

**GE Silicones**-----
COPYRIGHT GENERAL ELECTRIC CO.
-----FORMAT: USA
PRODUCT: SHC1200MATERIAL SAFETY DATA SHEET
METHYLSILSESQUIOXANE SOLUTION
-----1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
-----MANUFACTURED BY:
GE SILICONES
260 HUDSON RIVER ROAD
WATERFORD, NY 12188SUPPLIED BY:
GE SILICONES
260 HUDSON RIVER ROAD
WATERFORD, NY 12188EMERGENCY PHONE (24 HRS)
(518) 237-3330EMERGENCY PHONE (24 HRS)
(518) 237-3330REVISED: 02/21/00
PREPARER: CE HANNIGAN
CHEMICAL FAMILY/USE: SILICONE SOLUTION
FORMULA: MIXTURE2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION/ CAS REG NO.	APPROX. WGT. %	ACGIH TLV TWA	OSHA PEL TWA	OSHA PEL STEL	UNITS
A. HAZARDOUS					
DIACETONE ALCOHOL 123-42-2	10-30	50	NE	50	NE PPM
FORMALDEHYDE 50-00-0	<1	0.3(C)	NE	0.75	2 PPM
ISOBUTANOL 78-83-1	10-30	50	NE	50	NE PPM
METHANOL 67-56-1	10-30	200	SKN250	200	SKN250 PPM

ISOPROPYL ALCOHOL							
67-63-0	10-30	400	500	400	500	PPM	
B. NON-HAZARDOUS							
METHYLTRIMETHOXYSILANE, HYDROLYSIS-							
PRODUCT W/ SILICA							
68584-81-6	10-30	NE	NA	NE	NA	NA	
WATER							
7732-18-5	10-30	NA	NE	NA	NE	NA	

See Section 15 for description of any WHMIS Trade Secret(s).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

This section not in use

POTENTIAL HEALTH EFFECTS:

INGESTION:

Harmful if swallowed.
Causes vomiting,nausea,and diarrhea
Coma,shock and death may occur
May be fatal or cause blindness if swallowed.

SKIN CONTACT:

Causes moderate skin irritation.
Causes drying of the skin.
Harmful if absorbed thru the skin.

INHALATION:

Excessive inhalation causes headache, dizziness, nausea and incoordination.
Causes moderate respiratory irritation.
Harmful if inhaled.
Can cause unconsciousness if inhaled.

EYE CONTACT:

Causes severe eye irritation.
Eye contact may cause blindness.
High vapor concentration will cause irritation.
May harm vision.

MEDICAL CONDITIONS AGGRAVATED:

Respiratory
Liver, kidney

SUBCHRONIC (TARGET ORGAN) EFFECTS:

Dermatitis.
Respiratory ailments.
Central nervous system damage.
Optic nerve damage.
Liver and kidney damage.
Cumulative systemic toxicity.

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.

PRINCIPLE ROUTES OF EXPOSURE:

- Oral.
- Dermal - skin.
- Inhalation.

OTHER:

This product contains a component that showed unexpected acute toxicity to pregnant rabbits in a gavage study conducted by the chemical manufacturers association. There were no unexpected toxic effects in pregnant rats exposed in the same study. No developmental effects were noted in either study. Effect levels in rabbits were several times the maximum exposure which would occur at the TLV for this component.

This product contains Methylpolysiloxanes which can generate Formaldehyde at approximately 300 degrees Fahrenheit (150°F) 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 GE Silicones.

4. FIRST AID MEASURES

INGESTION:

If swallowed induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get medical attention.

SKIN:

Remove contaminated clothing and launder before reuse. Wash with soap and water.

INHALATION:

If inhaled, remove to fresh air, if not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

EYES:

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

NOTE TO PHYSICIAN:

None known.

5. FIRE FIGHTING MEASURES

FLASH POINT: 19.4 (C) 67 (F)
METHOD : PMCC.
IGNITION TEMP : 426 (C) 800 (F)
FLAMMABLE LIMITS IN AIR - LOWER (%): 1.6
FLAMMABLE LIMITS IN AIR - UPPER (%): 36
SENSITIVITY TO MECHANICAL IMPACT (Y/N): NO

SENSITIVITY TO STATIC DISCHARGE:

Sensitivity to static discharge is expected; material has a flash point below 200 f.

EXTINGUISHING MEDIA:

Alcohol foam
Carbon dioxide
Dry chemical
Foam
Water mist

SPECIAL FIREFIGHTING PROCEDURES:

Flammable.
Wear respiratory protection if in a confined area.

