

**DOW CORNING CORPORATION**  
**Material Safety Data Sheet**

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Version: 1.15

Revision Date: 2012/04/30

**MOLYKOTE(R) 111 COMPOUND****1. PRODUCT AND COMPANY IDENTIFICATION****MSDS No.: 01889834****SUPPLIER:**Dow Corning Corporation  
South Saginaw Road  
Midland, Michigan 48686**Prepared by Product Safety: (800) 248-2481****NEWALTA: (800) 567-7455****Revision Date: 2012/04/30****MANUFACTURER:**Dow Corning Corporation  
South Saginaw Road  
Midland, Michigan 48686**24 Hour Emergency Telephone: (989) 496-5900****WHMIS CLASSIFICATION: Class D, Division 2, Subdivision A.****Material Usage: Lubricant****2. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW****Generic Description: Silicone grease.****Physical Form: Grease****Colour: Translucent white****Odour: None**

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**POTENTIAL HEALTH EFFECTS****Acute Effects****Eye:** Direct contact may cause temporary redness and discomfort.**Skin:** No significant irritation expected from a single short-term exposure.**Inhalation:** No significant effects expected from a single short-term exposure.**Oral:** Low ingestion hazard in normal use.**Prolonged/Repeated Exposure Effects****Skin:** No known applicable information.**Inhalation:** No known applicable information.

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Oral: No known applicable information.

**Other Health Effects**

This product contains a chemical(s) that has the following effect(s):  
Reproductive Toxicity

See Section 11 for specific details.

**Signs and Symptoms of Overexposure**

No known applicable information.

**Medical Conditions Aggravated by Exposure**

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
7631-86-9	7.0 - 13.0	Silicon dioxide
556-67-2	0.1 - 1.0	Octamethylcyclotetrasiloxane
10043-35-3	0.1 - 1.0	Boric acid

The ingredients listed above are controlled products as defined in CPR, am. SOR/88-555.

**4. FIRST AID MEASURES**

Eye:	If irritation occurs, flush eye(s) with lukewarm gently flowing water for 5 minutes. Obtain medical attention.
Skin:	No health effects expected. If irritation does occur flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
Inhalation:	If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
Oral:	If irritation or discomfort occur, obtain medical advice.
Notes to Physician:	Treat according to person's condition and specifics of exposure.

**MOLYKOTE(R) 111 COMPOUND****5. FIRE-FIGHTING MEASURES**

Flash Point: > 214 °F / > 101.1 °C (Closed Cup)

Autoignition Temperature: Not available.

Flammability Limits in Air: Not available.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO<sub>2</sub>), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire Hazards: None.

**6. ACCIDENTAL RELEASE MEASURES**

Containment/Clean up: Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, provincial, federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases.

Note: See Section 8 for Personal Protective Equipment for Spills. Refer to Section 1 to obtain telephone numbers, if additional information is required.

**7. HANDLING AND STORAGE**

Use with adequate ventilation. Avoid eye contact.

Use reasonable care and store away from oxidizing materials. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Component Exposure Limits**

Consult local authorities for acceptable provincial values.

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<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
7631-86-9	Silicon dioxide	OSHA PEL (final rule): TWA 80mg/m <sup>3</sup> SiO <sub>2</sub> . NIOSH REL: TWA 6mg/m <sup>3</sup> . LC50: > 2.08 mg/l - Inhalation Rat ; 4hr dust/mist LD50: > 3,300 mg/kg - Oral Rat LD50: > 5,000 mg/kg - Dermal Rabbit
556-67-2	Octamethylcyclotetrasiloxane	Dow Corning guide: TWA 10 ppm. LC50: 2975 PPM - Inhalation Rat ; 4hr vapor LD50: > 4,800 mg/kg - Oral Rat LD50: > 2.5 ML/KG - Dermal Rabbit
10043-35-3	Boric acid	ACGIH TLV: TWA 2 mg/m <sup>3</sup> inhalable fraction, STEL 6 mg/m <sup>3</sup> inhalable fraction. LD50: 2,660 mg/kg - Oral Rat

**Engineering Controls**

Local Ventilation: None should be needed.  
General Ventilation: Recommended.

