

Description

The MC002971 Silicone Grease is a translucent, water repelling (hydrophobic), non-melting, and lubricating dielectric grease that provides superior corrosion and arcing resistance for connectors. It is widely applicable because it is safe for most metals, rubbers, plastics, and elastomers. As well, it is usable in many environments due to its high resistance and stability with respect to extreme cold, heat, humidity, and other extreme exposure conditions like high voltages. Voltage arcing can be prevented due to its excellent dielectric properties. Further, because it repels water, it provides excellent oxidation resistance for contacts and relays.

Benefits and Features

- Stable over wide temperature range and conditions - Non-melting
- Excellent electrical insulator - High dielectric strength
- Usable for incidental food contact (Conforms to 21 CFR section 178.3570)
- Odourless and non-toxic
- Corrosion inhibitor
- Suitable for Use in Food Facilities as a Non-Food Chemical

Usage Parameters

Properties	Value
Shelf Life ^{a)}	5 Year

^{a)} Reported shelf life assumes room temperature storage and unopened container.

Temperature Ranges

Properties	Value
Constant Service Temperature	-50 to 250°C
	(-58 to 482°F)
Storage Temperature of Unmixed Parts ^{b)}	0 to 25°C
	(32 to 77°F)

^{b)} Cold storage avoids material separation and settling. If storing at 25 °C, mix thoroughly to disperse filler before use.

Principal Components

- Dimethylpolysioxane
- Amorphous silica

Properties

Electrical Properties	Method	Value
Volume Resistivity (ρ_v)	ASTM D 257	$1 \times 10^{13} \Omega \cdot \text{cm}$
Volume Conductivity (σ_v)	ASTM D 257	$1 \times 10^{-13} \text{ S} \cdot \text{cm}$
Dielectric Strength @ 0.01"	ASTM D 149	500 V/mil (19.7kV/mm)
Arc Resistance		120 s
Thermal Properties	Method	Value
Thermal Conductivity		0.16 W/(m*K)

Grease Properties	Method	Value
Evaporation Loss, 22 h @165 °C (329 °F)	ASTM D 2595	1.40%
Oil Separation, 30 h @165 °C (329 °F)	ASTM D 6184	0.40%
Dropping Point	ASTM D 2265	>304 °C (>579 °F)
Water Washout @38 °C (100 °F) ^{a)}	ASTM D 1264	3.2%
Worked Penetration		320
Emcor Rust Test, distilled water	IP 220	#4 ^{b)}

^{a)} Bearing dried at 77°C (171°F)

^{b)} Corroded areas covering >5% and <10% of the running track surface

Physical Properties	Method	Value
Colour	Visual	Translucent
Odour		None
Density @25°C (77°F)	ASTM D 1475	1.007 g/mL
Viscosity	Brookfield	Thixotropic paste
Lubricant		Yes
Bleed Resistant		No
Corrosion Resistant		Yes
Base Material		Silicone Oil
Filler		Silica

Compatibility

Chemical - It is compatible with a wide variety of metal, rubber, and plastic substances such as ignition switches, valve seats, O-rings, sealing rings, transformer connectors, and cables systems.

Storage

Store between 0 and 10°C (32 and 50°F) in dry area to minimize settling. You may also store this product at higher temperatures but this can cause settling. If settling occurs, mix thoroughly until the product is homogeneous again.

Application Instructions

The performance of the MC002971 Silicone Grease depends on surface preparation. Improperly prepared contact surfaces can degrade the oxidation protection, dielectric properties, and lubrication characteristics by trapping contaminants between the surface and the grease. The thickness and coverage should be adjusted to meet your needs.

Prerequisites

- Clean and dry the surface of the substrate to remove other oils and greases, as well as dust, water, solvents, or any other contaminants.
- (Optional) Wear gloves to avoid contaminating the surface and to avoid possible skin irritation.

Equipment

- Lint free cloth (for cleaning contact and for wiping excess residue)
- Spatula or stick application tools (sized appropriately for your application)
- Isopropyl alcohol or other residue-free organic solvents (for cleaning)

NOTE: Thoroughly clean oil-based cleaners that are designed to leave a film on the metal surface.

Silicone Grease



To apply the paste

1. Wipe the contact with a lint-free cloth.
2. Clean the contacts with isopropyl alcohol or other non-oil based cleaner.
3. Once dry, apply the paste with the application tool to the contact, ensuring adequate coverage and desired thickness.

Packaging

Packaging	Net Volume		Net Weight	
Tube	85 mL	2.87 fl oz	85.6 g	3.02 oz

Part Number Table

Description	Part Number
Silicone Grease, Translucent, 85mL, Tube	MC002971

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