



DOW CORNING®4

Electrical insulating compound

FEATURES

- High dielectric strength
- Low volatility
- Moisture resistant
- Good thermal oxidation and chemical stability
- Meets MIL-S-8660C
- Retains its grease like consistency from -55°C(-67°F) to +200°C(392°F)
- Odourless
- Highly water repellent
- Adheres readily to dry metals, ceramics, rubber, plastics and insulating resins

Grease like material containing an inert silica filler in combination with selected polydimethyl silicone fluids

APPLICATIONS

A moisture proof seal for aircraft, automotive and marine ignition systems and spark plug connections, disconnection junctions in electrical wiring systems also in electrical assemblies and terminals.

- Used as a seal and lubricant for cable connectors, battery terminals, rubber door seals, switches and rubber and plastic O-rings and as a assembly lubricant for various metal-on-plastic and metal-on-rubber combinations.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

CTM*	Parameter	Unit	Value
0176	Color		White; translucent
0191	NLGI grade No. 2		
	Penetration unworked	mm/10	220
	Penetration worked 60, max	mm/10	310
0033A	Bleed, 30hours/200°C(392°F), max	%	6.0
0033A	Evaporation, 30hours/200°C(392°F), max	%	2.0
	Service temperature range ¹	°C	-55 to +200
		°F	-67 to 392
	Melting point	°C(°F)	None
0022	Relative density at 25°C(77°F)	g/ml	1.0
Electrical properties			
0114	Dielectric strength, 1.27mm gap	kV/ml	1.0
0112	Permittivity at 100Hz		3.1
0112	Permittivity at 100kHz		3.1
0112	Dissipation factor at 100Hz		0.0025
0112	Dissipation factor at 100kHz		0.0025
0249	Volume resistivity at 23°C(73°F)	Ohm.cm	0.10 x 10 ¹⁵
0171	Arc resistance	seconds	120

Parameter 1. The maximum temperature limit may approach 260°C(500°F) with no oxygen present.

* CTM: Corporate Test Method, copies of CTMs are available on request.

HOW TO USE

DOW CORNING 4 Compound can be applied by hand, specially designed automated equipment, brushing or wiping. Certain designs of grease guns may seize up with silicone compounds; 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 4 Compound can then be applied by brushing, dipping or spraying.

DOW CORNING 4 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.

Dispensing

Separation and compaction can occur with some high pressure dispensing equipment. This should be considered when designing dispensing systems for use with DOW CORNING 4 Compound.

For information on appropriate dispensing equipment for your application, please contact Dow Corning.

Solubility

DOW CORNING 4 Compound is insoluble in water, methanol, ethanol or mineral oil and is soluble in mineral spirit and methyl ethyl ketone. The suitability of a particular solvent should be based on testing prior to use. Flammability and toxicological properties should be important considerations in the choice of solvent.

Dimethyl silicone compounds should not be applied to O rings or other components made of silicone rubber because they will destroy the silicone rubber.

These compounds will also slightly swell natural butyl rubbers.

Chemical resistance

DOW CORNING 4 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. As each application may vary in chemical composition, pressure, flow velocity, relubrication requirements and equipment design, it is

recommended that DOW CORNING 4 Compound be tested before adopting for regular use.

DOW CORNING 4 Compound is not intended to be used with liquid oxygen and should not be used in applications requiring LOX compatibility without thorough testing for the specific application.

HANDLING PRECAUTIONS

When using solvents avoid heat, sparks and open flame. Always provide adequate ventilation. Obtain and follow handling precautions from the solvent supplier.

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 material safety data sheet is available on the Dow Corning website at www.dowcorning.com. You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

USABLE LIFE AND STORAGE

When stored 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 100g tubes, 5kg pails and 25kg pails.

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 Product Safety and Regulatory Compliance

(PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com or consult your local Dow Corning representative.

LIMITED 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. Suggestions of use shall not be taken as inducements to infringe any patent.

