



Krytox™ 2C Greases

Performance Lubricants

For Anti-Fretting Applications

Product Information

Krytox™ oils and greases are based on perfluoropolyether (PFPE) oils. Krytox™ 2C grease is made using Krytox™ PTFE and a non-melting thickener. The capability of the greases' upper limit is determined by the evaporation or breakdown temperature of the oil. These synthetic fluorinated lubricants are used in extreme conditions, such as continuous high temperatures up to 300 °C (572 °F) and higher temperatures for shorter

periods, depending on product grade limits. They are nonflammable and safe for use in oxygen service. They are chemically inert and are used safely around hazardous chemicals. They do not damage plastics or elastomers or cause corrosion to metals. They are commonly used as lubricants in aerospace, automotive, industrial, and semiconductor applications, as well as solving many other routine lubrication problems.

Typical Properties*	Krytox™ AUT 2C45	Krytox™ XP 2C5
Anti-Corrosion Additive	Yes	Yes
Anti-Wear Additive	Yes	Yes
Extreme Pressure Additive	Yes	Yes
Appearance	White, Creamy Consistency	White, Creamy Consistency
Estimated Oil Temperature Range, °C (°F)	-44 to 200 (-47 to 392)	-36 to 200 (-33 to 392)
Base Oil Viscosity, cSt		
20 °C (68 °F)	310	550
40 °C (104 °F)	100	160
100 °C (212 °F)	12.5	18
204 °C (400 °F)	2.5	3
Oil Separation, wt% at 30 hr, 99 °C (210 °F)	4	4
Maximum Oil Volatility, % at 22 hr, D2595		
66 °C (150 °F)	0.3	0.1
121 °C (250 °F)	2	1
204 °C (400 °F)	—	7
Dropping Point	N/A	N/A
Standard NLGI Grade	2	2
Specific Gravity, 0 °C (32 °F), g/cm ³	2.00	2.00

*These values are typical properties and not product specifications.

Krytox™ 2C greases contain an oil-soluble additive that is effective at preventing corrosion and reducing wear. It also contains a micro-powder, boron nitride, extreme pressure additive. Typical applications include those in potentially corrosive atmospheres, where vibrational or shock loading may be significant and an element will spend more time experiencing mixed film or boundary lubrication versus the desired full film or hydrodynamic lubrication.

Typical Applications

Applications for Krytox™ lubricants are generally of a critical nature, where temperatures in all industries are reaching extremes for conventional lubricants. Lubricants are expected to be 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™ oils and greases are the lubricant of choice in a wide range of industries and applications.

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.

Packing the Bearing

New unlubricated bearings often have rust-preventive oils in them to prevent damage while they are in storage before use. New bearings should be inspected for damage and cleanliness before use. The greases or preservative oils need to be removed when using Krytox™ lubricants. Failure to do so could result in reduced bearing life. Bearing life tests on uncleaned bearings have shown reduced life in high temperature, high speed tests, where the bearing was filled with a minimum amount of grease. The preservatives coat the metal surface to prevent rusting; so, they can also prevent the grease from adhering, causing them to be thrown off by the action of the bearing. They could also oxidize and harden, creating debris that will contaminate the grease.

Storage and Shelf Life

The XP series of Krytox™ lubricants can develop an odor and a slight amber/pinkish color over time. The XP series has a three-year shelf life and a recommended maximum operating temperature of 182 °C (360 °F). Testing has shown that these products retain their anti-rust and anti-wear properties and perform well past the end of the recommended three-year shelf life. Keep product sealed and store in a cool, dry place.

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For product information, industry applications, technical assistance, or global distributor contacts, visit krytox.com or within the U.S. and Canada, call 1-844-773-CHEM/2436 or outside of the U.S., call 1-302-773-1000.

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