

MATERIAL SAFETY DATA SHEET**RTV 1100 (SIL-TITE)
(ALUMINUM)****1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

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General Description: Silicone elastomer
Physical Form: Paste
Color: Clear
Odor: Low ammonia odor

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

2. COMPOSITION / INFORMATION OF INGREDIENTS

Product Composition / CAS REG NO.	Appox. WGT. %	TWA	ACGIH STEL	TLV TWA	OSHA STEL	PEL UNITS
Hazardous						
Hexamethyldisilazane 999-97-3	1 – 5	25 ®	NE	35 STEL	NE	® PPM
Methyltrimethoxysilane 1185-55-3	1 – 5	NA	NE	NA	NE	NA
Octamethylcyclotetrasiloxane 556-67-2	1 – 5	5 PPM	NE	GE REC	NE	Guide
Non Hazardous						
Dimethylpolysiloxane 63148-62-9	10 – 30	NA	NE	NA	NE	NA
Me-dimethoxy / stpd Polydime – Siloxane 68037-58-1	60 – 80	NA	NE	NA	NE	NA
Tetramer Treated Fumed Silica 68583-49-3	10 – 30	10	NE	15	NE	MG/ M3
Silanol / Stpd Siloxane W / ME Silsqxns 68554-67-6	1 – 5	NF	NE	NF	NE	NA

See section 15 for description of any WHMIS Trade Secrets.

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING!

Product is irritating to skin, eyes, and respiratory tract. May be harmful if swallowed. May irritate skin, eyes and has adverse liver and reproductive effects reported in animals. Product emits an ammonia like odor when curing and cures to a clear solid rubber.

POTENTIAL HEALTH EFFECTS: May be harmful if swallowed.

SKIN CONTACT: May cause mild skin irritation.

INHALATION: Causes mild respiratory irritation.

EYE CONTACT: May cause mild eye irritation.

MEDICAL CONDITIONS AGGRAVATED: None known.

SUBCHRONIC (TARGET ORGAN) EFFECTS: Reproductive disorders. May cause liver effects.

CHRONIC EFFECTS / CARCINOGENICITY: This product or one of its ingredients present 0.1% or more is not listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

PRODUCTS / INGREDIENTS: This space reserved for special use.

PRINCIPAL ROUTES OF EXPOSURE: Dermal, skin, eyes.

OTHER: Methanol released during curing. Ammonia released during curing.
Octamethylcyclotetrasiloxane.

INGESTION: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appeared normal) as well as hypertrophy (increased cell size).

INHALATION: In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5 – 10 ppm) showed no toxic effects in rodents.

Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 to 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found.

Interim results from a two generation reproductive study in rats exposed to 500 to 700 ppm D4 (whole body inhalation, 70 days prior to mating, through mating, gestation, and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended periods of off spring delivery (deystocia). These results were not observed at the 70 and 300 ppm dosing levels.

Preliminary results from an ongoing 24 month combined chronic / ongonicity study in rats exposed to 10, 30, 150, or 700 ppm D4 showed test-articled related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased incidence of endometrial adenomas. All of these effects were limited to the 700 ppm exposure group.

The relevance of these data to humans is unclear. Further studies are ongoing.

In developmental toxicity studies, rats, and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study.

This product contains methylpolysiloxane which can generate formaldehyde at approximately 300 F (150 C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer , eye and throat irritant, acute toxicant, and potential cancer hazard. An MSDS for formaldehyde is available from Silco Incorporated.

4. FIRST AID MEASURES

INGESTION: Do not induce vomiting. Slowly dilute with 1 – 2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

SKIN: wash with soap and water. Get medical attention if irritation or symtpns from section 3 develop.

INHALATION: If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minute and get medical attention if irritation persists.

NOTE TO PHYSICIAN: None Known.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA © NA (F)

METHOD: NA

IGNITION TEMP: UNK © UNK (F)

FLAMMABLE LIMITS IN AIR – LOWER (%) NA

FLAMMABLE LIMITS IN AIR – UPPER (%) NA

SENSITIVITY TO MECHANICAL IMPACT (Y/N): NO

SENSITIVITY TO STATIC DISCHARGE: Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA: All standard firefighting media.

