GE Silicones

FORMAT: USA
PRODUCT: SS4004

MATERIAL SAFETY DATA SHEET
SILICONE POLYMER IN SOLVENT

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY:
GE SILICONES
260 HUDSON RIVER ROAD
WATERFORD, NY 12188

EMERGENCY PHONE (24 HRS)
(518) 237-3330

SUPPLIED BY:
GE SILICONES
260 HUDSON RIVER ROAD
WATERFORD, NY 12188

EMERGENCY PHONE (24 HRS)
(518) 237-3330

REVISED: 04/09/02
PREPARER: KE LINTZ
CHEMICAL FAMILY/USE: SILICONE SOLUTION
FORMULA: MIXTURE

2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION/ CAS REG NO.	APPROX. WGT. %	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL TWA	OSHA PEL STEL	UNITS
1. HAZARDOUS						
BENZENE						
71-43-2	<.002	0.5	2.5	1	5	PPM
ETHYL SILICATE						
78-10-4	1-5	10		100		PPM
ACETONE						
67-64-1	10-30	750	1000	750	1000	PPM
ISOPROPYL ALCOHOL						
67-63-0	10-30	400	500	400	500	PPM

TOLUENE						
108-88-3	10-30	50 (SKIN)	100	150	PPM	
N-BUTYL ALCOHOL						
71-36-3	1-5	50	NE	50(C)	NE	PPM
2. NON-HAZARDOUS						
SILANOL/STPD SILOXANE W/ME SILSQXNS						
68554-67-6	10-30	NF	NE	NF	NE	NA

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

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3. HAZARDS IDENTIFICATION

1
EMERGENCY OVERVIEW:
DANGER!
EXTREMELY FLAMMABLE!
Irritating to skin, eyes, and respiratory tract.
Harmful if swallowed, inhaled, or absorbed through skin.
May cause adverse liver, kidney, and CNS effects.
May cause severe eye irritation.
Aromatic odor
Pink liquid
POTENTIAL HEALTH EFFECTS:
INGESTION:
Harmful if swallowed.
Causes vomiting, nausea, and diarrhea.
Irritation of the mouth, throat, and stomach.
SKIN CONTACT:
Causes drying of the skin.
Harmful if absorbed through the skin.
INHALATION:
Excessive inhalation causes headache, dizziness, nausea and incoordination.
Causes moderate respiratory irritation.
Harmful if inhaled.
EYE CONTACT:
Causes severe eye irritation may damage tissue.
MEDICAL CONDITIONS AGGRAVATED:
Respiratory disorders.
Pre-existing liver or kidney disorders.
SUBCHRONIC (TARGET ORGAN) EFFECTS:
Dermatitis.
Respiratory ailments.
Central nervous system damage.
Liver and kidney damage.
Corneal damage.
Pulmonary edema.

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.
Eyes.
Inhalation.
Absorption through skin.
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'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 GE Silicones.

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4. FIRST AID MEASURES

INGESTION:
DO NOT INDUCE VOMITING.
To avoid aspiration should vomiting occur, have the person lean forward.
Never induce vomiting unless specifically directed by qualified medical personnel.
Never give anything by mouth to an unconscious person.
GET MEDICAL ATTENTION OR CALL POISON CONTROL IMMEDIATELY!
SKIN:
Remove contaminated clothing and launder before reuse.
Wash with soap and water.
Get medical attention if irritation persists.
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, 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.

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5. FIRE FIGHTING MEASURES

FLASH POINT: -12 (C) 10 (F)
METHOD : PMCC
IGNITION TEMP : 465 (C) 869 (F)
FLAMMABLE LIMITS IN AIR - LOWER (%): 1
FLAMMABLE LIMITS IN AIR - UPPER (%): 12
SENSITIVITY TO MECHANICAL IMPACT (Y/N): NO
1 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:
Extremely flammable.
Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

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6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wear proper protective equipment as specified in the protective equipment section.
Warn other workers of spill.
Increase area ventilation.
Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.
Remove ignition sources and combustible materials.

Stop leak if possible without personal risk. Keep out of water supplies and sewers. Keep unneccesary people away.

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7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Use ground strap and appropriate precautions for dispensing flammable liquids.
Recommended storage in original container below 30'C (85'F).
Keep container closed when not in use.
Avoid breathing vapors.
Avoid contact with skin and eyes.
Use only in a well ventilated area.
Emptied containers may retain hazardous properties. Do not cut, puncture or weld on or near the container.
Use only spark-proof and explosion-proof tools and equipment.
Keep away from children.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

1
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:
Rubber gloves.
EYE AND FACE PROTECTION:
Monogoggles.
Safety glasses with side shields.
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

BENZENE
BOILING POINT : 80.1 (C) 176 (F)
VAPOR PRESSURE(20 C)(MM HG): 75
VAPOR DENSITY (AIR=1) : 2.8

ETHYL SILICATE
BOILING POINT : NF
VAPOR PRESSURE(20 C)(MM HG): NF
VAPOR DENSITY (AIR=1) : NF

ACETONE
BOILING POINT : 56.1 (C) 133 (F)
VAPOR PRESSURE(20 C)(MM HG): 186
VAPOR DENSITY (AIR=1) : 2.0

ISOPROPYL ALCOHOL
BOILING POINT : 82 (C) 180 (F)
VAPOR PRESSURE(20 C)(MM HG): 30
VAPOR DENSITY (AIR=1) : 2.1

TOLUENE
BOILING POINT : 110 (C) 231 (F)
1 VAPOR PRESSURE(20 C)(MM HG): 22
VAPOR DENSITY (AIR=1) : 3.2

N-BUTYL ALCOHOL
BOILING POINT : 117.7 (C) 243.9 (F)
VAPOR PRESSURE(20 C)(MM HG): 4.4
VAPOR DENSITY (AIR=1) : 2.55

SILANOL/STPD SILOXANE W/ME SILSQXNS
BOILING POINT : >135 (C) >275 (F)
VAPOR PRESSURE(20 C)(MM HG): NEGL.
VAPOR DENSITY (AIR=1) : NEGL.