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.
Wear proper protective equipment as specified in the protective equipment section.
Remove sources of ignition.
Warn other workers of spill.
Increase area ventilation.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

- Use ground strap.
- Recommended storage in original container below 30'C (85'F).
- Keep container closed when not in use.
- Avoid breathing vapors, if exposed to high vapor concentration, leave area at once.
- Avoid contact with skin and eyes.
- Open container cautiously.
- Use only in a well ventilated area.
- Warning. Flammable.
- Do not inhale vapors.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

- Exhaust ventilation
- Showers.
- Eyewash stations.
- Use in a well ventilated area.

RESPIRATORY PROTECTION:

- Use in a well ventilated area.
- Use approved NIOSH respiratory protection if TLV exceeded.....
- Or over exposure is likely.

PROTECTIVE GLOVES:

- Rubber gloves.

EYE AND FACE PROTECTION:

- Safety glasses.
- Monogoggles.

1 OTHER PROTECTIVE EQUIPMENT:

- Rubber apron.

VENTILATION:

- Use only in well ventilated area.
- Mechanical ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT INFORMATION:

BOILING POINT : NA (C) NA (F)

Material Safety DataSheet

VAPOR PRESSURE(20 C)(MM HG): NA
VAPOR DENSITY (AIR=1) : NA
FREEZING POINT : UNKN (C) UNKN (F)
MELTING POINT : NA (C) NA (F)
PHYSICAL STATE : LIQUID
ODOR : ALCOHOL
COLOR : HAZY
ODOR THRESHOLD (PPM) : 45
% VOLATILE BY VOLUME : ~82
EVAP. RATE(BUTYL ACETATE=1): <1
SPECIFIC GRAVITY (WATER=1) : 0.93
DENSITY (KG/M3) : 927.5
ACID/ALKALINITY (MEQ/G) : UNKN
PH : UNKN
VOC EXCL.H2O & EXEMPTS(G/L): NT
SOLUBILITY IN WATER (20 C) : PRECIPITATES
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): SOLUBLE IN ALCOHOLS

10. STABILITY AND REACTIVITY

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:
Carbon monoxide.
Carbon dioxide.
Silicon dioxide.
Formaldehyde.
INCOMPATIBILITY (MATERIALS TO AVOID):
Contact with oxidizing agents.
CONDITIONS TO AVOID:
Keep away from heat, sparks and flame.
Avoid any source of ignition.

1SH 11. TOXICOLOGICAL INFORMATION

DIACETONE ALCOHOL
ACUTE ORAL LD50 (MG/KG): 4000 (RAT)
ACUTE DERMAL LD50 (MG/KG): 13600 (RBT)
ACUTE INHALATION LC50 (MG/L): >1065 PPM/8HR (RAT)
OTHER:
Tested for acute oral, dermal and inhalation.
AMES TEST:

FORMALDEHYDE

ACUTE ORAL LD50 (MG/KG): 800 (RAT)
ACUTE DERMAL LD50 (MG/KG): 270 (RBT)
ACUTE INHALATION LC50 (MG/L): 590 mg/m3 (rat)
OTHER:
None.

AMES TEST: UNKNOWN

ISOBUTANOL

ACUTE ORAL LD50 (MG/KG): 2460 (RAT)
ACUTE DERMAL LD50 (MG/KG): 3400 (rbt)
ACUTE INHALATION LC50 (MG/L): LCL0 8000ppm/4H (rat)
OTHER:
Tested for acute oral LD50 and acute dermal LD50.

AMES TEST:

METHANOL

ACUTE ORAL LD50 (MG/KG): 5628MG/KG(RAT)
ACUTE DERMAL LD50 (MG/KG): 15,800 (rbt)
ACUTE INHALATION LC50 (MG/L): 64,000PPM/4HR
OTHER:
Tested for acute oral LD50.

AMES TEST:

ISOPROPYL ALCOHOL

ACUTE ORAL LD50 (MG/KG): 5840 (RAT)
ACUTE DERMAL LD50 (MG/KG): 13,000 (RBT)
ACUTE INHALATION LC50 (MG/L): 12,000 PPM/8HR(RAT)
OTHER:
Tested for acute oral, dermal and inhalation.

AMES TEST: UNKNOWN

METHYLTRIMETHOXYSILANE, HYDROLYSIS-

ACUTE ORAL LD50 (MG/KG): UNKNOWN
ACUTE DERMAL LD50 (MG/KG): UNKNOWN
ACUTE INHALATION LC50 (MG/L): UNKNOWN
1 OTHER:
None.

AMES TEST: UNKNOWN

WATER

ACUTE ORAL LD50 (MG/KG): NA
ACUTE DERMAL LD50 (MG/KG): NA
ACUTE INHALATION LC50 (MG/L): NA
OTHER:
None.

