

# Product Information

## Industrial Assembly and Maintenance

**DOW CORNING**

# *Dow Corning*<sup>®</sup> 4 Electrical Insulating Compound

## **FEATURES & BENEFITS**

- High dielectric strength
- Low volatility
- Moisture resistant
- Good thermal oxidation and chemical stability
- Meets requirements of SAE AS 8660
- Certification to NSF 51 and 61
- Meeting requirements of FDA 21 CFR 175.300
- Retains its grease like consistency from -40°C (-40°F) to +200°C (392°F)
- Odorless
- 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.

Test*	Property	Unit	Result
CTM 0176	Color		White; translucent
CTM 0191	NLGI consistency number		2
	Penetration unworked	mm/10	220
	Penetration worked 60, max	mm/10	310
CTM 0033A	Bleed, 30hours/200°C (392°F), max	%	6.0
CTM 0033A	Evaporation, 30hours/200°C (392°F), max	%	2.0
	Service temperature range <sup>1</sup>	°C	-40 to +200
		°F	-40 to 392
	Melting point	°C (°F)	None
CTM 0022	Relative density at 25°C (77°F)	g/ml	1.0
	<b>Electrical properties</b>		
CTM 0114	Dielectric strength, 1.27mm gap	V/mil	460
CTM 0112	Dielectric constant at 100 Hz		2.98
CTM 0112	Dielectric constant at 100 kHz		3.01
CTM 0112	Dissipation factor at 100 Hz		<0.0001
CTM 0112	Dissipation factor at 100 kHz		<0.0002
CTM 0249	Volume resistivity at 23°C (73°F)	Ohm.cm	1.1 x 10 <sup>15</sup>
CTM 0171	Arc resistance	seconds	135

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

<sup>1</sup>The maximum temperature limit may approach 260°C (500°F) with no oxygen present.

## **DESCRIPTION**

*Dow Corning*<sup>®</sup> 4 Electrical Insulating 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* 4Compound 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 IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL 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 DOW CORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.**

## **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 INFORMATION**

This product is available in tubes, pails and drums.

## **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, [dowcorning.com](http://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 our 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 our products will meet the 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.

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