

# *Molykote*<sup>®</sup> D-321 R Anti-Friction Coating

## **FEATURES & BENEFITS**

- Air drying
- Avoidance of stick-slip
- High aging resistance

## **COMPOSITION**

- Solid lubricants
- Solvents
- Binder

Air-curing dry film lubricant

## **APPLICATIONS**

- For metal/metal combinations with slow to medium fast movements and high loads.
- Suitable for the permanent lubrication of highly stressed sliding guides with low sliding speeds, oscillating movements or intermittent operation.
- Improving the running-in process and for lubrication under high vacuum and at extreme temperatures.
- Used successfully for cylinder-head bolts, toaster guides, car mirror adjustment mechanisms, high voltage switches, for the running-in of highly stressed gear wheel.
- Emergency lubricant for parts of the rotor head of wind energy installations and for groove-free cold extrusion of steel.

## **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		Grey-black
<b>Physical Properties</b>			
DIN 53211/3	Viscosity at 25°C (DIN3 cup)	seconds	23
DIN 53217/2	Density at 20°C	g/ml	1.07
CTM 0242 I	Nonvolatile content	%	29
<b>Temperature</b>			
	Service temperature range	°C	-180 to +450
<b>Load-carrying capacity, wear protection, service life</b>			
ASTM D 2625	Falex load-carrying capacity <sup>1</sup>	N	b=4500 p=12500 s=6800
ASTM D 2714	LFW-I, rotating <sup>1</sup> F=2860N, n=72 minutes <sup>1</sup> , v=7.9 m/minute no. of revolutions x1000 to μ=0.1		b=212 p=146 s=306

\*DIN: Deutsche Industrie Norm.

CTM: Corporate Test Method, copies of CTMs are available on request.

ASTM: American Society for Testing and Materials.

<sup>1</sup>Surface pretreatment: b = blank, p = phosphated, s = sand blasted

## HOW TO USE

### Surface preparation

First clean and degrease the surface which will be coated with *Molykote*<sup>®</sup> D-321 R Anti-Friction Coating. Phosphatization or sandblasting (180 grit) increases the adhesion and service life.

### How to apply

Stir *Molykote* D-321 R Anti-Friction Coating thoroughly before applying by spraying or brushing.

Recommended dry film thickness: 5 to 20  $\mu\text{m}$ .

### Drying Time

After 5 minutes at 23°C the applied film of *Molykote* D-321 R Anti-Friction Coating is touch-dry; this process time can be reduced to 1 minute exposing the coated part to hot air at 80°C.

### Curing time

After a curing time period of 2 hours at 23°C the dry film of *Molykote* D-321 R Anti-Friction Coating can perform the best lubrication properties.

### Solubility

Thinning can be carried out using *Molykote*<sup>®</sup> L 13 Thinner.

## HANDLING

### PRECAUTIONS

**PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOW CORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.**

## TYPICAL PROPERTIES (Continued)

Test	Property	Unit	Result
ASTM D 2714	LFW-1 oscillating <sup>1</sup>		b=178
	F=900N, frequency = 89.5 osc./minutes		p=400
	no. of oscillations to $\mu=0.08$		s=362
<b>Coefficient of friction</b>			
	Press-Fit test, $\mu =$		0.075

## USABLE LIFE AND STORAGE

When stored at or below 20°C in the original unopened containers, *Molykote* D-321 R Anti-Friction Coating has a usable life of 24 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.

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