

MOLYKOTE® Anti-Seize Paste supports battery-swapping

MOLYKOTE® Cu-7439 Plus Paste V1 for screws can ensure safe, reliable assembly/disassembly of swappable battery packs over time

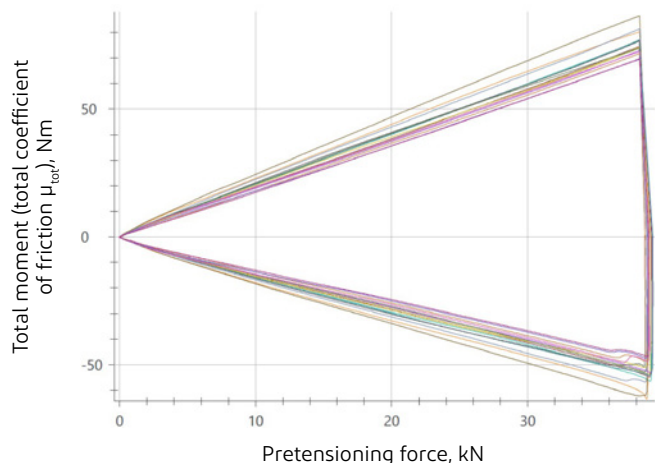
Responding to market needs to ensure fast, reliable, safe battery-swapping

The automotive industry currently is undergoing the biggest change in decades, moving from combustion engines to electrified vehicles (EVs). In addition to range limitations, charging time is one of the most significant pain points of EVs. Battery-swapping could be one solution to address that issue – and it is a solution that also relieves stress from the power grid. To ensure fast, reliable, automated and safe swapping of the battery, the fasteners that connect the battery pack to the vehicle need to be lubricated. This guarantees functionality of both the EV and the automated swapping station.

MOLYKOTE® Cu-7439 Plus Paste V1 provides long-lasting lubrication and prevents seizing and corrosion. As a result, lubricated fasteners can be released and tightened with the same force over a few thousand cycles without any malfunctioning. In fact, constant friction values prevent self-loosening of the battery pack while driving. Tests in the field showed 3000+ assembly cycles without any issues.

Screw test results: Constant forces over multiple tightenings

Testing with the screw tester demonstrates that MOLYKOTE® Cu-7439 Plus Paste V1 provides repeatable, constant forces over multiple tightenings (5).



Features of MOLYKOTE® Cu-7439 Plus Paste V1

- Long-lasting lubrication eliminates wear
- Very constant friction values over multiple assembly/disassembly cycles
- Good corrosion protection
- Good pressure resistance and load-carrying capacity
- Wide service-temperature range (-30 to 650°C)

Typical properties of MOLYKOTE® Cu-7439 Plus Paste V1

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.

Method ⁽¹⁾	Property	Result
	Color	Copper-colored
Consistency, density, viscosity		
ISO 2137	Unworked penetration	320-370 mm/10
DIN 53 217	Density at 20°C (68°F)	1.0 g/ml
DIN 51 562	Base oil viscosity at 40°C (104°F)	1100 mm ² /s
Temperature		
	Service temperature	-30 to +650°C; paste effective to +300°C -22 to +1202°F; paste effective to +572°F
ISO 2176	Drop point	None
Load-carrying capacity, wear protection, service life		
DIN 51 350 pt.4	Four-ball tester Weld load	2500 N
DIN 51 350 pt.5	Wear factor under 800 N load	1.0 mm
	Almen-Wieland machine OK load	>20,000 N
Coefficient of friction		
	Press-fit test $\mu =$	0.07
	Screw test: Coefficient of friction of bolt connection M12, 8.8, blackened surface μ thread μ head	0.13 0.12
	Initial breakaway torque (M12 with starting torque $M_a=80$ Nm and heat treatment at 300°C/572°F, 21 h, bolt material: C 45, 8.8, mat.no. 1.0503)	110 Nm
DIN 51 807 pt.1	Water resistance, static, evaluation	1 @ 90°C
Corrosion protection		
DIN 52 802	SKF-Emcors method Degree of corrosion	0

⁽¹⁾ISO: International Organization for Standardization. DIN: Deutsche Industrie Norm.

About MOLYKOTE® Specialty Lubricants

Since 1948, customers around the world have trusted the MOLYKOTE® brand for performance and expertise to help solve complex, technical design and lubrication challenges. Today, our greases, compounds, pastes, dispersions, oils and fluids, and anti-friction coatings support customers' innovation, performance and sustainability needs. To learn more about our extensive product and service offering, to utilize our interactive product selection tool, or to locate a distributor, visit molykote.com.



Contact us

MOLYKOTE® has Contact Centers around the globe. Find the phone number for the center nearest you at www.dupont.com/molykotecontact.



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