



## GE Silicones

### MATERIAL SAFETY DATA SHEET

SB32 55G-Drum(420.0LBS-190.5KG)

Trade Name                      Cyclopentasiloxane

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Manufactured By**                      **GES Waterford Plant**  
    **260 Hudson River Rd**  
    **Waterford NY 12188**  
**Revised:**                                      11/06/2003  
**Preparer:**                                    PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS  
**Chemical Family/Use:**                    Silicone siloxane  
**Formula:**                                    Cyclic siloxanes.  
**CHEMTREC**                                    1-800-424-9300

#### HMIS

|              |   |            |   |        |   |
|--------------|---|------------|---|--------|---|
| FLAMMABILITY | 2 | REACTIVITY | 0 | HEALTH | 0 |
|--------------|---|------------|---|--------|---|

#### NFPA

|              |   |            |   |        |   |
|--------------|---|------------|---|--------|---|
| FLAMMABILITY | 2 | REACTIVITY | 0 | HEALTH | 1 |
|--------------|---|------------|---|--------|---|

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>PRODUCT COMPOSITION</u> | <u>CAS REG NO.</u> | <u>WGT. %</u> |
|----------------------------|--------------------|---------------|
|----------------------------|--------------------|---------------|

#### A. HAZARDOUS

|                                  |          |        |
|----------------------------------|----------|--------|
| DECAMETHYLCYCLOPENTASIL<br>OXANE | 541-02-6 | > 90 % |
|----------------------------------|----------|--------|

#### B. NON-HAZARDOUS

#### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW:

CAUTION! Combustible liquid and vapor. May cause irritation of skin and eyes. Adverse liver effects reported in animals. Attention: Not for injection into humans. May generate formaldehyde at temperatures greater than 150 C(300 F). See Section 3 of MSDS for details.  
 Liquid Clear None

#### POTENTIAL HEALTH EFFECTS :

**INGESTION :**



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Not an anticipated route of exposure.

**SKIN :**

May cause mild skin irritation.

**INHALATION :**

None known.

**EYES :**

May cause mild eye irritation.

**MEDICAL CONDITIONS AGGRAVATED**

None known.

**SUBCHRONIC (TARGET ORGAN ) :**

Liver

**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.

**ROUTES OF EXPOSURE :**

None known.

**OTHER :**

Attention: Not for injection into humans. 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. Additional information on the toxicological effects of this material or its ingredients can be found in Section 11 - Toxicological Information.

#### **4. FIRST AID MEASURES**

**INGESTION :**

Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

**SKIN :**

Wash with soap and water. Get medical attention if irritation or symptoms from Section 3 develop.



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**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 minutes and get medical attention if irritation persists.

**NOTE TO PHYSICIAN :**

None known.

### **5. FIRE-FIGHTING MEASURES**

|  |                    |
|--|--------------------|
| <b>FLASH POINT</b>                         | 76.60 °C 170.60 °F |
| <b>METHOD:</b>                             | PMCC               |
| <b>IGNITION TEMPERATURE</b>                | Unknown            |
| <b>FLAMMABLE LIMITS IN AIR - LOWER (%)</b> | Unknown            |
| <b>FLAMMABLE LIMITS IN AIR - UPPER (%)</b> | Unknown            |

**SENSITIVITY TO MECHANICAL IMPACT:**                      No

**SENSITIVITY TO STATIC DISCHARGE :**

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

**EXTINGUISHING MEDIA :**

All standard firefighting media

**SPECIAL FIRE FIGHTING PROCEDURES :**

Combustible, 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 :**

Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.

### **7. HANDLING AND STORAGE**



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#### STORAGE

Store away from heat, sources of ignition, and incompatibles. Keep container tightly closed.

#### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Avoid contact with skin and eyes. Avoid inhalation of vapors or mists. Keep away from children. Use ground strap and appropriate precautions for dispensing flammable liquids.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### ENGINEERING CONTROLS :

ShowersEyewash stationsExhaust ventilation

#### 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 29CFR 1910.134).

#### PROTECTIVE GLOVES :

Rubber or plastics gloves

#### EYE AND FACE PROTECTION :

safety glasses with side-shields

#### OTHER PROTECTIVE EQUIPMENT :

Wear suitable protective clothing and eye/face protection.

