

MATERIAL SAFETY DATA SHEET

**RTV 4500 (SIL-BOND)
(STANDARD)**

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Silco Incorporated Phone: (440)-975-8886
7635 St. Clair Ave. Fax: (440)-975-8887
Mentor, Oh 44060

Revision Date: 08/24/11

General Description: Silicone elastomer
Physical Form: Paste
Color: As specified
Odor: Acetic acid odor

NFPA PROFILE: Health - 2 Flammability – 1 Instability/Reactivity - 0

Note: NFPA = National Fire Protection Association

2. OSHA HAZARDOUS COMPONENTS

CAS Number	Wt %	Component Name
4253-34-3	1.0 – 5.0	Methyltriacetoxysilane
17689-77-9	1.0 – 5.0	Ethyltriacetoxysilane

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

3. EFFECTS OF OVEREXPOSURE

Acute Effects:

Eye: Direct contact may cause moderate irritation.
Skin: Direct contact may cause moderate irritation.
Inhalation: Irritates respiratory passages very slightly.
Oral: Low ingestion hazard in normal use.

Prolonged / Repeated Exposure Effects:

Skin: No known applicable information.
Inhalation: No known applicable information.
Oral: No known applicable information.

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

Inhalation: No first aid should be needed.
Oral: No first aid is needed.
Eye: Immediately flush with water for 15 minutes. Seek medical attention.
Skin: Remove from skin and wash thoroughly with soap and water or waterless cleanser. Seek medical attention if irritation or other ill effects develop or persist.
Comments: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point: >212° F /100 ° C (Closed Cup)
Autoignition Temperature: Not determined
Flammability Limits in Air: Not determined
Extinguishing Media: On large scale fires use dry chemical foam or water spray. On small fires use carbon dioxide (CO₂), 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. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Usual Fire Hazards: None

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve into the following hazardous products: carbon oxides, traces of incompletely burned carbon compounds, formaldehyde, and silicon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Containment / Clean up: Observe all personal protection equipment recommendations described in section 5 and 8. Clean 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. Section 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call Silco Incorporated at (440)-975-8886, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves into acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye and skin contact. Use with reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

CAS Number	Component Name	Exposure Limits
4253-34-3	Methyltriacetoxysilane	See acetic acid comments
17689-77-9	Ethyltriacetoxysilane	See acetic acid comments

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm. STEL 15 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 exposed skin at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as possible and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Suitable Gloves: Silver Shield[®] 4H[®]
Inhalation: No respiratory protection should be needed.
Suitable Respirator: No respirator should be needed.

Personal Protective Equipment for Spills

Inhalation / Suitable
Respirator: No respiratory protection needed.

Precautionary

Measures:	Avoid eye and skin contact. Use with reasonable care.
Eyes:	Use proper protection – safety glasses as a minimum.
Skin:	Wash exposed skin at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Comments:	Product evolves into acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection.

When heated to temperatures above 150 degrees Celsius in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin, and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

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:	As specified
Odor:	Acetic Acid odor
Specific Gravity @ 25 C:	1.032
Viscosity:	Not determined
Freezing / Melting Point:	Not determined
Boiling Point:	Not determined
Vapor Pressure @ 25C:	Not determined
Solubility in Water:	Not determined
pH:	Not determined
Volatile Content:	Not determined
VOC Content:	30 g/L

Note: The above information is not intended for use in preparing product specifications. Contact Silco Incorporated before writing specifications.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Hazardous Polymerization:	Hazardous polymerization will not occur.
Conditions to Avoid:	None
Material to Avoid:	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in section 8.

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

No known applicable information.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC 50)	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, p34, 1993.

This table can be used to classify the ecotoxicity of this product when the 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.

Call Silco Incorporated at (440)-975-8886, if additional information is required.

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 (IATA)

Not subject to IATA regulations

Call Silco Incorporated at (440)-975-8886, if additional information is required.

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 Listings

Section 302 Extremely Hazardous Substances: None

Section 304 CERCLA Hazardous Substances: None

Section 312 Hazard Class:

Acute: Yes

Chronic: No

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 chemicals 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

CAS Number	Wt %	Component Name
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7631-86-9	< = 10.0	Silica, amorphous
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New Jersey

CAS Number	Wt%	Component Name
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70131-67-8	< = 87.0	Dimethyl siloxane, hydroxy-terminated
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7631-86-9	< = 10.0	Silica, amorphous
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4253-34-3	1.0 – 5.0	Methyltriacetoxysilane
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17689-77-9	1.0 – 5.0	Ethyltriacetoxysilane
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Pennsylvania

CAS Number	Wt%	Component Name
70131-67-8	< = 87.0	Dimehtyl siloxane, hydroxy-terminated
7631-86-9	< = 10.0	Silica, Amorphous

16. OTHER INFORMATION

Prepared By: Silco Incorporated

This data is offered in good faith as typical values and not as product specification. 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.

****** END OF MSDS ******