



Automotive and Transportation  
Solutions



# **SMART LUBRICATION™ SOLUTIONS FOR VEHICLE CHASSIS & BRAKE SYSTEMS**

*Smart science drives handling performance innovation*



## DESIGN FOR OPTIMIZED HANDLING PERFORMANCE

Meet your critical lubrication requirements for advanced chassis and brake systems design with *Molykote*® brand specialty lubricants from Dow Corning, a wholly owned subsidiary of The Dow Chemical Company. With our in-depth expertise, a heritage of innovation, problem-solving collaboration, and reliable global supply and technical support, these high-performance *Smart Lubrication*™ solutions are precisely formulated and application-matched to help you achieve:

- **Energy efficiency** with reduced friction losses and increased wear control
- **Comfort and design** with enhanced smoothness and reduced noise and vibration
- **Safety** with added component reliability, less wear and more corrosion resistance
- **Sustainability** with increased process efficiency and durable component service life

Design for optimized handling performance with a choice of *Molykote* brand *Smart Lubrication* solutions:

- **Greases** with special additives to resist water washout, evaporation or oxidation
- **Silicone compounds** for light-load lubricating and sealing in extreme temperatures
- **Anti-seize pastes** with high levels of lubricating solids for heavy loads and slow speeds
- **Anti-friction coatings** for clean dry-film lubrication to control friction, wear and noise
- **Solids and powders** for plastics lubrication and specialized friction-control additives
- **Oils and dispersions** with performance additives in synthetic or mineral blends

## INNOVATE WITH SMART SCIENCE

Proven, effective *Molykote* brand *Smart Lubrication* solutions can help you meet chassis and brake system design goals for handling performance innovation:

### *Improve braking performance; reduce noise and vibration*

- Pedal systems, parking brakes
- Boosters, actuators
- Caliper pins and springs
- Pad clips, shims, springs
- Drum brake components
- Pad and lining friction additives

### *Maintain steering response, precision and smoothness*

- Steering column bearings
- Tilt-wheel adjusters
- Electric power steering
- Gears, linkage, tie rods

