

## For Automotive Noise, Vibration, and Harshness

### Product Information

#### Krytox™ Lubricants Can Help Solve Your Customer's Toughest Complaints.

Inside an automobile's interior, there are a variety of places where different materials come into contact with one another. Examples include metal on plastic, leather on leather, weather stripping, and many others. Movement between these surfaces often results in a series of noises typically described as squeak, itch, or judder. Krytox™ lubricants can permanently eliminate these noises with just a small amount of lubricant at the interface.

Because these applications are intended to be a one-time application, it is important to choose a lubricant that is easy to apply, has low volatility, and will remain in place over the normal useful life of the vehicle. Krytox™ oils and greases are the answer.

Krytox™ oils and greases stand up to harsh environments and high temperatures to lubricate weather stripping and parts prone to noise and wear. Krytox™ prevents weather stripping from cracking, shrinking, and swelling to help reduce wind noise, drafts, and water leakage. And, when used on moving parts, Krytox™ lubricants can minimize the shock and stress that cause squeaks, rattles, and damage.

Krytox™ oils and greases are compatible with a wide variety of materials, and they have the frictional and long life characteristics that make them ideal lubricants in noise, vibration, and harshness applications.

#### Oils and Greases That Really Work in Demanding Real-Life Applications

Reliable high-performance fluoropolymer lubricants from Chemours can prevent unwanted noises without re-lubrication. Krytox™ oils and greases are easy to apply, have low volatility, and are long-lasting in aggressive environments.

#### Krytox™ Value

- **Long-lasting, cost-effective lubrication**—Krytox™ prevents unwanted noises without re-lubrication. And, Krytox™ stays put, so you can apply a small amount without fear of migration.
- **Material compatibility**—Because Krytox™ is compatible with metals, elastomers, and engineering plastics, it won't damage the components, allowing them to last as designed.
- **Chemical compatibility and environmental safety**—Krytox™ lubricants are chemically, biologically, and environmentally inert, as well as silicone-free. And, they contain no hazardous volatile organic compound materials or chlorine.
- **Lubricity**—Krytox™ provides excellent lubricity because of its low coefficient of friction and low surface energy; and because it doesn't oxidize, it won't turn sticky or change color.



#### Application Guidance

The typical coverage for Krytox™ when properly applied is approximately 4 g/m<sup>2</sup>. Most applications are less than 0.2 g. Each application must be considered separately in order to ensure the best solution is found. There are two main components of any application method:

1. Controlled metering of the material from the container to the applicator. This is best done automatically to ensure accuracy and repeatability.
2. Transfer of the material from the applicator to the component. This can be either a manual application, using a brush or foam applicator, or automatically—either by spraying or wiping by robot or specially designed jig.

#### Commonly Used Grades of Krytox™ Oils and Greases

Krytox™ Grade	Description
GPL 103, GPL 104, GPL 105, GPL 106, GPL 107 Oil	Clear, water-white oil of various viscosities
GPL 203, GPL 204, GPL 205 Grease	White grease with various base oil viscosity

## Application Examples

Automakers from around the world have a long history of using Krytox™ oils and greases to help eliminate automotive squeaks and rattles.

Here are just a few of the many pain points Krytox™ has been proven to help silence:

- **Leather trim, seats, and console parts**—Leather-on-leather friction can create an irritating noise. Krytox™ gets rid of the itch without staining the leather or becoming sticky over time.
- **Plastic door panel and metal frame**—Because Krytox™ is compatible with metals, elastomers, and plastics, it effectively silences noise caused by the interaction of various materials. And, Krytox™ won't oxidize or discolor plastic. Apply by spraying by hand or using a robot.
- **Rubber gaskets and seals**—A thin film of Krytox™ can lubricate sliding contact in convertible tops, sunroofs, trunk lids, and doors to keep the rubber compound in good condition, and protected from oxidation. Grease or oil can be applied by hand, or a jig can be used to guide the application.
- **Window lift systems and weather stripping**—Krytox™ can stop weather strip “bunching” and “gathering,” and help eliminate the wind noise produced as window glass is raised. Awkward configuration of these seals usually means that automatic application is difficult. An automatic dispenser in conjunction with disposable foam applicators is often used. The amount can be controlled by ensuring a preset quantity is dispensed directly from the supply onto the applicator.

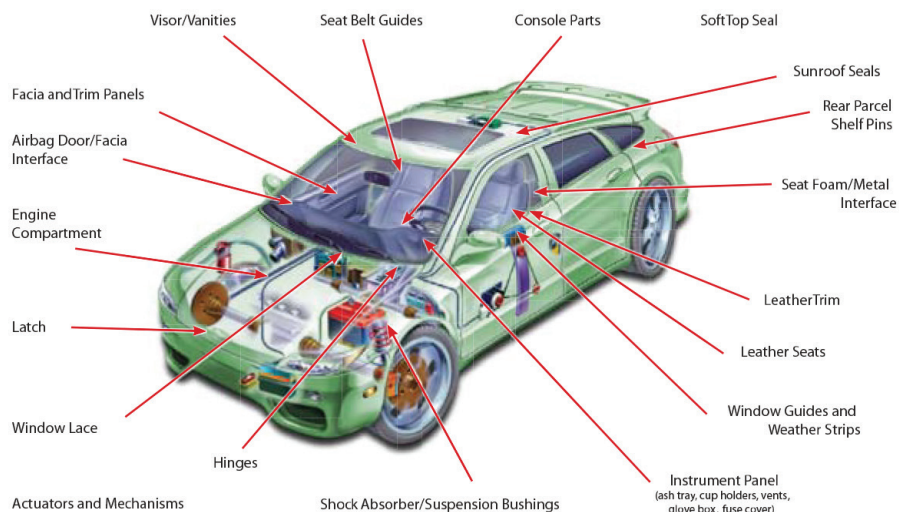
## Application Systems

There are several manufacturers of equipment that can be used for these applications. The systems can be purchased from one source or fabricated locally from many sources. Automatic dispensing systems for adhesives, sealants, or lubricants can be used as the supply system. Manufacturers such as GRACO, Hydrotech, LCC-Dispensit, or a local distributor can provide controlled application systems for precise dispensing.

Use of disposable foam tips or brushes can allow accurate coverage of most shapes. Companies such as Designetics or others can provide help in this area.

**Choose Krytox™ for long-lasting lubrication that helps improve vehicle performance and customer satisfaction.**

Whatever your engineering challenge—longer part life, extreme temperatures, reduced failures—performance lubricants from Chemours can help. At Chemours, we put our science to work to produce lubricants that can stand up to today's engineering design demands—no matter how tough the conditions. It's reliability you can count on, from a name you trust.



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