

# Krytox® grease GPL 204, 214, 224

**Krytox**<sup>®</sup> oils and Greases are based on <u>perfluoropolyether</u> 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. They are non flammable and are 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

The GPL 204 grease contains no additives and can be used on components that come in contact with chemicals. Typical applications include valves or bearings in contact with chemicals, instruments, and oxygen systems.

The GPL 214 grease contains molybdenum disulfide for extreme pressure (EP) conditions and should be used for slow speed or heavily loaded applications where there is no danger of the molybdenum disulfide additive reacting with chemicals or causing contamination.

The GPL 224 grease contains an anti-corrosion / anti-wear inhibitor and is ideal for corrosive environments where there is no danger of the sodium nitrite additive reacting with chemicals or causing contamination problems. Typical applications are automotive bearings, sealed pump bearings, electric motor bearings, general purpose bearings.

Typical Properties		<b>GPL 204</b>	GPL 214	GPL 224
Anti –Corrosion Additive		NO	NO	YES
Extreme Pressure additive		NO	YES	NO
Anti-Rust rating ASTM D-1743		NA	NA	pass
Appearance		White, Creamy Consistency	Black, Creamy Consistency	White, Creamy Consistency
Estimated useful Temperature range		-51 °C to 179 °C		
Base oil viscosity, cSt	20 °C	180		
	40 °C	60		
	100 °C	9		
	204 °C			
	260 °C			
Oil separation, % in weight after 30 hours	99 °C	4		
	204 °C			
Max. oil volatility % in 22 hours	66 °C	1		
D972 (Modified)	121 °C	3		
	204 °C			
	260 °C			
Dropping point		NA		
Standard NLGI grade		2		
Specific gravity at 0 °C g/cm <sup>3</sup>		1.97	2.11	1.98

These values are typical properties and are not specifications

## **Typical Applications**

Applications for these lubricants are generally of a critical nature, temperatures in all industries are reaching extremes for conventional lubricants, and 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 & applications

Krytox® oils & 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.

**Aerospace -** Instrumentation, O2 systems, actuators, bearings...

**Automotive** - fuel systems, braking, electrical switches, relays, controls, exterior & interior trim,

 $Valves - O_2$ , liquid  $O_2$ , aggressive chemicals, cryogenics

## 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® 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.

#### **Packaging**

Krytox<sup>®</sup> Greases are available in 2 oz & 8 oz tubes; 0,5 Kg & 1 lb. containers; 0,8 Kg / 1.75 lb. cartridges; 20 kg Containers; 100 Kg drums; 5 gallon pails and other grease drum sizes.

#### Storage & Shelf Life

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

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Because conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

For more information or technical assistance, visit us on the Worldwide Web @ <a href="http://www.dupont.com/lubricants">http://www.dupont.com/lubricants</a>
Or call the Krytox® hot line in Europe at (32) 3 543 1267; <a href="https://www.dupont.com">lubricants@lux.dupont.com</a>, US at 800 424 7502, Canada at 800 263 5924, Asia / Pacific at 81 3 5434 6126, Mexico 52 5 722 1446, Brazil / South America 55 11 7266 8601

