



Krytox in Automotive

What is Krytox?

Krytox is a trade name for a family of special products from Dupont which includes Fluorinated lubricants and coatings. These products available as fluids (oils), greases (pastes) and dry film materials are all based upon high technology fluorine based chemistry and offer a unique range of properties allowing them to be used in extremes of conditions where other lubricants & coatings cannot perform.

The unique properties of Krytox products has led to the development of many diverse areas of application in a range of different industries. From Paperboard manufacture to Space exploration each offers a different challenge for conventional lubricant technologies. These critical applications are where Krytox is fast becoming the lubricant of choice.

The Automotive industry is no different in this respect, the higher operating temperatures under bonnet and demands of extended lifetime of components along with the customer's desire for a quality ride and low noise



'refined' environment has led to many different applications on vehicles.

'Refine your ride'

Krytox anti squeak materials include a range of fluids which can be considered chemically similar to liquid Teflon or PTFE.

These odourless, colourless fluids can be applied to a substrate or interface of components to lubricate the contact, reducing friction, eliminating stick-slip and banishing annoying squeaks.



The universal compatibility, durability and thermal stability of Krytox often means that Krytox can last the lifetime of the vehicle in some applications.

Areas that benefit from the application of Krytox on interior trim include:

- Seat frames & covers including leather
- Fascia interfaces
- Ashtrays and cup holders
- Consoles & glove boxes
- Inner door panels and handles
- Luggage covers and parcel shelves
- Switches, controls, HVAC vents...



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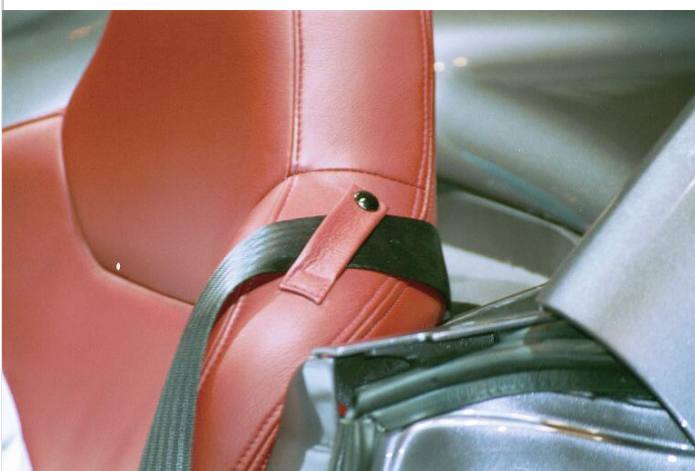
IKV Group are specialists in this area and work with our customers to develop the best solution including the material selection and means of application.

'Krytox weathers the storm'

Krytox is also extensively used on weather-strip sealing systems as a slip coating or re-release coating to reduce friction, eliminate stick-slip and unwanted noise in:

- Sunroof seals
- Glass channels
- Primary and secondary door seals
- Windscreen seals
- Boot and bonnet seals
- Encapsulated windows

...and many other applications.



Many different factors need to be taken into account when selecting a material for anti-squeak coating. These include:

- Materials & compatibility
- Temperature of the application, upper, lower and nominal
- Texture or finish of the substrate
- Type of contact & surface area
- Durability
- UV resistance
- Fogging characteristics
- Method of application and production process, curing time etc
- Handling of the component



Krytox products are also extensively used in the aftermarket by dealers and service centres and many manufacturers use these materials as a service item.

The universal compatibility and ease of application are ideal for these conditions as the materials will not harm any surface or material and can also be used as a diagnostic tool.



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They are available in a range of different packaging including applicator bottles and aerosols.

Dry film coatings are also used in these applications including PTFE based Dupont 'Dry Film' lubricants & DuPont Traysys products

In combination with our own Anti friction coatings, noise damping greases, gels and dispersions, IKV have the most extensive range of anti-squeak coatings and materials along with extensive knowledge and experience of accurate application.

'Krytox...keeps 'em rolling'



Rising under bonnet temperatures and the increasing reliability requirement of vehicles has led to the requirement for increased bearing and lubricant performance throughout the vehicle.

No longer are components expected to be 're-greased' at service intervals they are now

lubricated-for-life. This has led to the use of the latest lubricant technology in many applications where extreme temperatures or aggressive conditions demand.

Krytox is used in the most critical applications to extend life of bearings and components, reduce costly warranty bills and to give piece of mind to the manufacturer and customer.

Typical Krytox applications include:

- Alternator bearings
- Cooling Fan & fan clutch bearings
- Clutch release bearings and dual mass flywheel bushes
- Fuel pumps, fuel cap hinges and connectors
- HVAC systems & EGR Valves
- Steering columns, seals, slides & EPAS
- Braking system components
- Suspension components & bushings
- Transmission & handbrake cables
- Engine mountings & other rubber seals gaskets and connections
- Electrical applications, switches, relays HT applications, spark plug boots

Many other critical applications exist on the vehicle. Krytox is often the lubricant of choice where failure is not an option including safety and emergency equipment.

As the demands increase in the future DuPont and IKV are committed to working with our customers to achieve the most cost effective and technologically advanced solutions to friction related problems.