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SECTION 1. IDENTIFICATION

Product name : DOW CORNING(R) HIGH VACUUM GREASE

00000000001018817

Product code : DCC000001242

Manufacturer or supplier's details

Company name of supplier : Dow Corning Corporation

Address : South Saginaw Road

Midland Michigan 48686

Telephone : (989) 496-6000

Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900

CHEMTREC: (800) 424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Lubricants and lubricant additives

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity : Category 2

GHS Label element

Hazard pictograms

Signal Word : Warning

Hazard Statements : H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection. **Response:**

P308 + P313 IF exposed or concerned: Get medical advice/

attention. **Storage:**

P405 Store locked up.



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Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone compound

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Silicon dioxide	7631-86-9	>= 5 - < 10
Octamethylcyclotetrasiloxane	556-67-2	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

If inhaled : If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.

Get medical attention if symptoms occur.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

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

: Suspected of damaging fertility or the unborn child.

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

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam

Dry chemical

Carbon dioxide (CO2)



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Unsuitable extinguishing

media

: None known.

Specific hazards during fire

fighting

: Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-

ucts

: Carbon oxides Silicon oxides Formaldehyde Boron oxides

Specific extinguishing meth-

ods

: Use extinguishing measures that are appropriate to local cir-

cumstances 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 fire-fighters

: Wear self-contained breathing apparatus for firefighting if nec-

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Follow safe handling advice and personal protective equip-

ment 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 diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

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 deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE



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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.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	DCC OEL

Engineering measures : Processing may form hazardous compounds (see section

10).

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally

required.

Hand protection

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

Eye protection : Wear the following personal protective equipment:

Safety glasses

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



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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 re-

quire added precautions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Grease

Color : white, translucent

Odor : none

Odor Threshold : No data available

pH : Not applicable

Melting point/freezing point : No data available

Initial boiling point and boiling

range

: Not applicable

Flash point : > 300 °C

Method: closed cup

Evaporation rate : Not applicable

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

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : Not applicable

Relative vapor density : No data available

Relative density : 1.1

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : No data available



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Thermal decomposition : No data available

Viscosity

Viscosity, kinematic : 2,000,000 cSt

Explosive properties : Not explosive

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

Molecular weight : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

: 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

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:

Silicon dioxide:

Acute oral toxicity : LD50 (Rat): > 3,300 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: Information taken from reference works and the

literature.

Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l

Exposure time: 4 h



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Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion 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.

Octamethylcyclotetrasiloxane:

Acute oral toxicity : LD50 (Rat): > 4,800 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icitv

Remarks: Based on test data

Acute inhalation toxicity : LC50 (Rat): 2975 ppm

Exposure time: 4 h
Test atmosphere: vapor

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Based on test data

Acute dermal toxicity : LD50 (Rabbit): > 2.5 ml/kg

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Based on test data

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

Silicon dioxide:

Result: No skin irritation

Remarks: Information taken from reference works and the literature.

Octamethylcyclotetrasiloxane:

Species: Rabbit

Result: No skin irritation Remarks: Based on test data

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Silicon dioxide:

Result: No eye irritation

Remarks: Information taken from reference works and the literature.



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Octamethylcyclotetrasiloxane:

Species: Rabbit Result: No eye irritation Remarks: Based on test data

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information. Respiratory sensitization: Not classified based on available information.

Ingredients: Silicon dioxide:

Assessment: Does not cause skin sensitization.

Test Type: Skin: test type not specified

Species: Guinea pig

Remarks: No known sensitising effect.

Information taken from reference works and the literature.

Octamethylcyclotetrasiloxane:

Assessment: Does not cause skin sensitization.

Test Type: Maximization Test (GPMT)

Species: Guinea pig

Remarks: No known sensitising effect.

Based on test data

Germ cell mutagenicity

Not classified based on available information.

Ingredients: Silicon dioxide:

Genotoxicity in vitro : Result: negative

Remarks: Information taken from reference works and the

literature.

Genotoxicity in vivo : Application Route: Ingestion

Result: negative

Remarks: Information taken from reference works and the

literature.

Germ cell mutagenicity- As-

sessment

: Animal testing did not show any mutagenic effects.

Octamethylcyclotetrasiloxane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on test data

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)

Result: negative

Remarks: Based on test data



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: Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on test data

: Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: negative

Remarks: Based on test data

: Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: negative

Remarks: Based on test data

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Test species: Rat

Application Route: inhalation (vapor)

Result: negative

Remarks: Based on test data

Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Test species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on test data

Germ cell mutagenicity- As-

sessment

: Animal testing did not show any mutagenic effects.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHANo ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Ingredients:

Octamethylcyclotetrasiloxane:

Effects on fertility : Test Type: Two-generation reproduction toxicity study



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Species: Rat, male and female Application Route: inhalation (vapor) Symptoms: Effects on fertility. Remarks: Based on test data

Effects on fetal development : Test Type: Prenatal development toxicity study (teratogenicity)

Species: Rabbit

Application Route: inhalation (vapor) Symptoms: No effects on fetal development.

