MOLYKOTE® D-7409 Anti-Friction Coating

Heat-curing dry-film lubricant

Features

- Outstanding lubrication, coupled with corrosion protection properties
- High load-carrying capacity
- High wear resistance
- High-temperature resistance
- Resistant to oil, grease, solvents
- Avoidance of fretting corrosion

Composition

- Solid lubricants
- Organic binder
- Organic solvents

Applications

For metal/metal combinations with slow to moderately fast movements and moderate to high loads. Suitable for highly stressed sliding areas with low sliding speeds, oscillating movements or intermittent operations. For permanent lubrication at high temperatures and also where oils and greases cannot be used. Used successfully for piston rings and tappets of combustion engines, magnetic armatures of vehicle starter motors, bonnet lock components.

How to use

Surface preparation

Carefully clean and degrease the surface which will be coated with the anti-friction Coating. Recommended pre-treatments: phosphating or sandblasting (180 grid); both pre-treatments increase the adhesion and service life of the Anti-Friction Coating.

How to apply

Stir the anti-friction coating thoroughly before and during use, apply by spraying (air pressure 3 to 5 bar [45 to 75 psi]), dipping, centrifuging or brushing. Surfaces should be coated as evenly as possible. Recommended dry-film thickness: 5 to 20 µm.

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		Grayish black
	Service temperature range	°C	-70 to +300
		°F	-94 to +572
Physical properties			
ASTM D1084, Method B	Dynamic viscosity at 23°C (73°F)	mPas	400
ASTM D1475	Density at 23°C (73°F)	g/ml	1.17
ASTM D56	Flash point	°C	35
		°F	95
Load-carrying capacity, wear protection, service life[2]			
ASTM D2625	Falex, procedure B, load-carrying capacity	N N	s=8,700 m=11,100
ASTM D2714	Falex LFW-1, oscillating load=980 N @ 89.5 osc/min, no. of oscillations to µ=0.08		s=158,000 m=228,000 z=153,000
ASTM D7217	SRV, Load-carrying capacity ball/disc, load ramp=10 N/3 min speed=80 mm/s, 50°C (122°F), 40% rel. humidity	MPa	s=1,900 m=2,500 z=2,300
DIN 51834	SRV, Endurance life ball/disc, load 15 N (1,160 MPa) speed=40 mm/s, 50°C, (122°F), 40% rel. humidity	h	m >12 z >12

[1]ASTM: American Society for Testing and Materials. DIN: Deutsche Industrie Norm.
[2]Surface pretreatment: s=sandblasted; m=Mn-phosphated; z=Zn-phosphated.

Continued on next page

Typical properties (continued)

Standard[1]	Test	Unit	Result
Resistance[2]			
ASTM B117, DIN 50021	Corrosion resistance without red rust (steel substrate, spraying, film thickness 15 µm)[3]	h	z=250

[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, MOLYKOTE® recommends customers to run trials on original parts before setting specifications.

Coverage

When applied at a 10 µm dry-film thickness MOLYKOTE® D-7409 Anti-Friction Coating has a coverage of approx. 16 m^2/kg (this value does not take into account the losses generated during the application process).

Thinner

Recommended thinner is MOLYKOTE® 7415 Thinner.

Curing

Typical curing conditions at object temperature are: 30 minutes at 220°C (for optional curing schedules at lower temperatures, contact your local MOLYKOTE® representative).

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-7409 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.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, ℠ or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted.
© 2009-2019 DuPont.

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable and falls within the normal range of properties. It is intended for use by persons having technical skill, at their own discretion and risk. This data should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

Form No. 80-3466B-01 (07/19) AGP16093