

MOLYKOTE® D-6900

Anti-Friction Coating

Heat-curing dry-film lubricant for metal gaskets

Features

- Excellent lubrication
- Good acid resistance
- Good solvent resistance
- High load-carrying capacity
- Excellent adhesion to metal
- Low coefficient of friction
- High resistance to motor oil and coolant
- Excellent heat resistance
- Suitable for coil coating
- NEP/NMP-free

Composition

- Solid lubricants
- Organic binders
- Organic solvents

Applications

- Metal gaskets with high-temperature-resistance property (e.g., exhaust manifold gaskets). Coating offers microsealing property (fulfilling EURO 6 emission specifications up to 600°C) and prevents welding of metal/metal combinations at high temperatures. (*NOTE: Temperatures above 600°C have not yet been tested.*)
- Sliding contact of metal/metal combinations with slow to moderately fast movements and high loads.

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		Dark gray
	Service temperature range (cured film)	°C	-60/+400°C ⁽²⁾ -60/+700°C ⁽³⁾

Physical properties

ASTM D1084 Method B	Dynamic viscosity at 23°C (73°F)	mPas	600-1,300
ASTM D1475	Density at 23°C (73°F)	g/ml	1.4
ASTM D56	Flash point	°C °F	8 46

Load-carrying capacity, wear protection, service life⁽⁴⁾

ASTM D2714	LFW-1, rotating, load 2,860 N, n = 72 rpm, v = 7.9 m/min., no. of revolutions to $\mu = 0.1$		Mn > 48,000
ASTM D2714	LFW-1, oscillating, load 998 N, frequency = 89.5 osc./min., no. of oscillations to $\mu = 0.08$		Mn > 50,000
DIN 51834	SRV, endurance life, steel ball (10 mm)/disc, load 15 N (728 N/mm ²), speed 0.08 m/s, 50°C (122°F), 40% relative humidity, dry conditions	h COF (μ)	Mn > 3 Mn = 0.36
DIN 51834	SRV, load-carrying capacity, ball (10 mm)/disc, load 15 N for 10 min then increase to 200 N with 1 N/min, speed 0.08 m/s, 50°C (122°F), 40% relative humidity, dry conditions	MPa	Mn = 1,200

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

⁽²⁾Temperature resistance in direct contact with oxygen (air).

⁽³⁾Temperature resistance in the absence of oxygen. Temperatures above 600°C were only tested in laboratory (EURO 6 compliance of EMGs can only be guaranteed up to 600°C).

⁽⁴⁾Mn = Mn-phosphated (surface pretreatment).

Typical properties (continued)

Standard ⁽¹⁾	Test	Unit	Result
Resistance⁽⁵⁾			
	Water + coolant G13 (50:50) resistance, 48 h at 100°C		No adhesion loss
	Motor oil (SAE 10W40) resistance, 150 h at 150°C		No adhesion loss
	Acid resistance (pH 2.5)		No adhesion loss

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

⁽⁵⁾Substrate: stainless steel; pretreatment: degreasing.

How to use

Surface preparation

First, thoroughly clean and degrease the surface that will be coated with MOLYKOTE® D-6900 Anti-Friction Coating. Phosphating or sandblasting (100/180 grit – 80/130 µm) increases the adhesion and service life.

How to apply

Stir MOLYKOTE® D-6900 Anti-Friction Coating thoroughly before applying by coil coating or screen printing. Recommended dry film thickness: 10 to 20 µm (mean value).

Curing

Recommended curing conditions: 30 minutes at 200°C (392°F). However, curing time depends substrate material, size, mass, coating thickness and type of curing system.

Dilution

Viscosity of MOLYKOTE® D-6900 Anti-Friction Coating can be decreased with MOLYKOTE® L-13 Thinner.

Coverage

1 Kg of MOLYKOTE® D-6900 Anti-Friction Coating can cover up to 17 m². This calculation is based on a 15 µm thick MOLYKOTE® D-6900 Anti-Friction Coating dry film and does not take into account the losses generated during the application process.

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Usable life and storage

When stored at or below 23°C (73°F) in the original unopened containers, MOLYKOTE® D-6900 Anti-Friction Coating has a usable life of 12 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.