

MOLYKOTE®

DUPONT™

Smart Lubrication™

for vehicle chassis & brake systems



Design for optimized handling performance

Meet your critical lubrication requirements for advanced chassis and brake systems design with MOLYKOTE® brand specialty lubricants from DuPont. 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





Smart Lubrication™ selection guide: Chassis & brake applications

APPLICATION	DESIGN NEED	POTENTIAL SOLUTION(S)	PRODUCT HIGHLIGHTS
Booster/actuator	Reduced friction and wear	MOLYKOTE® PG-54 Grease	Silicone-oil-based grease with excellent elastomer compatibility
		MOLYKOTE® 111 Compound	Silicone-oil-based compound with wide service-temperature range
Brake clips, springs	Controlled friction and wear in extreme temperatures	MOLYKOTE® D-708 Anti-Friction Coating	Heat-cured, PTFE-based AFC for controlled friction with minimal wear
		MOLYKOTE® D-7405 Anti-Friction Coating	Heat-cured AFC with low coefficient of friction and good corrosion protection
Brake pad shims	Reduced friction and wear	MOLYKOTE® M-77 Solid Lubricant Paste	Silicone oil with thickener system and MoS ₂ solids
Caliper pins	Reduced fretting corrosion, NVH and abnormal pad/rotor wear	MOLYKOTE® G-3407 Caliper Pin Grease	Synthetic PAG-based grease for reducing fretting resistance in metal-metal pairings
		MOLYKOTE® 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	MOLYKOTE® 44M Grease	Silicone-oil-based grease with good water resistance
		MOLYKOTE® G-n Metal Assembly Paste	Synthetic MoS ₂ -based lubricant with very low sliding friction for component run-in
Electric parking brake	Lifetime lubrication with improved performance	MOLYKOTE® E Paste	Synthetic paste with several types of special solid lubricants
		MOLYKOTE® AG-633 Grease	Synthetic grease for plastic parts lubrication
		MOLYKOTE® D-708 Anti-Friction Coating	Heat-cured, PTFE-based AFC with excellent corrosion protection
Brake pads, linings	Reduced wear, fading and vibration	MOLYKOTE® Lubolid Additive Powders	Inorganic-based additives for more precise friction control in pads and linings
Pedal systems	Reduced friction with improved smoothness	MOLYKOTE® 106 Anti-Friction Coating	Heat-cured, dry-film AFC for clean, lifetime lubrication unaffected by dust and dirt
		MOLYKOTE® D-7409 Anti-Friction Coating	Heat-cured, MoS ₂ -based AFC with outstanding lubrication
Steering system	Reduced friction, wear and noise	MOLYKOTE® EM-30L Grease	Synthetic grease for lubricating plastic components
		MOLYKOTE® D-7409 Anti-Friction Coating	Heat-cured, MoS ₂ -based AFC with outstanding lubrication
Suspension, axle ball joints	Reduced friction and wear in severe-duty service	MOLYKOTE® G-4700 Extreme Pressure Synthetic Grease	NLGI GC-LB-certified extreme-pressure grease for heavy loads and vibrations
		MOLYKOTE® Longterm 2/78G High Performance Grease	Mineral-oil-based grease with high load-bearing capability
Suspension strut bearings	Reduced friction and wear	MOLYKOTE® 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	MOLYKOTE® D-7405 Anti-Friction Coating	Heat-cured AFC with low coefficient of friction and good corrosion protection
		MOLYKOTE® 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 MOLYKOTE® representative for product options to meet specialized requirements.



Sustainable design solutions

Enhance your design sustainability with MOLYKOTE® brand *Smart Lubrication*™ solutions from DuPont. 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 (MoS₂) 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, DuPont also offers proven, effective lubricants for these vehicle systems:

- Electrical
- Interior
- Exterior
- Powertrain



DuPont™, the DuPont Oval Logo, and all products, unless otherwise noted, denoted with ™, SM or ® are trademarks, service marks or registered trademarks of affiliates of DuPont de Nemours, Inc.
© 2019 DuPont de Nemours, Inc. All rights reserved.

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable and falls within the normal range of properties. It is intended for use by persons having technical skill, at their own discretion and risk. This data should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

MOLYKOTE®

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 MOLYKOTE® Technical Representative or visit molykote.com.