MOLYKOTE® 5 Compound

Dielectric compound used on insulators and bushings; as a lubricant for high-current switches

Features & benefits

- Nonconductive
- Water-repellent
- Long-lasting
- Easy to apply
- Helps prevent formation of conductive paths

Composition

- Greaselike silicone paste with phenylmethyl-based fluid

Applications

Applications where improved metal-to-metal lubricity (compared to other MOLYKOTE® brand silicone compounds) is needed. To help prevent arcing and flashovers on insulators and bushings. As a contact lubricant on high-voltage equipment. To lubricate static and dynamic O-ring seals in hot-melt adhesive equipment. To help prevent rust and corrosion on insulator threads and bolts; also helps in removal of insulators and hardware for replacement. As a water-repellent filling material to help prevent moisture from traveling inside the rubber jacket of service entrance cable (can be injected using a grease gun with a needle-type nozzle). To help prevent oxidation and corrosion on contacts and band-tightening screws of socket-type watt-hour meters.

Description

MOLYKOTE® 5 Compound is a greaselike material containing an inert amorphous silica filler in combination with selected dimethyl and phenylmethyl silicone fluids. This nonconductive compound is used primarily for applications requiring compatibility with rubber, metal, and plastic.

Specific features include:

- Easy application by hand, wiping, brushing, or automated equipment
- Room-temperature consistency over a wide range of hot and cold temperatures
- Serviceable temperature range of -54 to 232°C (-65 to 450°F) – a significant improvement over other silicone compounds
- Resistance to oxidation and moisture
- Virtually inert and nonvolatile

Typical properties

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

Standard[1]	Test	Unit	Result
Physical			
CTM 0176	Color		Translucent light gray
ASTM D1403	Penetration		
	Unworked	mm/10	200
	Worked 60 strokes, maximum	mm/10	210
Fed Std 791-321.2	Bleed, 24 hours/200°C (390°F)	%	3.5
Fed Std 791-321.2	Evaporation, 24 hours/200°C (390°F)	%	1
	Service temperature range	°C (°F)	-54 to 232 (-65 to 450)
CTM 0220	Specific gravity at 25°C (77°F)		1.0
Electrical			
ASTM D150	Dielectric constant at		
	100 Hz		2.99
	100 kHz		2.94
ASTM D618	Dissipation factor at		
	100 Hz		<0.0003
	100 kHz		<0.0001
ASTM D149	Dielectric strength, 50-mil gap	volts/mil	545
ASTM D991	Volume resistivity at 23°C (73°F)	ohm-cm	1.1×10^{15}
ASTM D495	Arc resistance	seconds	101

[1] CTMs (Corporate Test Methods) correspond to standard ASTM (American Society for Testing and Materials) tests in most instances. Copies of CTMs are available upon request.

How to use

MOLYKOTE® 5 Compound can be applied by hand, brush, wipe, or specially designed automated equipment. However, certain dispensing equipment may seize with silicone compounds, so testing is recommended prior to use.

If a thinner consistency is needed, the compound can be dispersed in low-viscosity polydimethyl siloxane fluid (i.e., ≈20 cSt viscosity) or other solvents and applied by brushing, dipping, or spraying.

Note: When using any solvent, always provide adequate ventilation. Follow precautions on solvent container label.

MOLYKOTE® 5 Compound can be cleaned from a surface by wiping or washing with low-viscosity polydimethyl siloxane fluid (i.e., ≈20 cSt viscosity) or other solvents, or by washing with detergent.

Handling precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION.

Usable life and storage

MOLYKOTE® 5 Compound has a shelf life of 60 months from date of manufacture. Refer to product packaging for “Use By” date.

Packaging

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

Limitations

MOLYKOTE® 5 Compound should not be applied to any surface that will be painted or finished. Such coatings may not adhere to the silicone-treated surfaces.

Not recommended for use with highly oxidative chemicals (e.g., liquid chlorine, liquid oxygen). Not recommended as a lubricant in metal bearings.

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