AMES TEST: UNKNOWN

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
Disposal should be made in accordance with federal, state and local regulations.
Incineration recommended in approved incinerator according to federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT SHIPPING NAME: COATING SOLUTION
DOT HAZARD CLASS: 3
DOT LABEL(S): FLAMMABLE LIQUID
UN/NA NUMBER: UN1139
PLACARDS: FLAMMABLE LIQUID
IATA:
COATING SOLUTION, 3, UN1139, II. RQ = 5000 LB (METHANOL)

IMO IMDG-code: 3.2
IMDG PG. 3200
EMS No: EmS. No.3-02, MFAG Table No.760 & Subsection 4.3

EUROPEAN CLASS:
RID (OCTI): 3
ADR (ECE) : 3
RAR (IATA): 3

15. REGULATORY INFORMATION

SARA SECTION 302:

None Found

SARA (311,312) HAZARD CLASS:

ACUTE HEALTH HAZARD

CHRONIC HEALTH HAZARD

FIRE HAZARD

SARA (313) CHEMICALS:

THIS PRODUCT CONTAINS TOXIC CHEMICAL(S) LISTED BELOW WHICH IS(ARE) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

METHANOL

67-56-1

CPSC CLASSIFICATION:

NA

WHMIS HAZARD CLASS:

B2 FLAMMABLE LIQUIDS

D2B TOXIC MATERIALS

WHMIS TRADE SECRET:

None

EXPORT:

SCHDLE B/HTSUS:

3208.90 Polymer Solution

ECCN:

EAR99

HAZARD RATING SYSTEMS

HMIS

FLAMMABILITY 3 , REACTIVITY 0 , HEALTH 2

NFPA

FLAMMABILITY 3 , REACTIVITY 0 , HEALTH 2

CALIFORNIA PROPOSITION 65:

NONE

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 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.

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

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Additional technical guidance for NYS bulk storage

- Some NYS bulk storage requirements are covered in previous sections.
- This product contains flammable/combustible solvents.
- Materials of construction/compatibility
Material is commonly stored in closed stainless steel or glass lined steel piping and storage tanks (at ambient temperature). Any other materials such as reinforce fiber-glass, plastic and etc. must be tested for compatibility before use. Consult supplier for materials for gaskets, packing, etc.
- Condition for safe storage
Bulk storage design factors to consider are venting, diking, separation distances between tanks and other structures. Storage requirements should be determined through consultation with qualified design and fire protection engineers and fire insurance carriers. Technical guidance may be found in pamphlet NFPA 30 or factory mutual handbook of industrial loss prevention. Recommended tank design: For pressure vessels, see American Society of Mechanical Engineers (ASME) code, section VIII, 50 PSIG minimum pressure and full vacuum. For atmospheric tanks, see API 2000 for design requirements. Relief Valves: Flammable and Combustible Liquids code, NFPA Nos. 30 and 29 CFR 1910.106, also consult API 520, 521. For piping design, consult ANSI B.31.3.
- Storage equipment
Corrosion protection, leak detection, spill and over-fill protection requirements, installation and maintenance information may be found in EPA final rule: 40 CFR part 280 underground storage tanks. New York State regulates storage requirements of this material in 6NYCRR parts 595-599.
- Inspection and maintenance

NYS regulates some inspection and maintenance requirements under 6NYCRR part 598.

API publication, guide for inspection of refinery equipment, is a source for inspection and maintenance information. (American Petroleum Institute, 1220 L. Street, Northwest, Washington, D.C. 20005)

- Safety precautions, warnings and procedures for handling and unloading bulk deliveries

Only qualified, fully trained and experienced persons should sample, connect, load, unload, or disconnect a tank car, portable tank or tank truck.

When loading or unloading material in bulk, all DOT (Department of Transportation) regulations found in 49 CFR 172-178 must be followed when applicable. This will include grounding, braking, attendance, etc.

The contents of the material to be unloaded should be verified before any transfer is made.

Prior to unloading into a storage tank, a qualified person must check the storage tank level to be sure that the amount of material to be received will not overflow the storage tank. The proper unloading connection should be vented to a vapor removal, recovery or conservation system.

- Spill and emergency response

Release reporting and corrective action are listed in 40 CFR part 280 underground storage tanks and 6NYCRR part 595.

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Note: Compatibility of GE Silicone hardcoat and polycarbonate resin, including GE LEXAN(R) resin, is dependent on a number of factors including operational stresses, chemical exposure, temperature levels, impact and exposure to ultraviolet light. While it is up to the end user to determine what application specific testing is appropriate, it is suggested that all polycarbonate resin applications be tested for at least 30 days for compatibility and crazing with this hardcoat before use. There is no dependable substitute for careful testing of prototypes or production parts in typical operating environments.

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