

Silicone Grease

Description

8462 is a dielectric silicone grease. It seals, waterproofs, lubricates and insulates indoor and outdoor electrical connections with a layer of non-hardening silicone compound. It is electrically insulating but allows current to flow through metal contacts, providing environmental protection without inhibiting connectivity or causing short circuits. It is also good for lubricating and sealing rubber and plastic parts.

It is commonly used on outdoor lighting, scoreboards, traffic lights, high voltage poles, transformers, disconnects, switching mechanisms, electrical contacts, spark plugs, battery terminals, fasteners, seals, gaskets, plastic insulators, and O-rings. It is useful in marine environments and harsh weather conditions.

Features and Benefits

- *Suitable for high and low voltage applications*
- *Seals, waterproofs, insulates, and lubricates*
- *Prevents corrosion*
- *Prevents arcing and pitting*
- *Broad service temperature range of -50 to 250 °C (-58 to 482 °F)*
- *Temperature resistant—does not harden, melt, bleed, dry, freeze, or separate due to temperature fluctuations*
- *Safe on rubbers and plastics*
- *Suitable for use in food facilities as a non-food chemical—Canadian and NFS recognition (letters available on request)*
- *Can be used where incidental food contact might occur—conforms to 21 CFR section 178.3570*

Usage Parameters

Properties	Value
Shelf life	5 y

Temperature Ranges

Properties	Value
Constant service temperature	-50 to 250 °C [-58 to 482 °F]
Storage temperature limits ^{a)}	0 to 25 °C [32 to 77 °F]

a) Cold storage avoids material separation and settling. If storing at room temperature, mix thoroughly to disperse filler before use.

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	$1 \times 10^{-13} \text{ S/cm}$
Dielectric strength @0.01"	ASTM D 149	500 V/mil [19.7 kV/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	1.4%
Oil separation, 30 h @165 °C [329 °F]	ASTM D 6184	0.4%
Dropping point	ASTM D 2265	>304 °C [>579 °F]
Water washout @38 °C [100 °F] ^{b)}	ASTM D 1264	3.2%
Worked penetration	—	320
Emcor rust test, distilled water	IP 220	4 ^{c)}

b) Bearing dried at 77 °C [171 °F].

c) Corroded areas covering >5% and <10% of the running track surface.

Properties

Physical Properties	Method	Value
Color	Visual	Translucent
Odor	—	Odorless
Density @25 °C [77 °F]	ASTM D 1475	1.01 g/mL
Viscosity @25 °C [77 °F]	IPCTM-65- Method 2.4.24.4	690 Pa·s ^{a)}
Lubricant	—	Yes
Bleed resistant	—	No
Corrosion resistant	—	Yes
Base material	—	Silicone oil
Filler	—	Silica

a) Brookfield viscometer at 10 rpm with spindle RV S95.

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.

Health, Safety, and Environmental Awareness

Please see the 8462 Safety Data Sheet (SDS) for further details on transportation, storage, handling, safety guidelines, and regulatory compliance.

Application Instructions

To apply the grease:

1. Wear protective gloves.
2. Clean and dry the surface being lubricated with a lint-free cloth or brush and a zero-residue cleaning solvent, such as MG 824 Isopropyl Alcohol.
3. Apply an adequate amount of grease to cover and protect the contact.

Packaging and Supporting Products

Cat. No.	Packaging	Net Volume	Net Weight	Packaged Weight
8462-85ML	Tube	85 mL [2.87 fl oz]	85.6 g [3.02 oz]	0.12 kg [0.26 lb]
8462-1P	Jar	473 mL [15.9 fl oz]	476 g [1.05 lb]	0.54 kg [1.2 lb]
8462-1G	Pail	3.78 L [3.99 qt]	3.80 kg [8.39 lb]	4.03 kg [8.89 lb]
8462-20KG	Pail	19.8 L [5.24 gal]	20 kg [44.0 lb]	TBD

TBD=To be determined. Contact M.G. Chemicals if custom packaging or sizes are required.

Technical Support

Please contact us regarding any questions, suggestions for improvements, or problems with this product. Application notes, instructions and FAQs are located at www.mgchemicals.com.

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