



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

A: Product name KF-96-100CS

B. Recommended use and Limitations on use

Recommended use Fluids, Modified silicone fluids
Resin modifier ,
Defoaming agent ,
Polishing agent ,
Powder processing agent ,
Water repellent ,
Textile treatment ,
Heating medium ,
Release agent ,
Cutting oil ,
Lubricating oil ,
Hydraulic oil ,
Damper oil ,
Cosmetic additive

Limitations on use Industrial use only.

C. Supplier information

MANUFACTURER

COMPANY NAME Shin-Etsu Silicones (Thailand) Limited
CONTACT Customer Services Department
ADDRESS 7th Floor, Harindhorn Tower, 54 North Sathorn Road, Bangkok 10500, Thailand
TELEPHONE NUMBER +66-2632-2941
FAX NUMBER +66-3868-9070

SUPPLIER

COMPANY NAME Shin-Etsu Silicone Korea Co., Ltd.
CONTACT Business Operation Dept.
ADDRESS GT TOWER 15F, 411, SEOCHO-DAERO, SEOCHO-GU, SEOUL, KOREA
TELEPHONE NUMBER +82(0)2-590-2500
FAX NUMBER +82(0)2-590-2501
EMERGENCY +82(0)2-590-2500
E-MAIL msds@shinetsu.net

2. Hazards identification

A. Hazard category/Classification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.

B. Warning label items including precautionary statement

- **Pictogram** None.
- **Signal word** None.
- **Hazard statement** None.
- **Precautionary statement** None.

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard) None known.

Supplemental information None.

3. Composition/information on ingredients

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Dimethylpolysiloxane ; No hazardous component Common and alternative name ; No data		63148-62-9	KE-31068	100

4. First aid measures

A. In case of eye contact	Rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
B. In case of skin contact	Wash skin with soap and water.
C. In case of inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
D. In case of swallowing	Rinse mouth. Get medical attention immediately.
E. Note to physician	Treat symptomatically.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
B. Specific hazards arising from the chemical (example: hazardous combustion products)	By heating and fire, harmful vapors/gases may be formed.
C. Specific methods of fire-fighting	
Special protective equipment for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency measures	Wear appropriate personal protective equipment.
B. Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
C. Methods and materials for containment and cleaning up	Eliminate sources of ignition. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.

7. Handling and storage

A. Precautions for safe handling	Provide adequate ventilation. Use adequate ventilation when this product is heated at approximately 150 degrees C(300°F) and above in the presence of air. Use care in handling/storage. Do not breathe mist or vapor.
B. Conditions for safe storage (including any incompatibilities)	Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Keep in original container. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure controls/personal protection

A. Exposure limit values, biological limit values, etc	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).

Exposure guidelines	Other components are not applicable
B. Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Provide eyewash station.
C. Personal protective equipment	
• Respiratory protection	If ventilation is insufficient when heating use chemical respirator with organic vapor cartridge.
• Eye protection	Wear safety glasses with side shields (or goggles).
• Hand protection	Wear protective gloves.
• Body protection	Wear suitable protective clothing.
Hygiene measures	Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. This product can generate formaldehyde at approximately 150 °C (300 °F) and above in the presence of air. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential cancer hazard. So, use adequate ventilation or wear protective equipment such as gloves, goggles, organic vapor respirator or protective clothing when this product is heated at approximately 150 °C (300 °F) and above in the presence of air.

9. Physical and chemical properties

A. Appearance	
Form	Liquid.
Color	Colorless. Clear.
B. Odor	Odorless
C. Odor threshold	Not available.
D. pH	Not measurable (Refer to water solubility)
E. Melting point/freezing point	
Melting point	No data
F. Boiling point, initial boiling point, and boiling range	No data
G. Flash point	> 201.2 °F (> 94 °C) Closed Cup > 572 °F (> 300 °C) Open Cup
H. Evaporation rate	Negligible (Butyl Acetate=1)
I. Flammability (solid, gas)	Not applicable.
J. Upper/lower limit on flammability or explosive limits	
Flammability limit - lower (%)	No data
Flammability limit - upper (%)	No data
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
K. Vapor pressure	Negligible (25 °C)
L. Solubility	
Solubility (water)	Not soluble (<1 ppm)
M. Vapor density	Not applicable
N. Specific gravity	0.96 (25 °C)
O. n-octanol/water partition coefficient	Not available.
P. Auto-ignition temperature	ca.400°C (752°F)
Q. Decomposition temperature	Not available.
R. Viscosity	100 mm ² /s (25 °C)
S. Molecular weight	No data

10. Stability and reactivity

A. Stability and hazardous reaction potential	
Stability	Stable at normal conditions.
Hazardous reaction potential	Hazardous polymerization does not occur.

B. Conditions to avoid (e.g. static discharge, shock or vibration, etc) Not available.

C. Incompatible materials Strong oxidizing agents.

D. Hazardous decomposition products Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product:
Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde .

11. Toxicological information

A. Information on likely routes of exposure

- **Respiratory organs** No adverse effects due to inhalation are expected.
- **Skin** No adverse effects due to skin contact are expected.
- **Eyes** Direct contact with eyes may cause temporary irritation.
- **Mouth** Expected to be a low ingestion hazard.

