

# Specialty Lubricants

## MOLYKOTE® HSC plus Solid lubricant paste

**Solid lubricant paste; contains no lead or nickel**

### FEATURES

- Can be used over a wide range of temperature (-30°C/-22°F to 1100°C/2012°F)
- Enables non-destructive dismantling, even after long use at high temperatures
- High load-carrying capacity
- Due to stated coefficient of friction, defined pre-stressing forces for bolted joints can be achieved
- Good corrosion protection
- Good electrical conductivity

### COMPOSITION

- Mineral oil
- Thickening agents
- Solid lubricants
- Metal powder, (lead-free)

### APPLICATIONS

- For metal/metal combinations that are subjected to high temperatures and frictional contacts which, typically for bolted joints, are free from lead or nickel.
- Suitable for lubrication points with low speeds, subjected to high temperatures and corrosive effects, and also require a low and constant coefficient of friction. As a contact lubricant for electrically conducting components.
- Used successfully for stud bolts of gas and steam turbines, stud bolts of turbochargers of diesel engines, flanged connections in chemical and petrochemical plants.

### TYPICAL PROPERTIES

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

Standard*	Test	Unit	Result
	Color		Copper
	<b>Penetration, density, viscosity</b>		
ISO 2137	Unworked penetration	mm/10	250-280
ISO 2811	Density at 20°C (68°F)	g/ml	1.4
	<b>Temperature</b>		
	Service temperature <sup>1</sup>	°C	-30 to 1100
		°F	-22 to 2012
ISO 2176	Drop point	°C	None
		°F	None
	<b>Load-carrying capacity, wear protection, service life</b>		
	Four-ball tester		
DIN 51 350 pt.4	Weld load	N	4800
DIN 51 350 pt.5	Wear scar under 400N load	mm	0.6
DIN 51 350 pt.5	Wear scar under 800N load	mm	1.1
	Almen-Wieland machine		
	OK load	N	20000
	Frictional force	N	1700

## TYPICAL PROPERTIES (continued)

Standard*	Test	Unit	Result
	<b>Coefficient of friction</b>		
	Screw test: Erichsen <sup>2</sup>		
	Screw test - $\mu$ thread		0.14
	Screw test - $\mu$ head		0.09
	Initial break-away torque <sup>3</sup>	Nm	120

1. Temperature limit of solid lubricants
2. Coefficient of friction in bolted connection, M12, 8.8, on blackened surface.
3. M 12, with starting torque  $M_a = 56\text{Nm}$  and heat treatment at  $540^\circ\text{C}/1004^\circ\text{F}$ , 21h, bolt material: 21 Cr MoV 57 mat no. 1.7709.

\* ISO: International Standardisation Organisation.

DIN: Deutsche Industrie Norm.

## HOW TO USE

### How to apply

If possible, clean the thread and used bolts with a wire brush. Spread an adequate amount of the paste on the contact areas in order to obtain a good seal. An excess is not harmful. In order not to alter the properties, the paste must not be mixed with greases or oils. Use spray can in order to apply the product more quickly and cleanly to larger areas or poorly accessible places.

## HANDLING PRECAUTIONS

Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information. The material safety data sheet is available on the Dow Corning website at [www.dowcorning.com](http://www.dowcorning.com). You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

## USABLE LIFE AND STORAGE

When stored at or below  $20^\circ\text{C}$  ( $68^\circ\text{F}$ ) 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 Dow Corning sales office or Dow Corning distributor.

## LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

## HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, [www.dowcorning.com](http://www.dowcorning.com) or consult your local Dow Corning representative.

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