DOW CORNING

Automotive and Transportation
Solutions

UV-Curable Anti-Friction Coating for Rubber and Plastic

MOLYKOTE™ D-9100 Anti-Friction Coating

Heat-curable lubricating coating cannot be used on rubber and plastics because of their weak heat and chemical solvent resistance.

MOLYKOTE D-9100 Anti-Friction Coating cures quickly with ultraviolet (UV) light to provide a durable lubricating film on many types of rubber and plastic. The flexible, smooth coating adheres strongly to elastic materials and meets requirements for long-lasting, effective lubrication.

MOLYKOTE™

Effective lubrication to reduce friction and control noise, stick-slip and wear

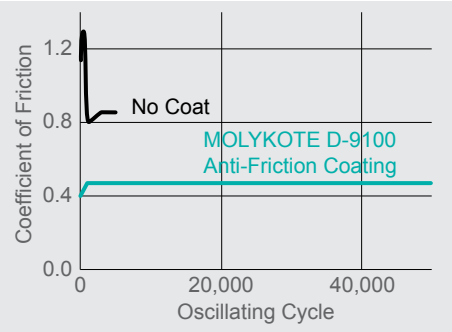
- Flexible lubricant coating withstands parts elongation
- High productivity and processing speed with UV curing
- Dry lubricant film formed without heat damage or long drying times
- Effective for many types of rubber and thermoplastics
- Excellent adhesion can extend lubricant coating service life

Lubricity

Rubber materials have a high coefficient of friction that makes it difficult to have consistent lubrication. MOLYKOTE D-9100 Anti-Friction Coating can reduce coefficient of friction and suitably lubricate dynamic rubber seals and sliding plastic parts. With fast UV curing, it also can improve productivity in assembly processes.

MOLYKOTE D-9100 Anti-Friction Coating can extend the life of sliding parts and highly stressed parts that have a high wear problem.

Lubricity (EPDM)



Please contact us for more information about the coating process.

Adhesion

Good adhesion provides good lubrication properties for rubber and plastics parts for prolonged periods of time. MOLYKOTE D-9100 Anti-Friction Coating has strong adhesion to many types of rubber and plastic and flexibility to follow mechanical movement.

After 200% elongation test of EPDM rubber

MOLYKOTE D-9100 Anti-Friction Coating

Conventional rubber coating (film is broken)

UV Curable

With a water-based carrier and UV curing system, MOLYKOTE D-9100 Anti-Friction Coating can be applied to many types of rubber and plastic without potential damage from heat or chemical solvents. In addition, the UV cure system reduces cycle time and energy cost compared to the heat cure system.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning Sales Application Engineer or Dow Corning Customer Service before writing specifications on this product.

	Standard	Test				Unit	Result		
As liquid		Appearance					Milky liquid		
	JIS K 5601-1-2	Solid content 105°C, 3 hours				%	35		
	JIS K 5600-2-2	Viscosity Iwata Cup NK-2				S	13		
		Cure condition							
		Dry time, 23°C				min	1		
		Cure time[1]				sec	30		
		Integrated quantity of light				mj/cm^2	2,000		
Cured coating		Appearance					White semitransparent		
	JIS K 5600-5-4	Scratch hardness (pencil test)[2]					6B		
		Adhesion test (cross cut)[2]							
	JIS K 5600-5-6	ABS	PC	PA46	PA66	TPO	NBR	EPDM	NR
		100%	100%	>75%	>75%	100%	100%	100%	100%
		Oil resistance[3] 80°C, 72 hours		Engine oil (0-20 W)			No change		
				Brake oil			Not acceptable		

[1] Typical case – please refer to integrated quantity of light at existing process.
[2] Degrease substrates with Isopropanol then coat and cure MOLYKOTE Anti-Friction D-9100 Coating.
[3] Coated on NBR.

Learn More

For more information on MOLYKOTE D-9100 Anti-Friction Coating, contact your Dow Corning Technical Representative, visit **dowcorning.com** or send an email to **automotive@dowcorning.com**.

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