B. Information on health hazards

- **Acute toxicity (list all possible routes of exposure)**

Components	Species	Test Results
Dimethylpolysiloxane ; No hazardous component Common and alternative name ; No data (CAS 63148-62-9)		
<u>Acute</u>		
Oral		
LD50	Rat	> 5 g/kg (Estimated by similar product)
• Corrosivity or irritation to the skin	SKIN-RABBIT	:No skin irritation (Estimated by similar product)
• Serious eye damage/eye irritation	EYE-RABBIT	: No eye irritation (Estimated by similar product)
• Respiratory sensitization		Not available.
• Skin sensitization		Not available.
• Carcinogenic properties /Carcinogenicity		No carcinogenicity (Estimated by similar product)
• Mutagenic properties /Mutagenicity		Negative(Bacteria) (Estimated by similar product)
• Reproductive toxicity		Not available.
• Specific target organ toxicity - single exposure		Not available.
• Specific target organ toxicity - repeated exposure		Not available.
• Aspiration hazard		Not available.

C. Other information

This product can generate formaldehyde at approximately 150 °C (300 °F) and above in the presence of air. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential cancer hazard. So, use adequate ventilation or wear protective equipment such as gloves, goggles, organic vapor respirator or protective clothing when this product is heated at approximately 150 °C (300 °F) and above in the presence of air.

Other components are no data.

12. Ecological information

A. Ecotoxicity No data available.

Hazardous to the aquatic environment, acute hazard Not available.

Hazardous to the aquatic environment, long-term hazard Not available.

B. Persistence/degradability May cause decomposition in dry soils. (Estimated by similar product)

C. Bioaccumulative potential No bioaccumulation (Estimated by similar product)

- D. Mobility in soil** No data available.
- E. Hazardous to the ozone layer** No data available.
- F. Other adverse effects** Other components are no data.

13. Disposal considerations

- A. Method of disposal** Incinerate. Incinerator should be appropriately equipped for silica and other fine powder which the product will generate in incineration. Workers should wear appropriate personal protective equipment(s) such as respirator. Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Dispose of contents/container in accordance with local/regional/national/international regulations.
- B. Disposal considerations (including disposal of contaminated containers or packaging)** Since emptied containers may retain product residue, follow label warnings even after container is emptied.
- Waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

14. Transport information

IATA

- A. UN number** Not applicable.
- B. UN proper shipping name** Not applicable.
- C. Transport hazard class(es)**
- Class** Not applicable.
- Subsidiary risk** -
- D. Packing group** Not applicable.
- E. Environmental hazards** No.
- F. Special precautions for user** Not applicable.

IMDG

- A. UN number** Not applicable.
- B. UN proper shipping name** Not applicable.
- C. Transport hazard class(es)**
- Class** Not applicable.
- Subsidiary risk** -
- D. Packing group** Not applicable.
- E. Environmental hazards**
- Marine pollutant** No.
- EmS** Not applicable.
- F. Special precautions for user** Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This product is not intended to be transported in bulk.

15. Regulatory information

- A. Restriction under the Occupational Safety and Health Act**
- Harmful Substances Prohibited from Manufacturing**
Not regulated.
- Harmful Substances Requiring Permission for Manufacture or Use**
Not regulated.
- Controlled Hazardous Substances**
Not regulated.
- Harmful Substances Requiring Special Medical Examination**
Not regulated.
- Workplace Environmental Monitoring Harmful Materials**
Not regulated.
- Occupational Exposure Limit**
Not regulated.

B. Restrictions under the Toxic Chemicals Control Act**Accidental Release Prevention Substances**

Not regulated.

Banned Toxic Chemicals

Not regulated.

Observational Chemicals

Not regulated.

Restricted Chemical Substances

Not regulated.

Toxic Chemicals

Not regulated.

C. Restrictions under the Safety Control of Dangerous Substances Act

Not regulated.

D. Restrictions under the Wastes Control Act**Halogenated Materials in Waste Organic Solvents**

Not regulated.

Hazardous Substances

Not regulated.

E. Restrictions under other foreign or domestic laws**Clean Air Conservation Act****Air Pollutants**

Not regulated.

Specific Air Pollutants

Not regulated.

Further information

This material safety data sheet was prepared in accordance with Article 41 of the Industrial Safety and Health Law.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information**A. Source of information**

ACGIH
 EPA: AQUIRE database
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents
 Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)
 Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)
 Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)
 Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)
 Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)
 Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)
 Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)
 Korea. Prohibited Chemical Substances (TCCL Article 11)
 Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)
 Korea. Restricted Chemical Substances (TCCL Article 11)
 Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)
 Korea. Toxic Chemical Control Law (TCCL), pre-1997 List
 Korea. Toxic Chemicals (TCCL Article 10)
 Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
 Korea. Employment Labor Department Notification No. 2016-19

B. Issue date

02-04-2014

C. Number of revisions and date of most recent revision

04-24-2017 (02 revision)

D. Other

Not available.

Disclaimer

A number of potentially serious health effects can result from aerosol inhalation of this product. Take preventive measures such as controlling size of generated particle, ventilation, and respiratory protection when using this product in spray application. Please contact nearby sales representative for further information. This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby 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 has been designed, manufactured and developed solely for general industrial use only. This product is not designed for, intended for use as, or suitable for, medical, surgical or other particular purposes. Users have the sole responsibility and obligation to determine the suitability of this product for any application, to make preliminary tests, and to confirm the safety of this product for their use. Users must never use this product for the purpose of implantation into the human body and/or injection into humans.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.