#### Exposure Guidelines

| <u>Chemical</u> | <u>CAS REG NO.</u> | <u>ACGIH</u> | <u>OSHA</u> | <u>Supplier</u> |
|-----------------|--------------------|--------------|-------------|-----------------|
|-----------------|--------------------|--------------|-------------|-----------------|

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                 |                   |
|---------------------------------|-------------------|
| BOILING POINT - C & F           | 210.00 °C 410 °F  |
| VAPOR PRESSURE (20 C) (MM HG) : | 3 MM HG           |
| VAPOR DENSITY (AIR=1) :         | no data available |
| FREEZING POINT:                 | Unknown           |
| MELTING POINT :                 | Unknown           |
| PHYSICAL STATE:                 | Liquid            |
| ODOR:                           | None              |
| COLOR :                         | Clear             |



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|   |                    |
|---|--------------------|
| EVAPORATION RATE (BUTYL ACETATE=1):             | < 1                |
| SPECIFIC GRAVITY (WATER=1) :                    | 0.95               |
| DENSITY (KG/M3) :                               | 958.60 KG/M3       |
| ACID / ALKALINITY (MEQ/G) :                     | <3 PPM A           |
| pH  | NA                 |
| VOLATILE ORGANIC CONTENT (VOL)                  | 100.00 %(m)        |
| SOLUBILITY IN WATER (20 C) :                    | Insoluble          |
| SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT) : | Soluble in toluene |
| VOC EXCL. H2O & EXEMPTS (G/L) :                 | 0.00               |

#### 10. STABILITY AND REACTIVITY

**STABILITY** :  
Stable

**HAZARDOUS POLYMERIZATION** :  
WILL NOT OCCUR

**HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS** :  
carbon dioxide (CO<sub>2</sub>)formaldehydeCarbon monoxideSilicon dioxide.

**INCOMPATIBILITY (MATERIALS TO AVOID)**  
None known.

**CONDITIONS TO AVOID** :  
Keep away from heat and sources of ignition.

#### 11. TOXICOLOGICAL INFORMATION

**ACUTE ORAL:**  
>20,000 mg/kg (rat)

**ACUTE DERMAL:**  
>10 ml/kg(Rat)

**ACUTE INHALATION:**  
LC50 rat8.67 mg/l (rat)

**OTHER:**  
Decamethylcyclopentasiloxane    Rodents repeatedly exposed to decamthylcyclopentasiloxane (D5)



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via inhalation or ingestion developed increased liver weights relative to unexposed control animals. When the exposure was stopped, livers returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Liver enlargement was due to an increase in metabolizing enzymes, and a temporary increase in the number and size of normal cells (hyperplasia and hypertrophy). These biochemical pathways are more sensitive in rodents than in humans. Inhalation exposures that are typical in industrial use (5-10 ppm) showed no toxic effects in rodents. A two-year combined chronic toxicity and carcinogenicity inhalation study was conducted with decamethylcyclopentasiloxane (D5) in Fisher-344 rats by whole body inhalation. A statistically significant increase in the trend for uterine endometrial tumors was observed in female rats exposed for 24 months at the highest dose level of 160 ppm. The same effects were not seen at the other dose levels of 10 and 40 ppm. No adverse effects were seen at male rats at any level. Whether or not this increase in incidence is truly related to the exposure to D5 is questionable and yet to be determined. Based on our present knowledge, it is unlikely that industrial, commercial, or consumer uses of products containing D5 would result in a significant risk to humans. The GE Recommended Exposure Guideline for D5 is 10 ppm.

**SENSITIZATION:**

Magnusson-Kligmann guinea pigs negative

**SKIN IRRITATION**

rabbit No skin irritation

**EYE IRRITATION**

rabbit No eye irritation

**MUTAGENICITY**

Salmonella/Microsome-test: No indication of mutagenic effects.

## **12. ECOLOGICAL INFORMATION**

**ECOTOXICOLOGY**

This product is a small, lipophilic, low molecular weight volatile compound. Due to its high volatility, product has a short half-life in the aquatic compartment, and is unlikely to be found in the terrestrial compartment. As a low molecular weight lipophilic compound it has the potential to bioaccumulate.

**CHEMICAL FATE**

no data available

**DISTRIBUTION**

no data available



