Power & Utilities
Solutions

DOW CORNING

There's a lot on the line.

We'll help keep things moving.

In regular service, a circuit breaker is typically static. But it is essential that components move smoothly when they need to. Because circuit breakers are subjected to temperature extremes, moisture, environmental contaminants and debris over long periods of time between maintenance, many lubricants harden, break down or dry out, often leading to circuit breaker failure.

Molykote® and *Dow Corning*® brand lubricants can provide proven long-term, reliable lubrication over a wide service temperature range and in a variety of environments. Fluorosilicones in particular resist solvents such as penetrating oil, and they do not dry out and harden, even after many years of exposure to the elements and static conditions.

Formulated to address specific requirements, *Molykote*® and *Dow Corning*® lubricants can help reduce seizure and increase circuit breaker performance and reliability. They may allow extended maintenance intervals and reduced lifecycle cost. The lubricants may also generate increased customer satisfaction by reducing equipment failures.

- ***Molykote*® 3451 Chemical Resistant Bearing Grease** provides exceptional lubrication on needle bearings in circuit breakers. This fluorosilicone grease provides superior resistance to most chemicals and can be used at high temperatures, and with heavy loads. *Molykote*® 3451 grease also resists washout by water, fuels, oils and solvents. It is compatible with most gaskets, seals and packings, including silicone O-rings.
- ***Molykote*® 1292 Long Life Bearing Grease** is a fluorosilicone grease used for metal/metal combinations with slow to medium-fast movements and medium loads. It is also used to lubricate flange gaskets in SF6 breakers. *Molykote*® 1292 grease has an extremely low tendency toward oxidation and a high resistance to water and water washout. It is resistant to mineral oil, fuels and many chemicals.
- ***Molykote*® 33 Extreme Low Temperature Bearing Grease** delivers exceptional performance in cold environments. It lubricates trip latch and coil bearings, antifriction bearings, and plastic and rubber parts under light to moderate loads. *Molykote*® 33 grease is resistant to oxidation and moisture, and it is compatible with many plastics and elastomers.
- ***Molykote*® G-n Metal Assembly Paste** is a low-friction lubricant that provides excellent protection against fretting wear and corrosion in sliding friction applications. It helps prevent seizure from fretting, galling and cold welding, extending service life on surfaces subjected to extreme pressures.
- ***Molykote*® 1000 Solid Lubricant Paste** is particularly useful for bolted metal joints, enabling non-destructive dismantling, even after long use at high temperatures. It offers good corrosion protection over a wide range of temperatures and at high loads.

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Typical Properties

	Molykote® 3451 Chemical Resistant Bearing Grease	*Molykote*® 1292 Long Life Bearing Grease	*Molykote*® 33 Extreme Low Temperature Bearing Grease	*Molykote*® G-n Metal Assembly Paste	*Molykote*® 1000 Solid Lubricant Paste	*Dow Corning*® 832 Multi-Surface Adhesive Sealant	*Dow Corning*® 111 Valve Lubricant & Sealant
Composition	Fluorosilicone oil, PTFE thickener	Fluorosilicone oil, organic thickener	Lithium soap, phenylmethyl silicone oil	Solid lubricants, mineral oil	Solid lubricants, mineral oil, thickener, powdered metal	Neutral cure 100% silicone RTV	Silica-thickened dimethyl silicone oil
Service Temperature Range	-40ºF to 450ºF (-40ºC to 232ºC)	-40ºF to 392ºF (-40ºC to 200ºC)	-100ºF to 356ºF (-73ºC to 180ºC)	0ºF to 750ºF (-18ºC to 399ºC)	-22ºF to 1202ºF (-30ºC to 650ºC)	-67°F to 300°F (-55°C to 149°C)	-40°F to 400°F (-40°C to 204°C)
Potential Applications	• Roller and needle bearings • Sleeve bearings • Silicone O-rings and gaskets • Pilot valve and control valve O-rings	• Gaskets in presence of SF6, flange surfaces	• Bearing applications where cold temperature conditions may hinder movement in trip latch mechanism, disconnect contact surfaces	• Pins and bushings • Metal-to-metal sliding surface contact • Gears and pinions • Bevel gears • Jack screws associated with racking mechanisms	• Bolted joints subjected to high temperatures and corrosive effects • Bolted joints that have to be re-tightened or disconnected after initial assembly and operation	• Sealing flange joints, bolts and nuts on breakers exposed to the weather	• Gaskets: air-to-air • Any non-silicone O-ring, sliding seals and surfaces
Features/Benefits	• Enables extended component lubrication intervals • Reduced wear and corrosion • Resists drying out • Long life • Solvent resistant • Chemically inert	• May help maintain integrity of gaskets and seals • May enable longer service life • Resists drying out • Long life • Solvent resistant • Chemically inert	• Excellent low-temperature properties • May reduce potential effect of cold temperatures on slow component movement	• Good wear and corrosion prevention • Solids provide long-term lubrication • Low coefficient of friction • Extreme temperature service	• Good corrosion protection • High load-carrying capacity • Stable coefficient of friction	• Non corrosive cure • Good adhesion to most substrates • No odor • Effective moisture barrier • Resistant to UV exposure • Will not shrink or crack	• Effective moisture barrier • Resists drying out • Helps keep seals and gaskets soft and pliable • Good metal-to-rubber lubricant

Products for Additional Maintenance

- ***Dow Corning*® 832 Multi-Surface Adhesive Sealant** is a 100 percent silicone adhesive engineered for assembly and maintenance applications. The one-component, ready-to-use silicone seals, bonds and protects a wide variety of surfaces. It forms a flexible, long-lasting seal over a wide temperature range and will not corrode metal or other corrosion-sensitive materials.
- ***Dow Corning*® 111 Valve Lubricant & Sealant** offers good resistance to most chemicals, excellent water resistance, low vapor pressure and low volatility over a wide temperature range. *Dow Corning*® 111 Lubricant & Sealant can be used to lubricate most non-silicone O-rings and gaskets.

Formulated for success

Molykote and *Dow Corning* lubricants are available in a range of formulations to suit a variety of applications. Backed by 60 years of innovation, Dow Corning solutions are trusted by engineers in many industries to solve or prevent lubrication challenges.

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DOW CORNING

We help you invent the future.™