

# DuPont™ Krytox®

## food grade lubricants

## Food Grade Lubricants

Krytox® oils and greases are synthetic lubricants that have been used for many years in extreme conditions such as continuous high temperatures up to 300°C (572°F) and higher. Krytox® FG oils and greases are now available in a line of food application products, where a lubricant with an H-1 rating is required. The products include several different types of greases and a range of oils for all types of systems.

These ultra-performance lubricants are designed for the highest level of protection in food industry equipment. They provide stable performance in temperature extremes and reduce friction and wear. They create a higher thickness lubricating film than conventional products, reducing metal to metal contact and wear. Krytox® FG products reduce wear and stop seizure and catastrophic failure. The oil is clear, colorless, and odorless, and the grease is white.

Krytox® lubricants are inert and will not react with any materials they may come in contact with. The polymeric nature of these products is extremely resistant to moisture, so they stay in place during cleaning. Cleaners and disinfectants, both acidic and caustic types, do not affect them. Steam and high

temperatures will not damage them. They do not damage plastic or elastomer seals or cause corrosion to metals.

They have excellent lubricating properties and can handle both high and low temperatures. They are commonly used as lubricants in aerospace, automotive, industrial, and semiconductor applications, as well as solving many other routine lubrication problems.

### Typical Applications

Applications for these lubricants are generally of a critical nature, where temperatures reach extremes for conventional lubricants. They are durable in the most aggressive environments and are often considered an integral part of the design. Where failure of components is not an option, whether because of durability, warranty, safety, loss of productivity or downtime, Krytox® is the lubricant of choice in a wide range of industries and applications. These products are not intended to be used as direct food additives.

Product Name	Application	Useful Range
Krytox® FG 20	Lubricating grease	-60 to 154°C (-76 to 309°F)
Krytox® FG 22	Lubricating grease	-36 to 204°C (-33 to 399°F)
Krytox® FG 24	Lubricating grease	-30 to 260°C (-22 to 500°F)
Krytox® FG 26	Lubricating grease	-10 to 300°C (14 to 572°F)
Krytox® FG 30	Anticorrosion grease	-60 to 154°C (-76 to 309°F)
Krytox® FG 32	Anticorrosion grease	-36 to 204°C (-33 to 399°F)
Krytox® FG 34	Anticorrosion grease	-30 to 260°C (-22 to 500°F)
Krytox® FG 36	Anticorrosion grease	-10 to 300°C (14 to 572°F)
Krytox® FG 40	Lubricating oil	-36 to 204°C (-33 to 399°F)
Krytox® FG 45	Lubricating oil	-20 to 300°C (-4 to 572°F)
Krytox® FG 50	Anticorrosion oil	-36 to 180°C (-33 to 356°F)
Krytox® FG 10	Vacuum pump fluid	
Krytox® FG 12	Vacuum pump fluid	
Krytox® FG 15	Vacuum pump fluid	

## Chemical and Environmental Compatibility

While Krytox® greases are nonreactive, they have different chemistries than other lubricants and should not be mixed with non-PFPE greases. Doing so may limit their effectiveness.

These lubricants are inert and will not react with any materials they may come in contact with. The polymeric nature of these products is extremely resistant to moisture, so they stay in place during cleaning. Cleaners and disinfectants, both acidic and caustic types, do not affect them. Steam and high temperatures will not damage them. They do not damage plastic or elastomer seals or cause corrosion to metals. They are nonflammable and are safe for use in oxygen service.

Krytox® oils and greases are silicone-free. They do not contain any VOC materials or chlorine and are not hazardous to the atmosphere or ozone layer. They are chemically, biologically, and environmentally inert. In addition to our new Krytox® FG lubricants, many of our standard Krytox® grades have an H-2 rating. Please contact us for a complete listing.

## Packing the Bearing

New bearings should be inspected for damage and cleanliness before use. New unlubricated bearings often have rust preventive oils in them to prevent damage while they are in storage before use. These preservative oils need to be removed when using Krytox® as a lubricant. Failure to do so could result in reduced bearing life. The preservatives coat the metal surface to prevent rusting, so they can also

prevent the grease from adhering—causing it to be thrown off by the action of the bearing. They also will oxidize, harden, and create debris that will contaminate the grease.

Proper lubrication is achieved by using the correct amount of grease. Too little grease in the bearings causes premature failure. Too much grease at the initial fill or during relubrication can cause overheating of bearings that are running at medium to high speed, resulting in bearing failure. The amount of grease put in the bearing depends on the application and operating speed. For applications such as conveyor rollers and low-speed machinery with DN values (inner race ID in mm x rpm) below 50,000, the bearing can be filled to about 75–80%. For medium-speed applications, i.e., DN 50,000 to 200,000, the bearing can be filled 35–50%. For higher-speed systems, the fill is typically 25–35%. Some extreme-speed special applications have grease fills of only 10–15%. Because Krytox® is heavier than hydrocarbon lubricants, its higher density (1.9 g/mL) must be considered when determining the fill quantity by weight.

## Packaging

Krytox® greases are available in 2 and 8 oz tubes; 0.5 kg and 1 lb containers; 0.8 kg/1.75 lb cartridges; 20 kg containers; 100 kg drums; 5 gal pails and other grease drum sizes.

## Storage and Shelf Life

Krytox® grease and oil lubricants have an indefinite shelf life, if unopened and stored in a clean dry location.

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**For more information or technical assistance, call:**

**(800) 424-7502**

**or visit us on the Web:**

**<http://www.krytox.com>**

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Or call the Krytox® hotline in the **United States** at (800) 424-7502, E-mail: [krytox@usa.dupont.com](mailto:krytox@usa.dupont.com)

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