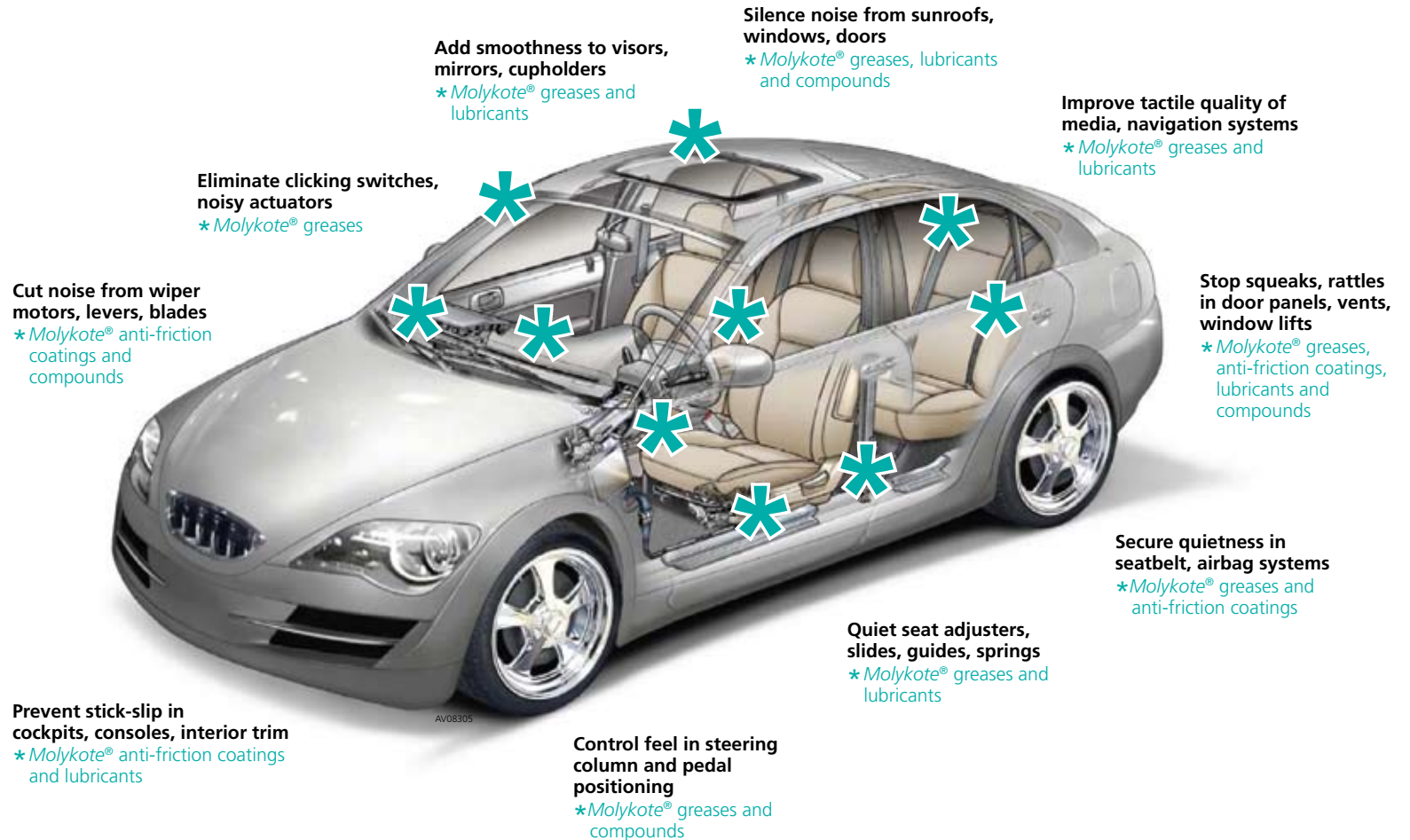


Molykote® brand NVH Control Products

Sound Solutions from Dow Corning



MOLYKOTE
FROM DOW CORNING

DOW CORNING

Molykote NVH Control Products: Sound Solutions Toolkit

Finding and fixing the causes of noise, vibration and harshness issues is crucial, from design through production to service. *Molykote* NVH Control products help get the job done right. And *Dow Corning*® brand silicone adhesive/sealant can help you quickly bond or seal different job materials.

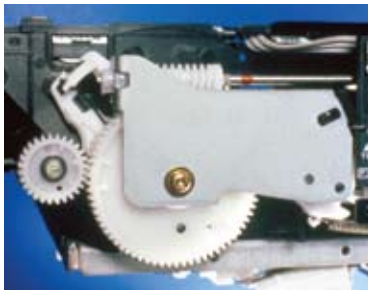
Samples of *Molykote* NVH Control products, especially suited for vehicle-interior uses, are available in a special limited-edition sound solutions toolkit. The kit contains samples of six NVH-damping lubricants, as well as a sample of *Dow Corning*® 7091 Adhesive/Sealant. Key details about each are highlighted in the sample selection chart.

