

SAFETY DATA SHEET

DOW CORNING

DOW CORNING(R) HIGH VACUUM GREASE

Version 6.0 Revision Date: 2017/09/13 SDS Number: 756251-00009 Date of last issue: 2017/07/19
Date of first issue: 2014/11/17

Substance / Mixture : Mixture
Chemical nature : Silicone compound

Components

Chemical name	Common Name	CAS-No.	Concentration (% w/w)
Silicon dioxide	Silica	7631-86-9	>= 1 - < 10
Silicone Metalloid Complex	Proprietary Ingredient	Proprietary Ingredient	>= 1 - < 10
Dimethyl siloxane, trimethylsiloxy-terminated	Siloxanes and Silicones, di-Me	63148-62-9	>= 80 - < 90

4. FIRST AID MEASURES

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : None known.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES

Suitable and unsuitable extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion prod- : Carbon oxides

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Products

Silicon oxides
Formaldehyde
Boron oxides

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Take care to prevent spills, waste and minimize release to the environment.

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- Conditions for safe storage : Keep in properly labelled containers.
 Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
 Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Silicon dioxide	7631-86-9	TWA	10 mg/m ³	KR OEL

Other ingredients, which are listed in section 3 but not listed in this section, do not have established occupational exposure limit values.

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Silicon dioxide

- Engineering measures** : Processing may form hazardous compounds (see section 10).
 Ensure adequate ventilation, especially in confined areas.
 Minimize workplace exposure concentrations.

Personal protective equipment. Among the following personal protective equipment, the PPEs which require safety certification need to be certified by KOSHA.

- Respiratory protection : No personal respiratory protective equipment normally required.

- Eye protection : Wear the following personal protective equipment:
 Safety glasses

Hand protection

- Remarks : Wash hands before breaks and at the end of workday.

- Skin and body protection : Skin should be washed after contact.

- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
 When using do not eat, drink or smoke.
 Wash contaminated clothing before re-use.
 These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Grease

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Colour : white, translucent

Odour : none

Odour Threshold : No data available

pH : Not applicable

Melting point/freezing point : No data available

Initial boiling point and boiling range : Not applicable

Flash point : > 250 °C
Method: Seta closed cup

Evaporation rate : Not applicable

Flammability (solid, gas) : Not classified as a flammability hazard

Self-ignition : The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : Not applicable

Solubility(ies)
Water solubility : No data available

Relative vapour density : No data available

Relative density : 1.1

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, kinematic : 2000000 cSt (25 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

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Particle size : No data available

10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions : Not classified as a reactivity hazard.
Stable under normal conditions.
Use at elevated temperatures may form highly hazardous compounds.
Can react with strong oxidizing agents.
Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products

Thermal decomposition : Formaldehyde

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Skin contact
Ingestion
Eye contact

Health hazard information

Acute toxicity

Components:

Silicon dioxide:

Acute oral toxicity : LD50 (Rat): > 3,300 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information taken from reference works and the literature.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information taken from reference works and the literature.

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Silicone Metalloid Complex:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Dimethyl siloxane, trimethylsiloxy-terminated:

Acute oral toxicity : LD50 (Rat): > 50 ml/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: On basis of test data.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: On basis of test data.

Skin corrosion/irritation**Components:****Silicon dioxide:**

Result: No skin irritation
Remarks: Information taken from reference works and the literature.

Silicone Metalloid Complex:

Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Dimethyl siloxane, trimethylsiloxy-terminated:

Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation**Components:****Silicon dioxide:**

Result: No eye irritation
Remarks: Information taken from reference works and the literature.

Silicone Metalloid Complex:

Species: Rabbit
Result: No eye irritation

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Remarks: Based on data from similar materials

Dimethyl siloxane, trimethylsiloxy-terminated:

Species: Rabbit
Result: No eye irritation
Remarks: On basis of test data.

Respiratory or skin sensitisation

Components:

Silicon dioxide:

Assessment: Does not cause skin sensitisation.
Test Type: Skin: test type not specified
Species: Guinea pig
Result: negative
Remarks: Information taken from reference works and the literature.

Silicone Metalloid Complex:

Assessment: Does not cause skin sensitisation.
Test Type: Maximisation Test
Species: Guinea pig
Remarks: Based on data from similar materials

Dimethyl siloxane, trimethylsiloxy-terminated:

Assessment: Does not cause skin sensitisation.
Test Type: Buehler Test
Species: Guinea pig
Result: negative
Remarks: On basis of test data.

Test Type: Maximisation Test
Species: Guinea pig
Result: negative
Remarks: On basis of test data.

