

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

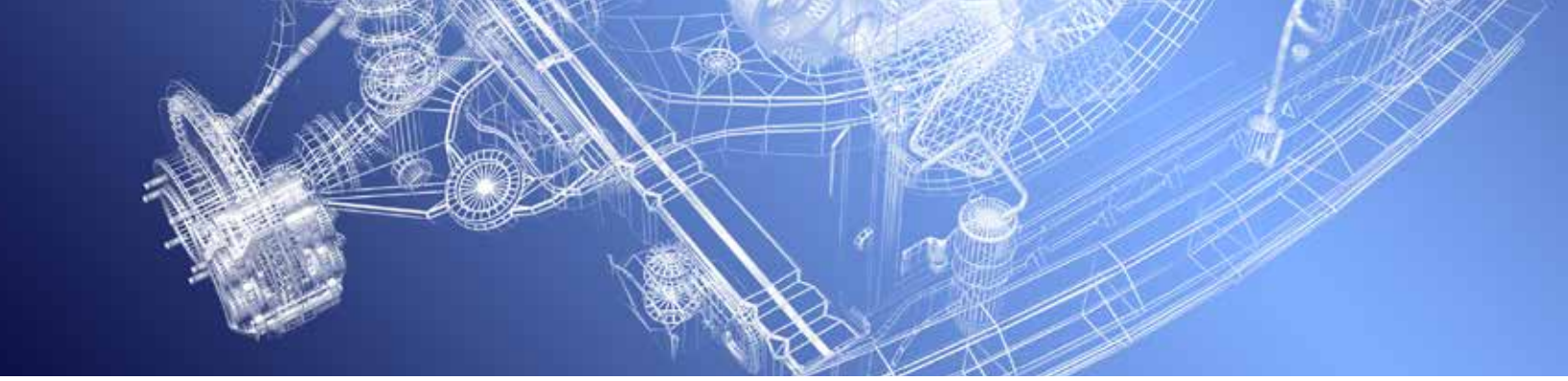




Smart Lubrication™ selection guide: Chassis & brake applications

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



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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.