Molykote is Smart Lubrication™

Where ordinary lubricants fail to last and tapes and foams pile up costs, *Molykote* specialty lubricants are solving NVH issues for quiet quality and added value in today's vehicle interiors. Choose from greases, pastes, compounds, fluid-film and dry-film anti-friction coatings. *Molykote* NVH Control products can help you:

- Add a velvety feel and quiet and smooth operation to function switches;
- Enhance tactile quality and acoustics of comfort and convenience components;
- Reduce squeaks, rattles, buzzes and vibrations from actuator-driven systems;
- Prevent annoying stick-slip noise from interior panels and materials; and
- Control free motion to enhance perceived quality in operator-adjustable systems.

Quality is quiet. *Molykote Smart Lubrication* delivers sound solutions for customer satisfaction.



AV04061



AV04117



AV08983



AV07386

A Selection of *Molykote* NVH Control Products

NVH Control Sound Solutions	Damping Lubricant Type and Form	High-Performance Properties	Typical NVH Applications	Lubricant Use Recommendations
<i>Molykote</i> ® EM-30L Grease	Light-consistency, white synthetic hydrocarbon oil/lithium soap grease with PTFE and other solid lubricants	Service temperature range from -45° to 150°C (-49° to 302°F); cost-effective for most material combinations involving slow/medium-fast motion, medium-to-heavy loads; minimal evaporation	Eliminate noise from electromechanical devices: <ul style="list-style-type: none"> • Mirror actuators • Interior switches • Door locks, actuators • Sunroof guides • Cupholder slides • Audio, media controls 	Clean points of application and apply with brush, grease gun or automated dispensing equipment. Test compatibility and performance on materials prior to using.
<i>Molykote</i> ® EM-50L Grease	Thin, translucent polyolefin oil/lithium soap grease formulated without solid lubricants, especially for noise damping	Service temperature range from -40° to 150°C (-40° to 302°F); compatible with most plastics; non-soiling with low seepage; enhanced surface adhesion to most substrates	Enhance feel, reduce noise & vibration, and smooth component operation: <ul style="list-style-type: none"> • Airbag modules • Actuator plastic gears • Wiper deflectors • Seat tracks, springs • Interior switches • Navigation systems 	Clean points of application and apply or fill with brush, spatula or automated dispensing equipment.
<i>Molykote</i> ® HP-300 Grease	Thick, white grease blended with perfluoropolyether (PFPE) and fluorinated polymer (PTFE) thickeners in a low-oxidation base oil	Long-lasting stability under harsh conditions; very wide service temperature range from -65° to 250°C (-85° to 482°F); superior resistance to chemicals and solvents; good compatibility with most rubber and plastics	Add long-term lubrication to eliminate squeaks and rattles in severe-duty service: <ul style="list-style-type: none"> • Cupholder slides • Airbag actuators, cable • Audio & navigation • Steering column boots • Window-lift regulators • Steer-by-wire actuator 	Clean contact surfaces and apply grease using a brush, grease gun or automated lubricating system. Do not mix with other greases.
<i>Molykote</i> ® D-96 Anti-Friction Coating	Water-based dispersion of PTFE solid lubricants with an organic binder; dries to a transparent lubricating film in 10-15 minutes at room temperature; full cure within two hours	Solid-film coating has service temperature range of -40° to 80°C (-40° to 176°F); reduces difference between static and sliding friction to reduce or eliminate stick-slip noise in material combinations: plastic/plastic, plastic/metal, plastic/leather, leather/leather	Control stick-slip and noise from materials with slow movement or vibration at low loads: <ul style="list-style-type: none"> • Arm rests, glove boxes • Door trims, hinge pins • Dashboards, consoles • Instrument panels • Clips & fasteners • Wiper blades 	Clean and degrease surfaces to be coated. Stir the coating before applying by spraying, dipping or brushing. Dilute with distilled water or tap water to adjust coating viscosity and film thickness.
<i>Molykote</i> ® PD-910 Lubricant	Translucent-white, liquid blend of solid lubricants and perfluorinated oil uniformly dispersed in non-flammable fluorinated solvent; forms a very thin, non-tacky film	Thin grease-like lubricating film reduces friction and adds excellent lubricity to rubber and plastic parts; effective from -65° to 150°C (-85° to 302°F); environmentally friendly; wide coverage with small volume	Eliminate noise and smooth operation to add high-quality feel: <ul style="list-style-type: none"> • Sun visors & mirrors • Door & window seals • Sunroof seals • Dashboard, IP cluster • Multimedia systems • Headrest sliders 	Clean points of contact and apply by dipping parts or use a brush or sponge to apply the lubricant.
111 Silicone Compound ¹	Stiff, white to light gray, translucent compound of silicone oil with an inorganic thickener and additives	Wide service temperature range from -40° to 200°C (-40° to 392°F); resists most chemicals; low volatility and vapor pressure; excellent water resistance and electrical insulating properties	Dampen noise and vibration from rubber and plastic seals and free motion materials: <ul style="list-style-type: none"> • HVAC controls, vents • Sunroof slides, guides • Parking brake cables • Body wiring harnesses • Pedal position systems • Wiper bearings, levers 	Clean surfaces and apply by hand, brushing or wiping, or using automated equipment. Some designs of grease guns may seize; test prior to use. Thinned with a solvent, the compound can be applied by dipping or spraying.
Bond & Seal Solution	Adhesive/Sealant Type	Performance Properties	Typical Applications	Use Recommendations
<i>Dow Corning</i> 7091 Adhesive/Sealant	Non-slumping, one-part, room-temperature-curing silicone paste available in a choice of colors – black, white and gray	Stable, flexible and strong from -55° to 180°C (-67° to 356°F); cures quickly with ambient temperature and humidity (moisture); adheres to most types of materials, painted or unpainted	Bond or seal materials with different thermal expansion: <ul style="list-style-type: none"> • Glass to metal • Glass to plastic • Painted/unpainted metals • Engineering plastics • Form-in-place gaskets 	Clean, dry, degrease surfaces with a solvent. Primer can be used for maximum adhesion. Apply a bead to one surface and quickly mate the seal or bond to the other surface. If needed, use a spatula to tool.