Carcinogenicity

No data available

Germ cell mutagenicity

Components:

Silicon dioxide:

Genotoxicity in vitro : Result: negative
Remarks: Information taken from reference works and the literature.
Genotoxicity in vivo : Application Route: Ingestion

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Result: negative
 Remarks: Information taken from reference works and the literature.

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

Dimethyl siloxane, trimethylsiloxy-terminated:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
 Result: negative
 Remarks: On basis of test data.

Reproductive toxicity**Components:****Dimethyl siloxane, trimethylsiloxy-terminated:**

Effects on fertility : Species: Rat
 Application Route: Ingestion
 Symptoms: No effects on fertility
 Remarks: On basis of test data.

Effects on foetal development : Species: Rat
 Application Route: Ingestion
 Symptoms: No effects on foetal development
 Remarks: On basis of test data.

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

No data available

STOT - repeated exposure**Components:****Dimethyl siloxane, trimethylsiloxy-terminated:**

Exposure routes: Ingestion
 Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Exposure routes: Skin contact
 Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

Repeated dose toxicity**Components:****Dimethyl siloxane, trimethylsiloxy-terminated:**

Species: Rat
 Application Route: Ingestion
 Remarks: On basis of test data.

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Species: Rat
 Application Route: Skin contact
 Remarks: On basis of test data.

Aspiration toxicity

No data available

Experience with human exposure

No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Dimethyl siloxane, trimethylsiloxy-terminated:**

Toxicity to fish : LC50 (Pleuronectes platessa (European plaice)): 350 mg/l
 Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 172 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 Remarks: On basis of test data.

LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 Remarks: On basis of test data.

LC50 (Oncorhynchus mykiss (rainbow trout)): > 962 mg/l
 Exposure time: 96 h
 Method: OPPTS 850.1075
 Remarks: On basis of test data.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 200 mg/l
 Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202
 Remarks: On basis of test data.

EC50 (Daphnia magna (Water flea)): > 320 mg/l
 Exposure time: 48 h

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		Method: OECD Test Guideline 202 Remarks: On basis of test data.
		EC50 (Daphnia magna (Water flea)): > 981 mg/l Exposure time: 48 h Method: OPPTS 850.1010 Remarks: On basis of test data.
		EC50 (Acartia tonsa): 629 mg/l Exposure time: 48 h Method: ISO 14669 and PARCOM method Remarks: On basis of test data.
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 2,000 mg/l Exposure time: 336 h
		EC50 (Anabaena flos-aquae): > 2,000 mg/l Exposure time: 336 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Cyprinodon variegatus (sheepshead minnow)): 91 mg/l Remarks: On basis of test data.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of contents and container according to wastes control act.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

Disposal precautions

Dispose of contents and container according to wastes control act.

14. TRANSPORT INFORMATION**International Regulations**

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Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act**Priority Existing Chemicals**

Not applicable

Toxic Chemicals

Not applicable

Restricted Chemicals

Not applicable

Prohibited Chemicals

Not applicable

Toxic Release Inventory

Chemical name	CAS-No.	Group	Threshold limits (%)
Silicone Metalloid Complex	Proprietary Ingredient	Group II	>= 1 %

Accident Precaution Chemicals

Not applicable

Dangerous Substances Safety Management Act

Not Applicable to Dangerous Materials

Wastes Control Act

Industrial waste

Follow article 13 of the act to dispose the product waste

Other requirements in domestic and other countries**The components of this product are reported in the following inventories:**

NZIoC : All ingredients listed or exempt.

REACH : For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

PICCS : All ingredients listed or exempt.

KECI : All ingredients listed, exempt or notified.

ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from inventory listing.

IECSC : All ingredients listed or exempt.

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AICS : All ingredients listed or exempt.

DSL : This product contains one or more substances which are not on the Canadian Domestic Substances List (DSL). Import of this product into Canada has volume limitations. For volume limits please consult Dow Corning Regulatory Compliance.

TCSI : All ingredients listed or exempt.

16. OTHER INFORMATION

Other information : none

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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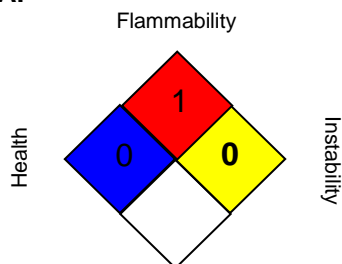
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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

NFPA:



Special hazard.

Full text of other abbreviations

KR OEL : Harmful Agents to be kept below Occupational Exposure Limits

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KR OEL / TWA : Time Weighted Average

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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