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.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

WE HELP YOU INVENT THE FUTURE.™

www.dowcorning.com

SAFETY DATA SHEET

According to article 31 and Annex II of the EU REACH Regulation

Version: 4.0

Revision Date: 25.01.2013

Superseded date: 25.01.2013

DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY****1.1 Product name** : DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND**1.2 Identified uses** : Lubricants and additives**Uses advised against** : None known.**1.3 Company** : Dow Corning Europe S.A.
rue Jules Bordet - Parc Industriel - Zone C
B-7180 Seneffe
Belgium**E-mail address (Safety Data Sheet)** : sdseu@dowcorning.com**Customer Service** : English Tel: +49 611237507
Deutsch Tel: +49 611237500
Français Tel: +32 64511149
Italiano Tel: +32 64511170
Español Tel: +32 64511163

Fax: +32 64888683

1.4 Emergency Phone Number : Dow Corning (Barry U.K. 24h) Tel: +44 1446732350
Dow Corning (Wiesbaden 24h) Tel: +49 61122158
Dow Corning (Seneffe 24h) Tel: +32 64 888240**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

According to EU Directives 67/548/EEC or 1999/45/EC:

Not hazardous.

2.2 Label elements**Labelling according to EEC Directive**

No special packaging or labelling requirements.

November 2014

Attn: Representative
Customs Service

The following information has been prepared to describe DOW CORNING® 4 ELECTRICAL INSULATING COMPOUND, so that our Harmonized Tariff Classification number selection can be explained:

1. **Trade Name** - DOW CORNING® 4 ELECTRICAL INSULATING COMPOUND
2. **Generic Name and Appearance** – a translucent white inorganic grease
3. **CAS# & General Analysis** –

CAS #	Weight %	Component Name
68037-74-1	70.0 - 90.0	Dimethyl, methyl silicone resin
7631-86-9	7.0 - 13.0	Silica, amorphous
70131-67-8	5.0 - 10.0	Dimethyl siloxane, hydroxy-terminated

4. What is the merchandise and how is it used:

DOW CORNING® 4 ELECTRICAL INSULATING COMPOUND is a lubricating, grease-like material used as a moisture proof seal for aircraft, automotive and marine ignition systems and spark plug connections, junctions in electrical wiring systems also in electrical assemblies and terminals.

5. Harmonized Tariff Code Classification:

The DOW CORNING® 4 ELECTRICAL INSULATING COMPOUND is classified using the HTS code of 3403.99. This is a lubricating preparation that does not contain, as basic constituents, petroleum oils or oils obtained from bituminous materials.

If you have any additional questions, please contact Dow Corning Europe SA

Customs & International Trade
Dow Corning Europe SA
Phone: 003264888000
E-mail: EUcommodity.codes@dowcorning.com

This information is provided in good faith and is believed accurate as of the date of this letter based on a review of current composition and information supplied by vendors. No warranty is expressed or implied. Liability is expressly disclaimed.

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DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND**3. COMPOSITION / INFORMATION ON INGREDIENTS****Chemical characterization:** Inorganic compound

According to EU Directives 67/548/EEC or 1999/45/EC:

Name	CAS-No.	EINECS/ ELINCS No.	REACH Registration Number	Conc. (% w/w)	Classification
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No hazardous ingredients.

According to Regulation (EC) No. 1272/2008:

Name	CAS-No.	EINECS/ ELINCS No.	REACH Registration Number	Conc. (% w/w)	Classification
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No hazardous ingredients.

CLP classifications are based on all current available data including from known international organizations. These classifications are subject to revision as more information becomes available.

4. FIRST AID MEASURES**4.1 Description of First Aid Measures:**

- On contact with eyes** : No first aid should be needed.
- On skin contact** : No first aid should be needed.
- If inhaled** : No first aid should be needed.
- On ingestion** : No first aid should be needed.

5. FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media** : On large fires use dry chemical, foam or water spray (fog). On small fires use carbon dioxide (CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.
- Unsuitable extinguishing media** : None known.
- 5.2 Hazards during fire fighting** : None known.
- Hazardous Combustion Products** : Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.
- 5.3 Special protective equipment/procedures** : A self-contained respirator and protective clothing should be worn. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

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DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND**6. ACCIDENTAL RELEASE MEASURES**

- 6.1 Personal precautions, protective equipment and emergency procedures** : Wear proper protective equipment.
- 6.2 Environmental precautions** : Do not allow large quantities to enter drains or surface waters.
- 6.3 Methods and materials for containment and cleaning up** : Scrape up and place in a container fitted with a lid. The spilled product produces an extremely slippery surface.

