

**1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

Manus Products, Inc.  
866 Industrial Blvd West  
Waconia, MN 55387

EMERGENCY TELEPHONE NUMBER

CHEMTRCC: 800-424-9300

Plant Telephone: 952 442-3323

Revision Date: 12/2009

Generic Description: Elastomeric Sealant

Physical Form: Paste

Color: All Colors

Odor: Some odor

NFPA Profile: Health 2 Flammability 1 Instability/Reactivity 0

**Note: NFPA - National Fire Protection Association**

**2. OSHA HAZARDOUS COMPONENTS**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
22984-54-9	3.0-7.0	Methyl tri(ethylmethylketoxime) silane
83817-72-5	1.0-5.0	Di (ethylmethylketoxime) methoxymethyl silane
101371-00-0	0.5-1.5	Ethoxy tri(ethylmethylketoxime) silane
93917-75-0	0.1-1.0	Diethoxy di(ethylmethylketoxime) silane
96-29-7	0.1-1.0	Methylethylketoxime
101371-01-1	0.1-1.0	Triethoxy (ethylmethylketoxime) silane
34206-40-1	0.1-1.0	Tetra (methylethylketoxime) silane

The above components are hazardous as defined in 29 CFR 1910.1200.

**3. EFFECTS OF OVEREXPOSURE**

Acute Effects

E y e : Direct contact may cause mild irritation.

**Manus Products, Inc.      MANUS-BOND 75-A;  
(White, Black, Gray,Clear)**

Skin:                                May cause moderate irritation.  
Inhalation:                        Irritates respiratory passages very slightly. Vapor overexposure may cause drowsiness.  
Oral:                                 Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin:                                Repeated skin contact may cause allergic skin reaction.  
Inhalation:                        Overexposure by inhalation may injure the following organ(s): Blood. Liver.  
Oral:                                 Repeated ingestion or swallowing large amounts may injure internally.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

**4. FIRST AID MEASURES**

Eye:                                 Immediately flush with water for 15 minutes.  
Skin:                                 Remove from skin and immediately flush with water for 15 minutes. Get medical attention if irritation or ill effects develop or persist.  
Inhalation:                        Remove to fresh air. Get medical attention if ill effects persist.  
Oral:                                 Get medical attention.  
Comments:                         Treat according to person's condition and specifics of exposure.

**5. FIRE FIGHTING MEASURES**

Flash Point:                        Not applicable.  
Autoignition                        Not determined.  
Temperature:  
Flammability Limits in Air:    Not determined.  
Extinguishing Media:            On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO<sub>2</sub>), dry chemical or water spray. Water can be used to cool fire exposed containers.

**Fire Fighting Measures:** Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Determine the need to evacuate or isolate the area according to your local emergency plan.

**Unusual Fire Hazards:** None.

#### Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Metal oxides. Carbon oxides and traces of incompletely burned carbon compounds. Nitrogen oxides. Silicon dioxide. Formaldehyde.

### **6. ACCIDENTAL RELEASE MEASURES**

**Containment/Clean up:** Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since some silicone materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills.

### **7. HANDLING AND STORAGE**

Use with adequate ventilation. Product evolves methyl ethyl ketoxime (MEKO) when exposed to water or humid air. Provide ventilation during use to control methyl ethyl ketoxime (MEKO) within exposure guidelines or use respiratory protection. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Product evolves flammable ethyl alcohol on exposure to water or humid air. Provide ventilation during use to control ethanol within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally.

Keep container closed and store away from water or moisture.

### **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

#### Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
22984-54-9	Methyl tri(ethylmethylketoxime) silane	See ethyl methyl ketoxime comments.
83817-72-5	Di (ethylmethylketoxime) methoxymethyl silane	See methyl alcohol and ethyl methyl ketoxime comments.

101371-00-0	Ethoxy tri(ethylmethylketoxime) silane	See ethyl alcohol and ethyl methyl ketoxime comments.
93917-75-0	Diethoxy di(ethylmethylketoxime) silane	See ethyl alcohol and ethyl methyl ketoxime comments.
96-29-7	Methylethylketoxime	Vendor guide: TWA 3 ppm, STEL 10 ppm. AIHA WEEL: TWA 10 ppm.
101371-01-1	Triethoxy (ethylmethylketoxime) silane	See ethyl alcohol and ethyl methyl ketoxime comments.
34206-40-1	Tetra (methylethylketoxime) silane	See ethyl methyl ketoxime comments.

Ethyl methyl ketoxime is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within the following exposure guidelines: Vendor guide TWA: 3 ppm, STEL: 10 ppm; AIHA WEEL TWA: 10 ppm. Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm. Ethyl alcohol is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL and ACGIH TLV: TWA 1000 ppm.

