

DuPont™ Krytox® MIL PRF-27617 Greases

GREASE, AIRCRAFT AND INSTRUMENT, FUEL AND OXIDIZER RESISTANT

DuPont™ Krytox® oils and greases are based on perfluoropolyether (PFPE) oils. 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. Chemically inert and safe for use around hazardous chemicals, these lubricants are nonflammable and are safe for use in oxygen service. Krytox® oils and greases are silicone free and 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.

Krytox® greases are the original products that this military specification was written for and have been certified continuously since the specification was originally written.

This is the latest data from the recertification that is required every five years. Krytox® greases are standard as NLGI Grade 2 penetration. If the 240 AZ is ordered to meet MIL-SPEC requirements, it must be ordered as NLGI Grade 1 to meet the specification.

CAGE No.: 43S57

NAICS Code: 324191 Lubricating Oils and Greases Manufacturing

SIC Code: 2992 Lubricating Oils and Greases

DUNS: 557214574

Krytox® Grade	240 AZ	240 AB	240 AC
Qualification Reference Number, 1 Oct 2008	AFPET/PTPT 08-011	AFPET/PTPT 08-012	AFPET/PTPT 08-013
Grease Type/Operating Range, °C	Type I (-54 to 149)	Type II (-40 to 204)	Type III (-34 to 288)
NATO Number	G-397	G-398	G-399
Penetration Grade	NLGI 1	NLGI 2	NLGI 2
Change in Worked Penetration (30 max.)	+13	+3	-3
Corrosion on Copper (2b max.)	1b	1b	1b
High Temperature Bearing Performance (500 hr min. at 10,000 RPM, 204 °C)	—	Stopped at 1320 hr	Stopped at 1685 hr
Evaporation ASTM D-2595, %	12.9	10.1	0.2
Oil Separation, %	—	14.2	15.5
Solubility in Fuel (20% max.), %	—	0.3	0.1
Liquid Oxygen Impact Sensitivity 20 impacts at 43.3 in, no reaction	No Reaction	No Reaction	No Reaction
Water Washout Characteristics (20% max.), %	—	0.25	—
Oxidation Stability (5 max.), psi	—	0.5	—
Dirt Count 75 μ and larger (0 per cc max.) 25 to 74 μ (1000 per cc max.)	0/26	0/0	0/0
Resistance to Aqueous Solution Distilled Water 50/50 Distilled Water/Ethanol	Pass Pass	Pass Pass	Pass Pass
Film Stability and Corrosion on Steel	Pass	Pass	Pass
Krytox® Base Oil Viscosity, 40 °C, cSt	22.8	77.8	243
Krytox® Useful Range, °C	-57 to 149	-40 to 232	-34 to 288
Determination of % TML and CVCM from Thermal Outgassing	—	—	TML = 0.141; CVCM = 0.051

*These values are typical properties and are not specifications



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Typical Applications

Applications for DuPont™ Krytox® lubricants are generally of a critical nature with temperatures in all industries reaching extremes for conventional lubricants. They 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 down time, Krytox® is the lubricant of choice in a wide range of industries and applications.

In the aerospace industry, Krytox® oils and greases are applied on various settings spanning from bearings and sealants to o-rings and oxygen systems. Krytox® is a valuable asset to the aerospace industry due to its superior performance in a wide range of temperatures scaling from 70 to 399 °C (-100 to 750 °F). In addition, it is robust in harsh environments and has excellent frictional properties, allowing it to resist change in properties over time, provide longer wear, and lower energy consumption. Krytox® lubricants are compatible with all metals, elastomers, plastics, paints and finishes. Due to the intense and severe circumstance of the aerospace industry, it can be expected that Krytox® delivers a high level of product excellence.

DuPont™ Krytox® 240 AC, 240 AB and 240 AZ gr-1 greases now have NSF approval for incidental food contact (H-1) in and around food processing areas.

Preparation Before Packing Bearings With Grease

New bearings and equipment that are not lubricated 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® as a lubricant. 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 also will oxidize and harden and can create debris which will contaminate the grease.

Storage and Shelf Life

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

DuPont Performance Lubricants

Extreme conditions. Extreme performance.

For more information or for technical assistance, please call **1-800-424-7502** or contact us at **krytox@usa.dupont.com**
For international sales and support contacts, visit us at **www.lubricants.dupont.com**

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