

MOLYKOTE® D-7405 Anti-Friction Coating

Heat-curing dry-film lubricant

Features

- Good dry-lubrication properties
- Low coefficient of friction
- Avoidance of stick-slip
- High wear resistance at low loads
- Low and constant coefficient of friction for fasteners
- Resistant to oils, greases and solvents
- Electrically insulating and therefore suitable for elimination of contact corrosion

Composition

- Solid lubricants
- Organic binder
- Solvent

Applications

For metal/metal and metal/plastic combinations with slow to moderately fast movements and low to moderate loads. Suitable for car door lock components, self-tapping screws, brake clips.

How to use

Surface preparation

Carefully clean and degrease the surface that will be coated with MOLYKOTE® D-7405 Anti-Friction Coating. Recommended pretreatments: phosphating or sandblasting (180 grid); both pretreatments increase the adhesion and service life of the MOLYKOTE® anti-friction coating.

How to apply

Stir MOLYKOTE® D-7405 Anti-Friction Coating thoroughly before applying. MOLYKOTE® Anti-Friction Coating can be applied by brushing and coil/roller coating; for spraying, dipping, centrifuging, the MOLYKOTE® Anti-Friction Coating needs to be thinned at suitable viscosity (like 400/700 mPas). Surfaces should be coated as evenly as possible. Recommended dry-film thickness: 5 to 20 µm.

Coverage

When applied at a 10 µm dry-film thickness MOLYKOTE® D-7405 Anti-Friction Coating has a coverage of approx. 30 m²/kg at a viscosity of 4,000 mPas and of approx. 20 m²/kg at a viscosity

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
	Color (dry film)		Olive-gray
	Color (fluid form)		Light brown
	Service temperature range	°C	-70 to +200
		°F	-94 to +392

Physical properties			
ASTM D1084	Dynamic viscosity at 23°C (73 °F)	mPas	4,000
Method B, ASTM D1475	Density at 23°C (73°F)	kg/l	1.05
ASTM D56	Flash point	°C	50
		°F	122

Load-carrying capacity, wear protection, service life ⁽²⁾			
ASTM D2625	Falex, procedure B, load-carrying capacity	N	m=11,100
ASTM D2714	Falex LFW-1, rotating load=680 N (475 N/mm ²) @ 72 osc/min, v=7.9 m/min, no. of revolutions x1,000 to µ=0.1		s=106 m=80 z=95
ASTM D2714	Falex LFW-1, oscillating load=900N (575 N/mm ²) @ 89.5 osc/min, no. of oscillations x1,000 to µ=0.15-		s=8 m=11 z=6
ASTM D7217	SRV, load-carrying capacity ball/disc, load ramp=1N/min speed=40 mm/s, 50°C (112°F) 40% rel. humidity	MPa	s=1,400 m=1,350 z=1,150

⁽¹⁾ASTM: American Society for Testing and Materials. DIN: Deutsche Industrie Norm.

⁽²⁾Surface pretreatment: s=sandblasted; m=Mn-phosphated; z=Zn-phosphated.

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Typical properties (continued)

Standard ⁽¹⁾	Test	Unit	Result
Friction on fasteners			
	Screw test: Schatz, μ thread		0.08
	Screw test: Schatz, μ head		0.07
Resistances⁽²⁾			
ASTM B117, DIN 50021	Corrosion resistance without red rust (steel substrate, spraying, dry-film thickness 15 μm) ⁽³⁾	h	z=200
ASTM B117, DIN 50021	Corrosion resistance without red rust (steel substrate, dip-spinning, dry-film thickness 15 μm) ⁽³⁾	h	z=100

⁽¹⁾ASTM: American Society for Testing and Materials. DIN: Deutsche Industrie Norm.

⁽²⁾Surface pretreatment: s=sandblasted; m=Mn-phosphated; z=Zn-phosphated.

⁽³⁾As the performance in corrosion protection is affected by the geometry of the parts, by the pretreatment of the surface, by the application method and by the thickness of the applied dry film, DuPont recommends customers to run trials on original parts before setting specifications.

of 400 mPas (these values do not take into account the losses generated during the application process).

Curing

Typical curing conditions at object temperature are 60 minutes at 120°C.

Thinner

Thinning can be carried out using a 5 to 1 mixture of MOLYKOTE® 7415 Thinner and butylacetate; cleaning of application equipment can be carried out with MOLYKOTE® 7415 Thinner.

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

When stored at temperatures between 5°C (41°F) and 23°C (73°F) in the original unopened containers, MOLYKOTE® D-7405 Anti-Friction Coating has a usable life of 36 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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