7. HANDLING AND STORAGE

- 7.1 Advice on safe handling** : Avoid eye contact. General ventilation is recommended. Do not empty into drains.
- 7.2 Advice on storage** : Do not store with oxidizing agents.
Storage temperature: minimum 0 °C, maximum 32 °C
- 7.3 Specific uses** : Refer to technical data sheet available on request.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Control parameters**

Name	CAS-No.	Exposure Limits
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None of the components have assigned exposure limits.

8.2 Exposure controls

Engineering Controls : Ventilation : Refer to Section 7.1

Personal protection equipment

Respiratory protection : This product cannot normally be inhaled.

Hand protection : Gloves are not normally required.

Eye/face protection : Safety glasses should be worn.

Skin protection : Protective equipment is not normally necessary.

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Hygiene measures	:	Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.
Additional information	:	These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.
<u>Environmental exposure controls</u>	:	Refer to section 6 and 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Grease
Colour	:	Translucent white
Odour	:	Very little
Flash point	:	> 300 °C (Closed Cup)
Explosive properties	:	No
Specific Gravity	:	> 1
Oxidizing properties	:	No

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

10. STABILITY AND REACTIVITY

10.1 Reactivity	:	None known.
10.2 Stability	:	Stable under normal usage conditions.
10.3 Possibility of hazardous reactions	:	None known.
10.4 Conditions to avoid	:	None established.
10.5 Materials to avoid	:	Can react with strong oxidising agents.
10.6 Hazardous decomposition products	:	Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.

11. TOXICOLOGICAL INFORMATION**Acute toxicity:**

On contact with eyes	:	May cause temporary discomfort.
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DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND

On skin contact : No adverse effects are normally expected.

If inhaled : No adverse effects are normally expected.

On ingestion : No adverse effects are normally expected.

Chronic toxicity:

On skin contact : No adverse effects are normally expected.

If inhaled : No adverse effects are normally expected.

On ingestion : No adverse effects are normally expected.

Toxicokinetics, metabolism and distribution : No specific information is available.

Other Health Hazard Information : This product contains (a) powder(s) hazardous by inhalation. This is not relevant to the current physical form of the product, which is not in a respirable form.

¹ Based on product test data.

² Based on test data from similar products.

12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity effects**

No adverse effects on aquatic organisms are predicted.

12.2 Persistence and degradability

Solid material, insoluble in water. No adverse effects are predicted.

12.3 Bioaccumulation

No bioaccumulation potential.

12.4 Release to waters / Mobility in soil**Fate and effects in waste water treatment plants:**

No adverse effects on bacteria are predicted.

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DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND**13. DISPOSAL CONSIDERATIONS**

Product and packaging disposal : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

14. TRANSPORT INFORMATION**Road / Rail (ADR/RID)**

Not subject to ADR/RID.

Sea transport (IMDG)

Not subject to IMDG code.

Air transport (IATA)

Not subject to IATA regulations.

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Status**

EINECS : All ingredients listed, exempt or notified (ELINCS).

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, exempt or notified.

IECSC : All ingredients listed or exempt.

ENCs/ISHL : All ingredients listed, exempt or notified.

KECL : All ingredients listed, exempt or notified.

PICCS : All ingredients listed, exempt or notified.

DSL : Consult your local Dow Corning office.

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DOW CORNING(R) 4 ELECTRICAL INSULATING COMPOUND**16. OTHER INFORMATION**

This product safety data sheet was prepared in compliance with article 31 and Annex II of the EU REACH Regulation as well as its relevant amendments, on the approximation of laws, regulations and administrative provisions relative to the classification, packaging and labelling of dangerous substances and preparations.

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces a formulation containing the Dow Corning product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from the Dow Corning Product Safety Data Sheet to their own Product Safety Data Sheet in compliance with article 31 and Annex II of the EU REACH Regulation.

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS. Dow Corning shall not be held responsible for any defect in the product covered by this SDS, should the existence of such defect not be detectable considering the current state of scientific and technical knowledge.

As stated above, this Safety Data Sheet has been prepared in compliance with applicable European law. If you purchase this material outside Europe, where compliance laws may differ, you should receive from your local Dow Corning supplier a SDS applicable to the country in which the product is sold and intended to be used. Please note that the appearance and content of the SDS may vary - even for the same product - between different countries, reflecting the different compliance requirements. Should you have any question, please refer to your local Dow Corning supplier.

Source of information: Internal data and publically available information