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**MATERIAL SAFETY DATA SHEET**

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**SECTION 1. COMPANY IDENTIFICATION**

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## COMPANY IDENTIFICATION

MANUFACTURER'S NAME: Shin-Etsu Chemical Co., Ltd.

ADDRESS: 6-1, 2-Chome, Ohtemachi, Chiyodaku, Tokyo, JAPAN

EMERGENCY TELEPHONE NUMBER:

330-630-9860(Shin-Etsu Silicones of America, Inc.)

800-424-9300(CHEMTREC)(24hrs)(Washington, D.C. USA)

TELEPHONE NUMBER FOR INFORMATION:

03-3246-5121(Tokyo, JAPAN)

330-630-9860(Shin-Etsu Silicones of America, Inc.)

DATA PREPARED : 11/26/2003

LAST REVISION : 11/26/2003

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BASE NO 7

PRODUCT NAME :

**GEC-5**

PRODUCT CLASSIFICATION:

Silicone Fluid

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**SECTION 2. COMPOSITION**

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SINGLE OR MIXTURE:

Single

CHEMICAL IDENTIFICATION:

Dimethylcyclopolysiloxane

HAZARDOUS COMPONENT(S)/(CAS No.):

Decamethylcyclopentasiloxane/

(541-02-6)[Combustible Liquid] : 100%

(See Section 8 of this MSDS for Exposure Guideline)

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**SECTION 3. HAZARDS IDENTIFICATION**

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HAZARDS CLASSIFICATION:

None (based on IMO)

Combustible Liquids (based on DOT)

FIRE AND EXPLOSION:

Combustible

POTENTIAL HEALTH EFFECT:

INHALATION ; No significant irritation expected from a single exposure.

SKIN contact ; May cause slight skin irritation.

Causes drying of skin.  
EYES contact ; May cause slight eyes irritation.  
INGESTION ; Low-harmful

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**SECTION 4. FIRST AID MEASURES**

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INHALATION ; Remove to fresh air.  
SKIN contact ; Remove product from skin with dry cloth or towel, and wash exposed area with detergent.  
EYES contact ; Immediately flush with water for at least 15 minutes.  
INGESTION ; Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Call a physician immediately.

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**SECTION 5. FIRE FIGHTING MEASURES**

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FLASH POINT(method used):  
77 degrees C (Closed cup)  
FLAMMABLE LIMITS:  
LOWER: Not measured UPPER: Not measured  
EXTINGUISHING MEDIA:  
Foam, dry chemical or carbon dioxide  
SPECIAL FIRE FIGHTING PROCEDURE:  
None  
UNUSUAL FIRE AND EXPLOSION HAZARD:  
None

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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STEP TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:  
Shut off all ignition sources.  
Contain the spill or leak.  
Scrape up with rag and place in container.

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**SECTION 7. HANDLING AND STORAGE**

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PRECAUTION TO BE TAKEN IN HANDLING AND STORING:  
Keep container closed when not in use.  
Store in a cool place.  
Keep away from heat, sparks and flame.  
Do not lay the container on its side.  
Use with adequate ventilation.  
Avoid prolonged breathing vapor.  
Avoid contact with eyes and prolonged or repeated skin contact.

Keep out of reach of children.

\* \* \* \* \* Information about the emptied container \* \* \* \* \*

Do not re-use this container.

This container will be very hazardous when emptied.

Residues will be explosive or flammable.

Keep away from heat, sparks and flame.

Do not puncture or cut this container, and do not weld on or near this container.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### EXPOSURE GUIDELINES:

ACGIH TLV-TWA : Not established,

OSHA PEL : Not established

### RESPIRATORY PROTECTION(specify type):

Use respiratory protection unless adequate local exhaust ventilation is provided.(Organic vapor type)

### VENTILATION:

LOCAL EXHAUST: Recommended

MECHANICAL(general): Adequate ventilation system

SPECIAL: Unknown

OTHER: Unknown

### PROTECTIVE GLOVES:

Plastic film or rubber gloves

### EYE PROTECTION:

Safety glasses

### OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Eyewash equipment

### WORK/HYGIENIC PRACTICES:

Keep away from heat, sparks and flame.

Avoid prolonged breathing vapor.

Avoid contact with eyes and prolonged or repeated skin contact.