**Personal Protective Equipment for Routine Handling**

Eyes: Use proper protection - safety glasses as a minimum.  
Skin: Washing at mealtime and end of shift is adequate.  
Suitable Gloves: Handle in accordance with good industrial hygiene and safety practices.  
Inhalation: No respiratory protection should be needed.  
Suitable Respirator: None should be needed.

**Personal Protective Equipment for Spills**

Eyes: Use proper protection - safety glasses as a minimum.  
Skin: Washing at mealtime and end of shift is adequate.  
Inhalation/Suitable Respirator: No respiratory protection should be needed.

Precautionary Measures: Avoid eye contact. Use reasonable care.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

**MOLYKOTE(R) 111 COMPOUND****9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Form: Grease  
Color: Translucent white  
Odor: None  
Odor Threshold: Not available.  
Specific Gravity @ 25°C: 1.1  
Viscosity: Not available.  
Freezing/Melting Point: Not available.  
Boiling Point: Not available.  
Vapor Pressure @ 25°C: Not available.  
Vapor Density: Not available.  
Evaporation Rate: Not available.  
Solubility in Water: Not available.  
Coefficient of Water/Oil: Not available.  
Distribution:  
pH: Not available.  
Volatile Content: Not available.

Flash Point: > 214 °F / > 101.1 °C (Closed Cup)  
Autoignition Temperature: Not available.  
Flammability Limits in Air: Not available.

Note: The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

**10. STABILITY AND REACTIVITY**

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to Avoid: None.

Materials to Avoid: Oxidizing material can cause a reaction.

**Hazardous Decomposition Products**

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

**11. TOXICOLOGICAL INFORMATION****Component Toxicology Information**

Octamethylcyclotetrasiloxane administered to rats by inhalation at concentrations of 500 and 700 ppm resulted in statistically significant decreases in the number of pups born and the live litter size in both the first and second

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generations. Prolonged estrous cycles, and decreased mating and fertility indices were observed following 700 ppm exposure in the second generation only. There were also increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia).

Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (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/substances/ese/eng/challenge/batch2/batch2\\_556-67-2.cfm](http://www.ec.gc.ca/substances/ese/eng/challenge/batch2/batch2_556-67-2.cfm)).

Repeated exposure in rats to D4 resulted in what appears to be 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.

#### Special Hazard Information on Components

##### **Reproductive Toxicity**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>	
556-67-2	0.1 - 1.0	Octamethylcyclotetrasiloxane	Evidence of reproductive effects in laboratory animals.
10043-35-3	0.1 - 1.0	Boric acid	Evidence of reproductive effects in laboratory animals.

## 12. ECOLOGICAL INFORMATION

### Environmental Fate and Distribution

Complete information is not yet available.

### Environmental Effects

Complete information is not yet available.

### Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

#### Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
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Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

**13. DISPOSAL CONSIDERATIONS**

Can be incinerated in accordance with local regulations.

Call local hazardous waste disposal company or provincial waste authorities for more information. Refer to Section 1 to obtain telephone numbers, if additional information is required.

**14. TRANSPORT INFORMATION****Canada Road (Based on IMDG Regulations)**

Not subject to local road regulations.

**Ocean Shipment (IMDG)**

Not subject to IMDG code.

**Air Shipment (IATA)**

Not subject to IATA regulations.

Refer to Section 1 to obtain telephone numbers, if additional information is required.

**15. REGULATORY INFORMATION**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

WHMIS  
CLASSIFICATION: Class D, Division 2, Subdivision A.

DSL Status: All chemical substances in this material are included on or exempted from the DSL.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

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**MOLYKOTE(R) 111 COMPOUND****16. OTHER INFORMATION**

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either 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.

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