SPECIAL FIREFIGHTING PROCEDURES: Firefighters must wear NIOSH/MSHA approved positive pressure self contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear protective equipment as specified in the protective equipment section. Increase area ventilation.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid contact with skin and eyes. Use only in well ventilated area. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails, cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation. Store away from heat, sources of ignition, and incompatibles. Keep away from children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Showers and eyewash stations. See "Ventilation" below.

RESPIRATORY PROTECTION: If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).

PROTECTIVE GLOVES: Cloth Gloves.

EYE AND FACE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Wear eye protection and protective clothing.

VENTILATION: Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non routine or emergency situations.

9. PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT INFORMATION:

BOILING POINT:	NA	© NA	(F)
VAPOR PRESSURE (20 C) (MM HG):	NA		
VAPOR DENSITY (AIR=1):	NA		
FREEZING POINT:	NA	© NA	(F)
MELTING POINT:	UNK	©UNK	(F)
PHYSICAL STATE:	Solid		
ODOR:	Ammonia		
COLOR:	Clear		
ODOR THRESHOLD (PPM):	UNK		
% VOLATILE BY VOLUME:	< 4		
EVAP. RATE (BUTYL ACETATE=1):	<1		
SPECIFIC GRAVITY (WATER=1):	UNK		
DENSITY (KG / M3):	UNK		

ACID / ALKALINITY (MEQ/G): NA
PH: NA
VOC. EXCL. H2O & EXEMPTS (G/L): NT
SOLUBILITY IN WATER (20 C): INSOLUBLE
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): PARTIALLY IN TOLUENE

10. STABILITY AND REACTIVITY

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur
HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS:
Carbon monoxide
Carbon dioxide
Methanol
Ammonia
Formaldehyde
INCOMPATIBILITY (MATERIALS TO AVOID): None Known.
CONDITIONS TO AVOID: None Known.

11. TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION:
ACUTE ORAL LD50 (MG/KG): Unknown
ACUTE DERMAL LD50 (MG/KG): Unknown
ACUTE INHALATION LC50 (MG/L): Unknown
OTHER:
AMES TEST: Unknown

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time
CHEMICAL FATE : No data at this time

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT SHIPPING NAME: NONE
DOT HAZARD CLASS: NOTE REGULATED
DOT LABEL (S): NONE
UN/NA: NONE
PLACARDS: NONE
IATA: NOT REGULATED BY IATA
IMO IMDG -code: NOT REGULATED FOR OCEAN TRANSPORTATION

EUROPEAN CLASS:
RID (OCTI): NONE
ADR (ECE): NONE
RAR (IATA): NONE

15. REGULATORY INFORMATION

SARA SECTION 320: None Found
SARA (311, 312) HAZARD CLASS: Acute and Chronic Health Hazard
SARA (313) CHEMICALS: None
CPSC CLASSIFICATION: NA
WHMIS HAZARD CLASS: D2A Very Toxic Materials
D2B Toxic Materials
WHMIS TRADE SECRET: None
EXPORT:
SCHDLE B / HTSUS: 3214.10 Mastic Based on Rubber
ECCN: EAR99
HAZARD RATING SYSTEMS
HMIS: FLAMMABILITY – 0 REACTIVITY – 0 HEALTH – 1
NFPA FLAMMABILITY = 0 REACTIVITY = 0 HEALTH = 1
CALIFORNIA PROPOSITION 65: None

16. OTHER INFORMATION

This product or its components are on the European inventory of existing commercial chemicals (EINECS).

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

This product or its components are on the Australian inventory (ACQIN).

C = ceiling limit
EST= estimated
NA = not applicable
NE= None established
ND = None determined
SKN = skin
R = recommended
NT = not tested
By – Product = reaction by product, TSCA inventory status under 40 CFR part 720.30(h-2).
NEGL = negligible
NF = none found
UNKN = unknown
REC = recommended
V = recomm. By vendor
TS = trade secret
MST = mist
STEL = short term exposure

All chemicals substances in this material are included on or exempted from listing on the TSCA inventory.

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