

# Molykote® D-7405 Anti-Friction Coating

## 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

Heat-curing dry film lubricant

## 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.

## TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test*	Property	Unit	Result
	Color (dry film)		olive-gray
	Color (fluid form)		light brown
	Service temperature range	°C	-70 to +200
		°F	-94 to +392
	<b>Physical properties</b>		
ASTM-D 1084 Method B	Dynamic viscosity at 23 °C (73 °F)	mPas	4000
ASTM-D 1475	Density at 23 °C (73 °C)	kg/l	1.05
ASTM-D 56	Flash point	°C	50
		°F	122
	<b>Load-carrying capacity, wear protection, service life<sup>1</sup></b>		
ASTM-D 2625	Falex, procedure B, loadcarrying capacity	N	p <sub>(1)</sub> =11100
ASTM-D 2714	Falex LFW-1, rotating load=680 N (475 N/mm <sup>2</sup> ) n=72 min <sup>-1</sup> , v=7.9 m/minutes no. of revolutions x1000 to μ=0.1		p <sub>(1)</sub> =80 p <sub>(2)</sub> =95 s=106
ASTM-D 2714	Falex LFW-1, oscillating F=900N (575 N/mm <sup>2</sup> ) frequency=89.5osc./minutes no. of oscillations x1000 to μ=0.15–		p <sub>(1)</sub> =11 P <sub>(2)</sub> =6 s=8
ASTM-D 7217	SRV, load carrying capacity ball/disc, load ramp=1N/min speed=40 mm/s, 50 °C (112°F) 40% rel.humidity	MPa	p <sub>(1)</sub> =1350 p <sub>(2)</sub> =1150 s=1400
	<b>Friction on fasteners</b>		
	Screw test: Schatz, μ thread		0.08
	Screw test: Schatz, μ head		0.07
	<b>Resistances</b>		
ASTM-B 117 DIN 50021	Corrosion resistance without red rust (steel substrate, spraying, dry film thickness 15 μm) <sup>2</sup>	h	p <sub>(2)</sub> =200
ASTM-B 117 DIN 50021	Corrosion resistance without red rust (steel substrate, dip-spinning, dry film thickness 15 μm) <sup>2</sup>	h	p <sub>(2)</sub> =100

\*ASTM: American Society for Testing and Materials.

DIN: Deutsche Industrie Norm

<sup>1</sup>Surface pretreatment: p<sub>(1)</sub>=Mn-phosphated, p<sub>(2)</sub>=Zn-phosphated, s=sandblasted

<sup>2</sup>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 Dow Corning recommends customers to run trials on original parts before setting specifications

## HOW TO USE

### Surface preparation

Carefully clean and degrease the surface which will be coated with the *Molykote*<sup>®</sup> D-7405 Anti-Friction Coating. Recommended pre-treatments: phosphating or sandblasting (180 grid); both pre-treatments increase the adhesion and service life of the *Molykote* Anti-Friction Coating.

### How to apply

Stir *Molykote*<sup>®</sup> 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 m<sup>2</sup>/kg at a viscosity of 4000 mPas and of approx. 20 m<sup>2</sup>/kg at a viscosity 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*<sup>®</sup> 7415 Thinner and butylacetate; cleaning of application equipments can be carried out with *Molykote* 7415 Thinner.

## HANDLING

### PRECAUTIONS

HANDLING PRECAUTIONS  
PRODUCT SAFETY  
INFORMATION REQUIRED  
FOR SAFE USE IS NOT  
INCLUDED IN THIS

DOCUMENT. BEFORE  
HANDLING, READ PRODUCT  
AND MATERIAL SAFETY  
DATA SHEETS AND  
CONTAINER LABELS FOR  
SAFE USE, PHYSICAL AND  
HEALTH HAZARD  
INFORMATION. THE  
MATERIAL SAFETY DATA  
SHEET IS AVAILABLE ON THE  
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FROM YOUR DOW CORNING  
SALES APPLICATION  
ENGINEER, OR DISTRIBUTOR,  
OR BY CALLING  
DOW CORNING CUSTOMER  
SERVICE.

### 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 INFORMATION

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, [dowcorning.com](http://dowcorning.com) or

consult your local Dow Corning representative.

### LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

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