Remarks: Based on test data

Reproductive toxicity - As-

sessment

: Some evidence of adverse effects on sexual function and

fertility, based on animal experiments.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Octamethylcyclotetrasiloxane:

Routes of exposure: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg

bw or less.

Routes of exposure: inhalation (vapor)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or

less.

Routes of exposure: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg

bw or less.

Repeated dose toxicity

Ingredients:

Octamethylcyclotetrasiloxane:

Species: Rat

Application Route: Ingestion Remarks: Based on test data

Species: Rat

Application Route: inhalation (vapor) Remarks: Based on test data

Species: Rabbit

Application Route: Skin contact Remarks: Based on test data



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Aspiration toxicity

Not classified based on available information.

Further information

Ingredients:

Octamethylcyclotetrasiloxane:

Remarks: Results from a 2 year repeated vapor inhalation exposure study to rats of octamethyl-cyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Based on the available information on its potential to cause harm to human health, Health Canada, in a 2008 screening assessment, has concluded that octamethylcyclotetrasiloxane is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health (http://www.ec.gc.ca/ese-

ees/default.asp?lang=En&n=2481B508-1). Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Octamethylcyclotetrasiloxane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.022 mg/l

Exposure time: 96 h

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia sp.): > 0.015 mg/l

Exposure time: 48 h

Remarks: No toxicity at the limit of solubility.

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): >

0.022 mg/l

Exposure time: 96 h

Remarks: No toxicity at the limit of solubility.

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.022

mg/l

Exposure time: 96 h

Toxicity to fish (Chronic toxic-

ity)

: NOEC (Oncorhynchus mykiss (rainbow trout)): >= 0.0044 mg/l

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates

(Chronic toxicity)

: NOEC (Daphnia sp.): > 0.0079 mg/l

Exposure time: 21 d

Remarks: No toxicity at the limit of solubility.

M-Factor (Chronic aquatic : 1



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toxicity)

Toxicity to bacteria : IC50: > 10,000 mg/l

Method: ISO 8192

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

Persistence and degradability

Ingredients:

Octamethylcyclotetrasiloxane:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 3.7 % Exposure time: 28 d

Method: OECD Test Guideline 310

Stability in water : Degradation half life: 69.3 - 144 h (24.6 °C) pH: 7

Method: OECD Test Guideline 111

Bioaccumulative potential

Ingredients:

Octamethylcyclotetrasiloxane:

Partition coefficient: n-

octanol/water

: log Pow: 6.48 (25.1 °C)

Mobility in soil
No data available

Other adverse effects

Ingredients:

Octamethylcyclotetrasiloxane:

Results of PBT and vPvB

assessment

: Remarks: Octamethylcyclotetrasiloxane (D4) meets the current REACh Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living

organisms.



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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and

Recovery Act (RCRA)

: This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded

in its purchased form.

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.

Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting

requirements of SARA Title III, Section 302.



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SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Dimethyl Siloxane, Trimethylsiloxyterminated
Silicon dioxide
Silicone Metalloid Complex

Froprietary

63148-62-9
70 - 90 %
7631-86-9
5 - 10 %

Ingredient

New Jersey Right To Know

Dimethyl Siloxane, Trimethylsiloxyterminated
Silicon dioxide
Silicone Metalloid Complex

63148-62-9
70 - 90 %
7631-86-9
5 - 10 %

Ingredient

California Prop 65 This product does not contain any chemicals known to the

State of California to cause cancer, birth, or any other

reproductive defects.

The ingredients of this product are reported in the following inventories:

KECI : All ingredients listed, exempt or notified.

REACH : All ingredients (pre-)registered or exempt.

TSCA : All chemical substances in this material are included on or

exempted from listing on the TSCA Inventory of Chemical

Substances.

AICS : All ingredients listed or exempt.

IECSC : All ingredients listed or exempt.

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

inventory listing.

PICCS : 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.

NZIoC : All ingredients listed or exempt.

Inventories



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AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

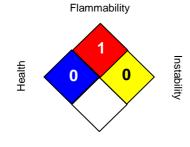
Registration: Trade Secret

Component	Registration number
Silicone Metalloid Complex	NJ TSRN 14962700-8475P

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

HMIS III:

HEALTH	0*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Full text of other abbreviations

DCC OEL : Dow Corning Guide

NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Min-

eral Dusts

DCC OEL / TWA : Time weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA Z-3 / TWA : 8-hour time weighted average

Sources of key data used to compile the Material Safety

Data Olasat

Data Sheet

: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

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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



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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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