORMATION:

FIBERGLASS CONTINUOUS FILAMENT - The International Agency for Research on Cancer (IARC) in June 1987 categorized fiber glass continuous filament as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human, as well as animal studies was evaluated by IARC as insufficient to classify fiber glass continuous filament as a possible, probable or confirmed cancer causing material. The American Conference of Governmental Industrial Hygienists (ACGIH) A4 classification, not classifiable as a human carcinogen, for respirable continuous filament glass fibers is based on inadequate data in terms of its carcinogenicity in humans and/or animals. For respirable continuous filament glass fibers, a TLV-TWA of 1 fiber/cc was adopted to protect workers against mechanical irritation. The TLV- TWA of 5 mg/m³ was adopted for nonrespirable glass filament fiber, measured as inhalable dust, to prevent mechanical irritation of the upper respiratory tract.

FORMALDEHYDE: In March 1987 the International Agency for Research on Cancer (IARC) upgraded their overall evaluation of formaldehyde gas, based on evidence of carcinogenicity in humans, from a possible human carcinogen (Group 2B based on inadequate evidence in humans) to a probable human carcinogen (Group 2A based on limited evidence in humans). A number of new epidemiological studies on persons in a variety of occupations with potential exposure to formaldehyde were used in the evaluation. Cancers that occurred in excess in more than one study are: Hodgkin's disease, leukemia and cancers of the buccal cavity and pharynx (particularly nasopharynx), lung, nose, prostate, bladder, brain, colon, skin and kidney.

Exposure to formaldehyde at concentrations in excess of 1 ppm may cause significant irritation of the eyes and upper respiratory tract. The irritation threshold appears to be about 0.3 ppm. Pulmonary sensitization, although rare, does occur in humans. Formaldehyde solutions can cause severe eye and moderate skin irritation. Repeated skin exposure to solutions of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly active in a number of in vitro genotoxicity tests, but inactive in vivo. Formaldehyde did not cause birth defects in offspring of female mice who were exposed to concentrations up to 10 ppm. Lifetime inhalation of formaldehyde at concentrations above 5 ppm for 6 hours per day caused nasal tumors in laboratory animals. Many epidemiological studies have failed to link cancer to humans with occupational exposure to formaldehyde.

The American Conference of Governmental Industrial Hygienists (ACGIH) A2 designation, suspected human carcinogen, is based on cancer in experimental animals and conflicting or insufficient epidemiologic studies of workers. The recommended ceiling TLV or 0.3 ppm for work place air formaldehyde is based on evidence of irritation of occupation exposure to formaldehyde, as well as human formaldehyde exposures in other settings.

B. Component Carcinogenicity

ACGIH, IARC, OSHA, and NTP carcinogen lists have been checked for those components with CAS registry numbers.

Fiber Glass Continuous (non-respirable) (65997-17-3):

ACGIH: A4- Not Classifiable as a Human Carcinogen (related to Continuous filament glass fibers)

IARC: Monograph 43, 1988 (related to Glass filaments) (Group 3 (not classifiable))

Formaldehyde (50-00-0)

ACGIH: A2 - suspected human carcinogen

OSHA: 0.75 ppm TWA PEL; 2 ppm STEL; 0.5 ppm TWA action level; Irritant and Potential cancer hazard (29 CFR 1910.1048)

NTP: Suspect Carcinogen (Possible Select Carcinogen)

IARC: Monograph 62, 1995 (Group 2A (probably carcinogenic to humans))

12. ECOLOGICAL INFORMATION**ECOTOXICITY:**

GENERAL PRODUCT INFORMATION: This material is not expected to cause harm to animals, plants or fish.

COMPONENT ANALYSIS - ECOTOXICITY - AQUATIC TOXICITY:

FORMALDEHYDE: LC50 (96 hr) fathead minnow: 24.1 mg/L. Cond: Flow-through, 21.7 degrees C, pH 6.8, 50.8 mg/L CaCO₃; LC50 (96 hr) bluegill: 0.10 mg./L. Cond: Flow-through.

ENVIRONMENTAL FATE: No data available for this product.

13. DISPOSAL CONSIDERATIONS**US EPA WASTE NUMBER & DESCRIPTIONS**

GENERAL PRODUCTION INFORMATION: No components are identified as hazardous wastes.

COMPONENT WASTE NUMBERS: No EPA Waste Numbers are applicable for this product's components.

DISPOSAL INSTRUCTIONS: Consult appropriate authorities before disposing of this material.

14. TRANSPORT INFORMATION: This product is not regulated as a hazardous material for transport under either 49 CFR or the IMDG Code.

15. REGULATORY INFORMATION**US Federal Regulations****A. General Product Information:**

No additional information available. Formaldehyde content is below the SARA 313 0.1% "de minimis concentration."

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: TPQ = 500 pounds; RQ = 100 pounds (does not meet toxicity criteria but because of high production volume and recognized toxicity is considered a chemical of concern).

SARA 313: Form R reporting required for 0.1% de minimis concentration

CERCLA: Final RQ = 100 pounds (45.4 kg)

SARA 311/312

Acute Health Hazard:	Yes
Chronic Health Hazard:	Yes
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard:	No

C. Clear Air Act

The following components appear on the Clear Air Act - 1999 Hazardous Air Pollutants List:

Component	CAS	CAA
Formaldehyde	50-00-0	Yes

State Regulations**A: General Product Information:**

No additional information available.

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 Continuous (non-respirable) (¹ related to Glass, fibrous or dust) (² related to Fibrous glass) (³ related to Fibrous glass dust)	65997-17-3	Yes ¹	No	Yes ²	Yes	No	Yes ³
Formaldehyde	50-00-0	Yes	Yes	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 and birth defects or other reproductive harm.

Other Regulations

A: General Product Information:

No additional information available.

16. OTHER INFORMATION

- Preparation Date: February 26, 2004
- Revised:
 - August 2004 (Formatting and DOT Transport Information)
 - August 2005 (Changes in emergency contact information)
 - June 2006 (Company name change)
 - May 2007 (Formatting Issues)
- Replaces: January 1, 1987 Version

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