### *Reduce suspension wear and NVH*

- Ball joints, axial joints, bushings
- Strut bearings

### *Provide lifetime lubrication for difficult-to-access components*

- Parking brake cables, gears
- Assembly fasteners



**MOLYKOTE**®  
FROM DOW CORNING



## SMART LUBRICATION™ SELECTION GUIDE: CHASSIS & BRAKE APPLICATIONS

APPLICATION	DESIGN NEED	POTENTIAL SOLUTION(S)	PRODUCT HIGHLIGHTS
Booster/Actuator	Reduced friction and wear	<i>Molykote</i> ® PG-54 Grease	Silicone-oil-based grease with excellent elastomer compatibility
		<i>Molykote</i> ® 111 Compound	Silicone-oil-based compound with wide service-temperature range
Brake Clips, Springs	Controlled friction and wear in extreme temperatures	<i>Molykote</i> ® D-708 Anti-Friction Coating	Heat-cured, PTFE-based AFC for controlled friction with minimal wear
		<i>Molykote</i> ® D-7405 Anti-Friction Coating	Heat-cured AFC with low coefficient of friction and good corrosion protection
Brake Pad Shims	Reduced friction and wear	<i>Molykote</i> ® M-77 Solid Lubricant Paste	Silicone oil with thickener system and MoS <sub>2</sub> solids
Caliper Pins	Reduced fretting corrosion, NVH and abnormal pad/rotor wear	<i>Molykote</i> ® G-3407 Caliper Pin Grease	Synthetic PAG-based grease for reducing fretting resistance in metal-metal pairings
		<i>Molykote</i> ® G-807 Low Friction Silicone Compound	PTFE-modified compound for rubber-to-metal and plastic-to-metal lubrication
Drum Brake Components	Reduced friction, wear and brake drag	<i>Molykote</i> ® 44M Grease	Silicone-oil-based grease with good water resistance
		<i>Molykote</i> ® G-n Metal Assembly Paste	Synthetic MoS <sub>2</sub> -based lubricant with very low sliding friction for component run-in
Electric Parking Brake	Lifetime lubrication with improved performance	<i>Molykote</i> ® E Paste	Synthetic paste with several types of special solid lubricants
		<i>Molykote</i> ® AG-633 Grease	Synthetic grease for plastic parts lubrication
		<i>Molykote</i> ® D-708 Anti-Friction Coating	Heat-cured, PTFE-based AFC with excellent corrosion protection
Brake Pads, Linings	Reduced wear, fading and vibration	<i>Molykote</i> ® Lubolid Additive Powders	Inorganic-based additives for more precise friction control in pads and linings
Pedal Systems	Reduced friction with improved smoothness	<i>Molykote</i> ® 106 Anti-Friction Coating	Heat-cured, dry-film AFC for clean, lifetime lubrication unaffected by dust and dirt
		<i>Molykote</i> ® D-7409 Anti-Friction Coating	Heat-cured, MoS <sub>2</sub> -based AFC with outstanding lubrication
Steering System	Reduced friction, wear and noise	<i>Molykote</i> ® EM-30L Grease	Synthetic grease for lubricating plastic components
		<i>Molykote</i> ® D-7409 Anti-Friction Coating	Heat-cured, MoS <sub>2</sub> -based AFC with outstanding lubrication
Suspension, Axle Ball Joints	Reduced friction and wear in severe-duty service	<i>Molykote</i> ® G-4700 Extreme Pressure Synthetic Grease	NLGI GC-LB-certified extreme-pressure grease for heavy loads and vibrations
		<i>Molykote</i> ® Longterm 2/78G High Performance Grease	Mineral-oil-based grease with high load-bearing capability
Suspension Strut Bearings	Reduced friction and wear	<i>Molykote</i> ® Longterm 2 Plus Bearing Grease	Mineral-oil-based grease with solid lubricants and extreme-pressure additives
Assembly Fasteners, Bolts	Improved assembly with proper tightening torque	<i>Molykote</i> ® D-7405 Anti-Friction Coating	Heat-cured AFC with low coefficient of friction and good corrosion protection
		<i>Molykote</i> ® D-321 R Anti-Friction Coating	Air-drying bonded lubricant with excellent heat-aging resistance under heavy loads

**NOTE:** These are proven, effective *Molykote*® brand *Smart Lubrication*™ solutions for vehicle chassis and brake systems design. Contact your Dow Corning representative for product options to meet specialized requirements.



## SUSTAINABLE DESIGN SOLUTIONS

Enhance your design sustainability with *Molykote* brand *Smart Lubrication* solutions from Dow Corning. To meet key chassis and brake design needs, these advanced specialty lubrication technologies can be custom-formulated for specified performance characteristics, regulatory standards and process requirements. Raw materials include base oils such as silicone, mineral or polyalphaolefin (PAO); solid lubricants such as molybdenum disulfide (MoS<sub>2</sub>) and polytetrafluoroethylene (PTFE); thickeners such as lithium; and various performance additives to inhibit rust, resist wear or withstand extreme pressure.

- *Molykote*® brand greases and anti-seize pastes reduce wear and NVH while resisting corrosion and water wash-out in safety-critical lubrication of steering, suspension and braking components.
- *Molykote*® brand anti-friction coatings optimize friction and wear control, reduce brake system noise, and remain effective in the presence of dust and dirt.
- *Molykote*® brand Lubolid additives help achieve precise friction properties for antimony-free and lead-free brake pads and linings to meet End of Life Vehicles Directive (ELV) requirements.

## SMART LUBRICATION SOLUTIONS FOR OTHER VEHICLE SYSTEMS

In addition to the *Molykote* brand *Smart Lubrication* solutions for chassis and brake design featured in this selection guide, Dow Corning also offers proven, effective lubricants for these vehicle systems:

- Interior
- Exterior
- Powertrain

## LEARN MORE: CONTACT US

To learn more about *Molykote* brand specialty lubricants and proven, effective *Smart Lubrication* solutions to drive handling performance innovation in vehicle chassis and brake systems design, contact your Dow Corning Technical Representative, visit [dowcorning.com/auto](http://dowcorning.com/auto) or send an email via [dowcorning.com/ContactUs](mailto:dowcorning.com/ContactUs).

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### HANDLING PRECAUTIONS

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