

DuPont™ Krytox®

food grade lubricants

FG Vacuum Pump Oils

Krytox® FG oils are high temperature, extreme pressure, water-resistant oils for your most demanding needs. They provide stable performance in temperature extremes and are designed to reduce friction and wear while extending equipment life in severe duty applications. They are extremely resistant to water washout from bearings and other equipment. Their wide temperature range allows them to be used in both high and low temperature applications.

The superior film-forming capability of Krytox® FG lubricants provides a thicker oil layer and reduces wear. The nonoxidizing nature of the molecule makes the oils last longer. The oils don't carbonize and gum up as they age to cause catastrophic failure. They have superior extreme pressure properties and excellent adhesion, so they stand up to all conditions.

Krytox® FG oils are recommended for use in food and packaging equipment where an H-1 rated lubricant is required. There are several grades available to meet a variety of temperature and vacuum conditions.

Krytox® lubricants are commonly used 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 are reaching extremes for conventional lubricants. They are durable in the most aggressive environments and are now 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.

Chemical and Environmental Compatibility

While Krytox® FG oils are nonreactive, they have different chemistries than standard lubricants and should not be mixed with other non-PFPE lubricants.

Property/Grade	Krytox® FG 10	Krytox® FG 12	Krytox® FG 15
Color	Clear, colorless	Clear, colorless	Clear, colorless
Antirust	No	No	No
Flash Point	None	None	None
Oil Viscosity, cSt			
40°C (104°F)	24	49	81
100°C (212°F)	4.2	7.1	10.6
Volatility at 22 hr	121°C (250°F) = 12%	149°C (300°F) = 11%	149°C (300°F) = 5%
Viscosity Index	57	102	116
Pour Point, °C (°F)	-60 (-76)	-55 (-67)	-50 (-58)
Upper Use Limit, °C (°F)	140 (284)	160 (320)	180 (356)
Vapor Pressure	4 x 10 ⁻⁷ torr	2 x 10 ⁻⁷ torr	1 x 10 ⁻⁷ torr
Density, g/cc at 20°C (68°F)	1.88	1.89	1.90

These values are typical properties and not specifications.

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 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.

Cleaning Systems Before Use

Before using Krytox®, all old lubricants must be fully removed from the pump or equipment. 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 greases or 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 contaminate the Krytox® and also prevent the Krytox® from adhering—causing it to be thrown off by the action of the bearing or pump. They also can oxidize, harden, and create debris that will contaminate the Krytox®.

Packaging

Krytox® FG VPF fluids are available in 1 lb and larger containers.

Storage and Shelf Life

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

For more information or technical assistance, call:

(800) 424-7502

or visit us on the Web:

<http://www.krytox.com>

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

Canada at 800-263-5924, E-mail: products@can.dupont.com

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Asia/Pacific—including India at 886-2-2514-4434, E-mail: krytox.lubricants@twm.dupont.com

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