MOLYKOTE® D-10-GBL Anti-Friction Coating

Heat-curing dry-film lubricant

Features

- Excellent resistance to oil, grease, gasoline, diesel and solvents
- Long-term wear protection
- Highly viscous and suitable for screen-printing
- High-temperature resistance

Composition

- Solid lubricants
- Organic binder
- Solvent

Applications

For metal/metal combinations involving slow to medium speeds and low to medium loads. Suitable for the permanent lubrication of heavily loaded friction contacts involving low to high speeds, in direct contact with motor oils, gasoline, diesel or grease. Used in automotive applications like pistons of internal gasoline and diesel combustion engines, compressors and piston pumps, pneumatic and hydraulic systems; and other applications that require help to reduce piston and cylinder wall wear during break-in, cold-start and ongoing operation situations.

How to use

Surface preparation

First, clean and degrease thoroughly the surface that will be coated with MOLYKOTE® D-10-GBL Anti-Friction Coating. Phosphating or sandblasting (180 grid) increases the adhesion and service life.

How to apply

Stir MOLYKOTE® D-10-GBL Anti-Friction Coating thoroughly before applying by screen-printing. Recommended dry-film thickness: 15 to 20 µm.

It can also be applied by other processes like spraying or brushing; in this case, depending on the application, it should be diluted to the suitable application 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		Gray-black
	Service temperature range (cured dry film)	°C °F	-40 to 340 -40 to 644
Physical properties			
ASTM D1084 Method B	Dynamic viscosity at 23°C (73°F)	mPas	35,000
ASTM D1475	Density at 23°C (73°F)	g/ml	1.30
ASTM D56	Flash point	°C °F	77 171
Load-carrying capacity, wear protection, service life[2]			
ASTM D2625	Falex, procedure B, load-carrying capacity	N	$p_{(1)}$=5,500
DIN 51834	SRV, endurance life cylinder/disc, load 50 N (150 MPa) speed=120 mm/s, 50°C, (122°F), 40% RH, 3 drops engine oil	h µ[3]	s >12 0.12

[1]ASTM: American Society for Testing and Materials. DIN: Deutsche Industrie Norm.
[2]$p_{(1)}$= Mn-phosphated, s=sand blasted,
[3]µ = coefficient of friction.

Curing

Typical curing schedule at object temperature is 20 minutes at 200°C (392°F). A flash-off of the solvent for 10 minutes at 80°C (176°F) prior to high-temperature curing is recommended. Actual curing times vary with substrate material, size, mass, coating thickness and type of curing oven; to ensure proper cure and adhesion of MOLYKOTE® D-10-GBL Anti-Friction Coating, specific tests should be performed before fixing application process specifications.

Thinner
Thinning (viscosity adjustment) can be carried out by using the solvent GBL (gamma-butyrolactone – CAS # 96-48-0).

Coverage
When applied at 20 µm dry-film thickness, MOLYKOTE® D-10-GBL Anti-Friction Coating has a coverage of approx. 15 m^2/kg (this value does not take into account the losses generated during the application process).

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 or below 23°C (73°F) in the original unopened containers, MOLYKOTE® D-10-GBL Anti-Friction Coating has a usable life of 12 months from the date of production. Store containers in a cool and dark place (avoid direct sunlight exposure).

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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