¹111 Silicone Compound is manufactured under both the *Dow Corning* and *Molykote* brands.

Other Sound Solutions

Molykote® brand lubricants, *Silastic*® brand silicone elastomers and *Dow Corning*® brand sealants also help to provide NVH Control in body, chassis and powertrain systems.

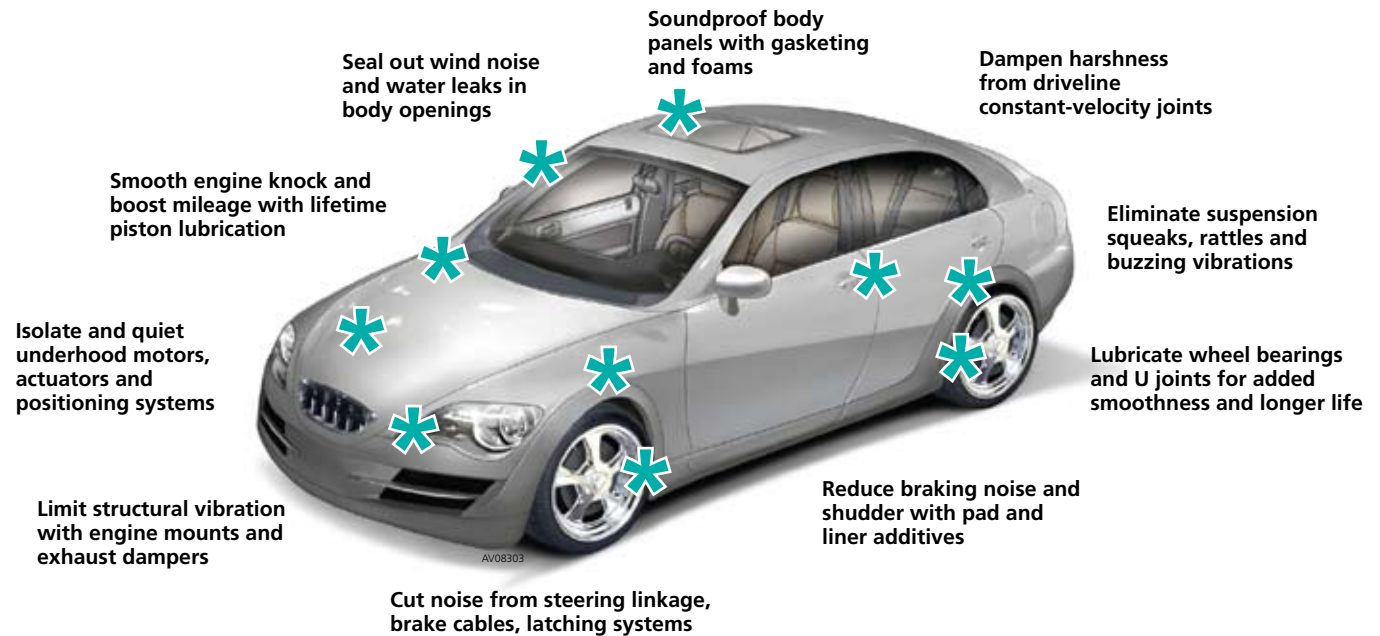
Superior Technical Support

Dow Corning and our *Molykote* NVH Control experts, working in our automotive engineering centers around the world, also offer you:

- Advanced application support;
- Integrated engineering expertise;
- Design development assistance;
- Custom materials prototyping; and
- Complete analytical testing.

How To Contact Us

To learn more about our extensive product and service offering, please visit dowcorning.com/auto or e-mail automotive@dowcorning.com.



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