**Engineering Controls**

Local Ventilation: Recommended.  
General Ventilation: Recommended.

**Personal Protective Equipment for Routine Handling**

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.

Suitable Gloves: Butyl Rubber. Natural Rubber. Neoprene Rubber(R). Nitrile Rubber. Silver Shield(R). 4H(R).

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data show exposures are within recommended exposure guidelines. Industrial Hygiene Personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator: Organic Vapor Type.

Personal Protective Equipment for Spills

Eyes: Use full face respirator.

Skin: Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.

Inhalation/Suitable Respirator: Use self-contained breathing apparatus (SCBA) or other supplied-air respirator.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally. Use reasonable care.

Comments: Product evolves methyl ethyl ketoxime (MEKO) when exposed to water or humid air. Provide ventilation during use to control methyl ethyl ketoxime (MEKO) within exposure guidelines or use respiratory protection. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Product evolves flammable ethyl alcohol on exposure to water or humid air. Provide ventilation during use to control ethanol within exposure guidelines or use respiratory protection.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Form: Paste

Color: All Colors

Odor: Some odor

Specific Gravity @ 25°C: 1.04

Viscosity: Not determined.

Freezing/Melting Point: Not determined.

Boiling Point: Not determined.

Vapor Pressure @ 25°C: Not determined.

Vapor Density: Not determined.

Solubility in Water: Not determined.

pH: Not determined.

Volatile Content: Not determined.

Note: The above information is not intended for use in preparing product specifications.

**10. STABILITY AND REACTIVITY**

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Polymerization:

Conditions to Avoid: None.

Materials to Avoid: Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8 . Oxidizing material can cause a reaction.

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicology Data for Product**

Complete information is not yet available.

**Component Toxicology Information**

Methyl Ethyl Ketoxime (MEKO) is formed upon contact with water or humid air. Male rodents exposed to MEKO vapor throughout their lifetime developed liver cancer. Additional testing is planned by the MEKO supplier to determine any relevance to humans. Until more data is known, exposure levels should be maintained as low as achievable.

**Special Hazard Information on Components**

**Sensitizers**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>	
22984-54-9	3.0-7.0	Methyl tri(ethylmethylketoxime) silane	Possible skin sensitizer.
83817-72-5	1.0-5.0	Di (ethylmethylketoxime) methoxymethyl silane	Possible skin sensitizer.
101371-00-0	0.5-1.5	Ethoxy tri(ethylmethylketoxime) silane	Possible skin sensitizer.
93917-75-0	0.1-1.0	Diethoxy di(ethylmethylketoxime) silane	Possible skin sensitizer.
96-29-7	0.1-1.0	Methylethylketoxime	Possible skin sensitizer.
101371-01-1	0.1-1.0	Triethoxy (ethylmethylketoxime) silane	Possible skin sensitizer.
34206-40-1	0.1-1.0	Tetra (methylethylketoxime) silane	Possible skin sensitizer.

**12. ECOLOGICAL INFORMATION**

**Environmental Fate and Distribution**

No specific information is available.

**Environmental Effects**

No specific information is available.

**Fate and Effects in Waste Water Treatment Plants**

No specific information is available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34,1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

**13. DISPOSAL CONSIDERATIONS**

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal.

**14. TRANSPORT INFORMATION**

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (ICAO)

Not subject to ICAO regulations.

**15. REGULATORY INFORMATION**

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listing as

**Section 302 Extremely Hazardous Substances:**

None.

**Section 304 CERCLA Hazardous Substances:**

None

**Section 312 Hazard Class:**

Acute: Yes  
 Chronic: Yes  
 Fire: No  
 Pressure: No  
 Reactive: No

**Section 313 Toxic Chemicals:**

None present or none present in regulated quantities.

**Supplemental State Compliance Information**

**California**

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

**Massachusetts**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
7631-86-9	10.0-30.0	Silica, amorphous

**New Jersey**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
70131-67-8	> 60.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	10.0-30.0	Silica, amorphous
22984-54-9	3.0-7.0	Methyl tri(ethylmethylketoxime) silane
63148-62-9	<=5.0	Polydimethylsiloxane
83817-72-5	1.0-5.0	Di (ethylmethylketoxime) methoxymethyl silane

**Pennsylvania**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
70131-67-8	> 60.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	10.0-30.0	Silica, amorphous
22984-54-9	3.0-7.0	Methyl tri(ethylmethylketoxime) silane

**16. OTHER INFORMATION**

These data are offered in good faith as typical values and not as product specifications. No warranty, either

expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

**PREPARATION INFORMATION**

Prepared by;	Manus Chemical Safety and Health Department
MSDS No.	Manus Bond 75-A (White, Black, Gray, Clear)
Date Prepared	December, 2009
Date of Issue	December, 2009
Supercedes	November, 2006