

Product Information

Specialty Lubricants

DOW CORNING

DOW CORNING® 111 Silicone compound

FEATURES

- Good resistance to most chemicals
- Wide service temperature range (-40°C/-40°F to 200°C/392°F)
- Low vapor pressure
- Low volatility
- Excellent water resistance

COMPOSITION

- Silicone oil
- Inorganic thickener
- Additives

Valve lubricant and sealant

APPLICATIONS

- Lubrication for control and pressure plug valves, water softener and faucet valves.
- Sealant for vacuum and pressure systems.
- Sealant for outdoor equipment (also shipboard) subject to washing and harsh environmental exposure: meters, electrical service entrance and underground connections.
- Damping medium for dash pots in electrical and electronic equipment.
- Chemical barrier coating.
- Used as an anti-stick and sealant for transformer gasket and equipment enclosures. It prevents gaskets from sticking to metal and resists weathering and water washout.
- Rubber and plastic O-rings, gaskets and seals.

TYPICAL PROPERTIES

Specification writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales representative prior to writing specifications on this product.

Standard*	Parameter	Unit	Value
	Physical nature		Stiff compound
	Color		White to light grey, translucent
ISO 2137	Penetration unworked	mm/10	175 to 210
ISO 2137	Penetration, worked 60, max.	mm/10	260
CTM 0033A	Bleed 24 hours/200°C (392°F), max.	%	0.5
CTM 0033A	Evaporation 24 hours/200°C (392°F), max.	%	2.0
	Melting point	°C	None
		°F	None

* CTM: Corporate Test Method, copies of CTMs are available on request.
ISO: International Standardisation Organisation

HOW TO USE

How to apply

DOW CORNING 111 Silicone Compound can be applied by hand, specially designed automated equipment, brushing or wiping. Certain designs of grease guns may seize up; test prior to use.

A thinner consistency can be achieved

by dispersing in solvents such as xylene, mineral spirits and methyl ethyl ketone. DOW CORNING 111 Silicone Compound can then be applied by brushing, dipping or spraying.

DOW CORNING 111 Silicone Compound should not be applied to any surface which will be painted or finished. Such coatings may not

adhere to the silicone-treated surface. If contaminated by a silicone coating, parts can be wiped or washed with solvent, washed with detergent, or immersed in an alcoholic potassium hydroxide solution and then rinsed in clear water before painting.

Solubility

DOW CORNING 111 Silicone Compound is insoluble in water, methanol, ethanol, or mineral oil, and soluble in Chlorothene NU^{*®}, perchloroethylene, mineral spirits and methyl ethyl ketone. The greater the consistency (lower penetration value), the lower the solubility of the specific silicone compound. The suitability of the particular solvent should be based on testing prior to regular use. Flammability and toxicological properties should be important considerations in the choice of a solvent.

Chemical resistance

DOW CORNING 111 Silicone Compound is not greatly affected by mineral oils, vegetable oils or air. It is generally resistant to dilute acids and alkalines, and to most aqueous solutions.

DOW CORNING 111 Silicone Compound is quite resistant to a wide variety of organic and inorganic chemicals. Because each application may vary in chemical composition, pressure, flow velocity, relubrication requirements and equipment design, it is recommended that the silicone compound be tested before adopting for regular use.

DOW CORNING 111 Silicone Compound is not to be used with liquid oxygen and should not be used in applications requiring LOX compatibility.

HANDLING PRECAUTIONS

DOW CORNING 111 Silicone Compound may cause temporary discomfort when in direct contact with eyes. In case of eye contact, flush eyes with water.

**PRODUCT SAFETY
INFORMATION REQUIRED FOR
SAFE USE IS NOT INCLUDED.**

**BEFORE HANDLING, READ
PRODUCT AND SAFETY DATA
SHEETS AND CONTAINER
LABELS FOR SAFE USE,
PHYSICAL AND HEALTH
HAZARD INFORMATION. THE
SAFETY DATA SHEET IS
AVAILABLE FROM YOUR LOCAL
DOW CORNING SALES
REPRESENTATIVE.**

USABLE LIFE AND STORAGE

When stored at or below 20°C (68°F) in the original unopened containers, this product has a usable life of 60 months from the date of production.

PACKAGING

This product is available in different standard container sizes. Detailed container size information should be obtained from your nearest Dow Corning sales office or Dow Corning distributor.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Dow Corning representative.

WARRANTY INFORMATION - PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Dow Corning specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Dow Corning provides you with a specific, duly signed endorsement of fitness for use, Dow Corning disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.

^{*®} Chlorothene NU is a registered trademark of the Dow Chemical Company.

DOW CORNING CORPORATION

Material Safety Data Sheet

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Version: 1.3

Revision Date: 2008/02/20

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANT

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: (989) 496-5900

Customer Service: (989) 496-6000

Product Disposal Information: (989) 496-6315

CHEMTREC: (800) 424-9300

MSDS No.: 01889834

Revision Date: 2008/02/20

Generic Description: Silicone grease.
Physical Form: Grease
Color: Translucent white
Odor: Odorless

NFPA Profile: Health 0 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. HAZARDS IDENTIFICATION

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.
Oral: No known applicable information.

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,

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANT

component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

None present. This is not a hazardous material as defined in the OSHA Hazard Communication Standard.

4. FIRST AID MEASURES

Eye: Immediately flush with water.

Skin: No first aid should be needed.

Inhalation: No first aid should be needed.

Oral: No first aid should be needed.

Notes to Physician: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

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

Autoignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO₂), 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

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANT

Containment/Clean up: Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. 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 absorbant. 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, state and 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. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, 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.

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

There are no components with workplace exposure limits.

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

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANT

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Grease
Color: Translucent white
Odor: Odorless
Specific Gravity @ 25°C: 1.1
Viscosity: Not determined.
Freezing/Melting Point: Not determined.
Boiling Point: Not determined.
Vapor Pressure @ 25°C: Not determined.
Vapor Density: Not determined.
Solubility in Water: Not determined.
pH: Not determined.
Volatile Content: Not determined.
Flash Point: > 214 °F / > 101.1 °C (Closed Cup)
Autoignition Temperature: Not determined.
Flammability Limits in Air: Not determined.

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.

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANT

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

No known applicable information.

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
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

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal. Call (989) 496-6315, if additional information is required.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANT

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

Call Dow Corning Transportation, (989) 496-8577, if additional information is required.

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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

EPA SARA Title III Chemical Listings**Section 302 Extremely Hazardous Substances (40 CFR 355):**

None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):

None.

Section 311/312 Hazard Class (40 CFR 370):

Acute: No
Chronic: No
Fire: No
Pressure: No
Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):

None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

Supplemental State Compliance Information**California**

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

Massachusetts

DOW CORNING(R) 111 VALVE LUBRICANT & SEALANTCAS Number Wt % Component Name

7631-86-9 7.0 - 13.0 Silica, amorphous

New JerseyCAS Number Wt % Component Name

63148-62-9 > 60.0 Polydimethylsiloxane

7631-86-9 7.0 - 13.0 Silica, amorphous

70131-67-8 5.0 - 10.0 Dimethyl siloxane, hydroxy-terminated

PennsylvaniaCAS Number Wt % Component Name

63148-62-9 > 60.0 Polydimethylsiloxane

7631-86-9 7.0 - 13.0 Silica, amorphous

70131-67-8 5.0 - 10.0 Dimethyl siloxane, hydroxy-terminated

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.

(R) indicates Registered Trademark