MOLYKOTE® P-37 Paste

Extremely pure, solid lubricant paste for bolted joints; contains no lead, nickel, sulfur, chlorine or fluorine

Features & benefits

- Compatible with high temperatures (1,400°C)
- Excellent load-carrying capacity and seize protection
- Sulfur content of less than 250 ppm, with a total halogen content (including chlorine) of less than 200 ppm
- Low seepage, so it can be used in places wherein cleanliness is required
- Allows screws to be removed easily, even after extended periods of use at high temperatures
- Does not include components that become brittle at high temperatures

Specifications

- Fulfills technical requirements of Siemens TLV 9600 02/01
- Fulfills technical requirements of General Electric TIL 1117-3RI
- Fulfills technical requirements of EDF-PMUC
- Fulfills technical requirements of Pratt & Whitney PWA-36246

Composition

- Mineral oil
- Special solid lubricants

Applications

Suitable for screws, nuts and bolts that are subjected to extremely high temperatures and are made of heat-resistant or extremely heat-resistant steels (e.g., those made from nickel-based alloys). Used successfully for the bolted joints of gas and steam turbines in power stations.

How to use

Clean and degrease the location of use before applying this product. Use a wire brush to remove any sludge or rust on the screws. Carefully apply the paste to fully coat the screws. Do not mix with other lubricants.

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.

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
	Appearance		Gray black
ISO 2137	Unworked penetration	mm/10	280 to 310
ISO 2811	Density at 20°C	g/cm^3	1.21
	Service temperature[2]	°C	-30 to 1,400
	Total halogen content	ppm	200 (max)
	Sulfur content	ppm	250 (max)
DIN 51 350 T.4	Four ball weld load (1,450 rpm 1 minute)	N	5,500
DIN 51 350 T.5	Four ball wear scar (1,450 rpm, 800 N, 1 hour)	mm	1.50
Coefficient of friction in bolted connection, M12 x 1.75, 8.8, blackened:			
	µ thread µ head		0.11/0.11
Breakaway torque, M-12 bolts 21CrMoNiV57 1.7709, nuts and washers 21CrMo5 1.7258, 600°C for 21 hours:			
	Tightening torque	Nm	49.4
	Breakaway torque	Nm	120.9
Breakaway torque, Nimonic NiCr20TiAl bolts, nuts and washers 2.4952, 850°C for 4 weeks:			
	Tightening torque	Nm	49.4
	Breakaway torque	Nm	102.4

[1] ISO: International Standardization Organization DIN: Deutsche Industrie Norm
[2] Temperature resistance of solid lubricant

Usable life and storage

When stored between 0°C and 35°C in the original unopened containers, this product has a usable life of 60 months from the date of production.

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.

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