Wash hands and gargle after handling.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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### BOILING POINT:

210 degrees C

### VAPOR PRESSURE:

1.0mmHg (20 degrees C)

### VAPOR DENSITY(air=1):

>1

### SPECIFIC GRAVITY:

0.96 (25 degrees C)

### MELTING POINT:

-38 degrees C

## EVAPORATION RATE:

&lt;1 (Butyl Acetate=1)

## SOLUBILITY IN WATER:

Not soluble (&lt;1 ppm)

## APPEARANCE(color):

Colorless, transparent

## APPEARANCE(form):

Fluid

## ODOR:

Essentially odorless

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**SECTION 10. STABILITY AND REACTIVITY**

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## STABILITY:

Stable

## CONDITION TO AVOID:

None

## INCOMPATIBILITY(material to avoid):

None

## HAZARDOUS DECOMPOSITION OR BY-PRODUCT:

None

## HAZARDOUS POLYMERIZATION:

Will not occur

## CONDITION TO AVOID:

None

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**SECTION 11. TOXICOLOGICAL INFORMATION**

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## SKIN IRRITATION:

Patch Test(24Hr/Open) : Almost Negative(1%)

## EYE IRRITATION:

EYE-RABBIT : MILD

## SENSITIZATION:

No evidence of sensitization

## ACUTE TOXICITY(LD50):

LD50(Oral/Rat) : &gt;5g/kg

## ACUTE TOXICITY(LC50):

LC50(Inhalation/Rat) : >5g/m<sup>3</sup>/Hr

(estimated by similar dimethylcyclodisiloxane)

## SUBACUTE TOXICITY:

Repeated inhalation or oral exposure of mice and rats to octamethylcyclotetrasiloxane and decamethylcyclopentasiloxane produced an increase in liver size. No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the

underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive.

**CHRONIC TOXICITY:**

No information is available.

**CARCINOGENICITY:**

NTP:Not listed, IARC:Not listed, OSHA REGULATED:Not listed

**MUTAGENICITY:**

Negative(Bacteria)

**REPRODUCTIVE EFFECT:**

No information is available.

**TERATOGENIC EFFECT:**

No information is available.

**OTHER INFORMATION:**

None

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**SECTION 12. ECOLOGICAL INFORMATION**

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**BIODEGRADATION:**

No evidence of biodegradation

**BIOACCUMULATION:**

May cause bioaccumulation.

**AQUATIC TOXICITY:**

No information is available.

**OTHER INFORMATION:**

Vapor undergoes indirectly photolysis in the troposphere.

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**SECTION 13. DISPOSAL CONSIDERATIONS**

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Can be burned in a chemical incinerator equipped with an afterburner and scrubber.

Do not dispose of the emptied container unless the contents have been completely removed and container has been flushed with a clean neutral solvent and then dried up.

Do not dispose the emptied container unlawfully.

Observe all federal, state, and local laws.

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**SECTION 14. TRANSPORT INFORMATION**

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**<IMO INFORMATION>**

ID No.:

None

**CLASSIFICATION AND CLASS:**

None

**PACKAGING GROUP:**

None

**PROPER SHIPPING NAME:**



None

TECHNICAL SHIPPING NAME:

None

MARINE POLLUTANT:

None

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<DOT INFORMATION>

ID No.(49CFR 172.101):

NA 1993

HAZARD CLASS(49CFR 172.101):

None

PACKING GROUP(49CFR 172.101):

III

PROPER SHIPPING NAME(49CFR 172.101):

Combustible Liquids, N.O.S.

TECHNICAL SHIPPING NAME:

Organosiloxane

DOT REPORTABLE QUANTITY(49CFR 172.101, APP.) :

HAZARD SUBSTANCE(S) NAME / (CAS No.), CONTENTS AND RQ

Not applicable

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT(TSCA) STATUS:

Listed on the TSCA Inventory.

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EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES

(EINECS) STATUS:

Listed on the EINECS.

LABELING ACCORDING TO EC-REGULATIONS REQUIRED:

SYMBOL : Not required

R-PHRASE : Not required

S-PHRASE : Not required

CONTAINS : None

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SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986(SARA)

TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the emergency planning and community Right-To-Know Act of 1986 and 40 CFR 372.

This information must be included in all MSDS's that are copied and distributed for the material.

The toxic chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

\*\* None \*\*

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CALIFORNIA PROPOSITION 65:



This regulation requires a warning for California Proposition 65 Chemical(s) under the statute.

The California Proposition 65 Chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

\*\* None \*\*

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**SECTION 16. OTHER INFORMATION**

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For Industrial Use Only

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This materials safety data sheet is offered solely for your information, consideration and investigation.

The data described in this MSDS consist of data on literature, our acquisitional data and analogical inference by data of similar chemical substance or product.

Shin-Etsu Chemical Co., Ltd. provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.

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