



MATERIAL SAFETY DATA SHEET

Print Date: 5/01/13

PRODUCT NAME: SIL-BOND RTV 4500

COLOR: ALUMINUM

REVISION DATE: May 1, 2013

1. PRODUCT AND COMPANY IDENTIFICATION

Identification of the Substance or Preparation

Commercial Product Name: SIL-BOND RTV 4500

Manufacturer:

Silco Inc.

7635 St. Clair Avenue

Mentor, OH 44060

PHONE: 440-975-8886 FAX: 440-975-8887

General Description: Silicone elastomer

Physical Form: Paste

Color: Aluminum

Odor: Acetic acid odor

NFPA PROFILE: Health 1 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. HAZARDS IDENTIFICATION

POTENTIAL HEALTH AFFECTS

Acute Effects

Eye: Direct contact may cause mild irritation.

Skin: May cause mild irritation.

Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentration is attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

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.



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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.

3. COMPOSITION/ INGREDIENTS

<u>CAS NUMBER</u>	<u>Wt %</u>	<u>Component Name</u>
64742-46-7	<=7.0	Hydrotreated middle petroleum distillates
17689-77-9	1.0 - 5.0	Ethyltriacetoxysilane
4253-34-3	1.0 – 5.0	Methyltriacetoxysilane

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

4. FIRST AID MEASURES

Eye: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.

Skin: No health effects expected. If irritation does occur flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.

Inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.

Oral: If irritation or discomfort occurs, obtain medical advice.

Notes to Physician: Treat according to person's condition and specifics of exposure.



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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 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.

Unusual Fire Hazards: None.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean Up: Observe all personal protections equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant 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 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 contact. Avoid skin contact. Avoid breathing vapor. Keep container closed.

Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
64742-46-7	Hydrotreated middle petroleum distillates	OSHA PEL (final rule) and ACGIH TLV for oil mists: TWA 5 mg/m ³
17689-77-9	Ethyltriacetoxysilane	See acetic acid comments.
4253-34-3	Methyltriacetoxysilane	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 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.

Suitable Gloves: Handle in accordance with good industrial hygiene and safety practices.

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator: Respiratory protection is not needed under ambient conditions. If vapor is generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.



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Personal Protective Equipment for Spills

Eyes: Use full face respirator.

Skin: Wash 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.

Inhalation/Suitable Respirator: Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Use reasonable care.

Comments: Product evolves 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°C (300°F) in the presence of air, product can form formaldehyde vapors. Physical and health hazard information is readily available on the Material Safety Data Sheet.

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



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9. PHYSICAL/CHEMICAL CHARACTERISTICS

Physical Form: Paste
Color: Aluminum
Odor: Acetic acid 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.
VOC Content: 30 grams per liter
Flash Point: >212°F/> 100°C (Closed Cup)
Autoignition Temperature: Not determined.
Flammability Limits in Air: 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.
Conditions to Avoid: None.
Materials to Avoid: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Decomposition Products

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

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

No known applicable information.

12. ECOLOGICAL CONSIDERATIONS

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 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 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 (IATA)

Not subject to IATA regulations.



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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 (40 CFR 355): None.

Section 304 CERCLA Hazardous Substances (40 CFR 302): None.

Section 311/312 Hazard Class (40 CFR 370):

Acute: No

Chronic: No

Fire: No

Pressure: No

Reactive: No

Section 313 Toxic Chemicals (40 CFR 372): None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

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	7.0 – 13.0	Silicon dioxide



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New Jersey

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
70131-67-8	70.0 – 90.0	Dimethyl siloxane, hydroxyl-terminated
7631-86-9	7.0 – 13.0	Silicon dioxide
64742-46-7	<=7.0	Hydrotreated middle petroleum distillates
17689-77-9	1.0 – 5.0	Ethyltriacetoxysilane
4253-34-3	1.0 – 5.0	Methyltriacetoxysilane

Pennsylvania

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
70131-67-8	70.0 – 90.0	Dimethyl siloxane, hydroxyl-terminated
7631-86-9	7.0 – 13.0	Silicon dioxide
64742-46-7	<=7.0	Hydrotreated middle petroleum distillates

16. OTHER INFORMATION

Prepared by: Silco Inc.

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.

[http: www.silco-inc.com](http://www.silco-inc.com)