PRODUCT INFORMATION:
BOILING POINT : NA (C) NA (F)
VAPOR PRESSURE(20 C)(MM HG): NA
VAPOR DENSITY (AIR=1) : NA
FREEZING POINT : NA (C) NA (F)
MELTING POINT : NA (C) NA (F)

PHYSICAL STATE : LIQUID
ODOR : PUNGENT
COLOR : PINK
ODOR THRESHOLD (PPM) : 100
% VOLATILE BY VOLUME : ~80
EVAP. RATE(BUTYL ACETATE=1): <1
SPECIFIC GRAVITY (WATER=1) : 0.8
DENSITY (KG/M3) : 855
ACID/ALKALINITY (MEQ/G) : UNK
PH : NA
VOC EXCL.H2O & EXEMPTS(G/L): 695
SOLUBILITY IN WATER (20 C) : REACTS
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): SOLUBLE, TOLUENE

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10. STABILITY AND REACTIVITY

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

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11. TOXICOLOGICAL INFORMATION

BENZENE
ACUTE ORAL LD50 (MG/KG): 3,800 (RAT)
ACUTE DERMAL LD50 (MG/KG): NONE FOUND
ACUTE INHALATION LC50 (MG/L): 10,000 PPM/7HR(RAT)
OTHER:
Tested for acute oral LD50 and LC50.
AMES TEST: UNKNOWN

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

AMES TEST:

ACETONE
ACUTE ORAL LD50 (MG/KG): 5,800 (RAT)
ACUTE DERMAL LD50 (MG/KG): 20,000 (RBT)
ACUTE INHALATION LC50 (MG/L): NA
OTHER:
None.

AMES TEST: UNKNOWN

ISOPROPYL ALCOHOL
ACUTE ORAL LD50 (MG/KG): 4595 (rat).
ACUTE DERMAL LD50 (MG/KG): 13600 (RBT)
ACUTE INHALATION LC50 (MG/L): 33 MG/L-4HR(RAT)
OTHER:
Tested for acute oral, dermal and inhalation.
AMES TEST: UNKNOWN

TOLUENE
ACUTE ORAL LD50 (MG/KG): 5000 (RAT)
ACUTE DERMAL LD50 (MG/KG): 14,000 (RBT)
ACUTE INHALATION LC50 (MG/L): 5320 PPM /8HR(MUS)
OTHER:
Tested for acute oral, dermal and inhalation.
AMES TEST: UNKNOWN

N-BUTYL ALCOHOL
ACUTE ORAL LD50 (MG/KG): 790 (RAT)
1 ACUTE DERMAL LD50 (MG/KG): 4200 (RBT)
ACUTE INHALATION LC50 (MG/L): 8000 PPM/4HR (RAT)
OTHER:
Tested for acute oral, dermal and inhalation.
AMES TEST:

SILANOL/STPD SILOXANE W/ME SILSQXNS
ACUTE ORAL LD50 (MG/KG): >40,000 RAT,ESTM.
ACUTE DERMAL LD50 (MG/KG): NONE FOUND
ACUTE INHALATION LC50 (MG/L): >535 MG/L ESTM.
OTHER:
None.

AMES TEST:

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12. ECOLOGICAL INFORMATION

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

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13. DISPOSAL CONSIDERATIONS

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

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14. TRANSPORT INFORMATION

DOT SHIPPING NAME: FLAMMABLE LIQUID N.O.S. (Acetone & Toluene)
DOT HAZARD CLASS: 3
DOT LABEL(S): FLAMMABLE LIQUID
UN/NA NUMBER: UN1993
PLACARDS: FLAMMABLE LIQUID
IATA:
FLAMMABLE LIQUID N.O.S. (Acetone & Toluene), 3, UN1993, II, RQ= 5000 LB (Acetone), RQ=1000 LB (Toluene).
IMO IMDG-code: 3
EMS No: EmS. No.3-07
EUROPEAN CLASS:
RID (OCTI): 3
ADR (ECE) : 3,2301,1A
RAR (IATA): 3

1SH 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.

N-BUTANOL
71-36-3
TOLUENE
108-88-3
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 1 , HEALTH 2
NFPA FLAMMABILITY 3 , REACTIVITY 1 , HEALTH 2
CALIFORNIA PROPOSITION 65:
THIS PRODUCT CONTAINS CALIFORNIA PROPOSITION 65 CHEMICALS WHICH ARE LISTED BELOW:

BENZENE (71-43-2)
TOLUENE (108-88-3)

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16. OTHER INFORMATION

This product or its components are on the European inventory of existing commercial chemicals (EINECS).....
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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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This product or its components are on the Australian inventory (ACOIN).....
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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
		TS =	trade secret
		R =	recommended
		MST =	mist
STEL = short term exposure limit		NT =	not tested

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California Proposition 65:
WARNING! This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

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 be-fore 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 disconect 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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All chemical substances in this material are included on or exempted from listing on the TSCA inventory.

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