

AUT Series Automotive Lubricants

Product Information

The Krytox™ AUT series from Chemours is a line of products designed to address the automotive industry's need for lubricants that combine efficiency and performance at both low and high temperatures. While all grades in the Krytox™ AUT series are based on ISO 100-grade perfluoropolyether (PFPE) oil, each AUT grade is formulated with unique additives to provide flexible options for anti-corrosion protection for automotive equipment and heavy transportation parts, such as viscous fan clutch bearings, alternators, and idler bearings.

Designed to fill the gap between Krytox™ GPL 224 grease and Krytox™ GPL 225 grease—delivering low temperature starting performance while maintaining efficacy at hotter operating temperatures—the Krytox™ AUT grease series can increase the service life of critical components, allowing automotive manufacturers to extend warranties and improve productivity by reducing component failure. Developed to fill the gap between Krytox™ GPL 104 oil and Krytox™ GPL 105 oil, Krytox™ AUT 1045 oil can also increase critical component service life.

Characteristics of Krytox™

Krytox™ oils and greases are based on PFPE oils. These synthetic fluorinated lubricants are used in extreme conditions, such as continuous high temperatures up to 288 °C (550 °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 also safe for use in oxygen service. Krytox™ oils and greases do not damage plastics or elastomers, nor cause corrosion to metals.

Krytox™ oils and greases are silicone-free. These lubricants are biologically and environmentally inert, contain no VOC materials or chlorine, and are not hazardous to the atmosphere or ozone layer. They are commonly used as lubricants in aerospace, automotive, industrial, and semiconductor applications, as well as in solving many other routine lubrication problems.

Formulations for Automotive Applications

While all grades in the Krytox™ AUT series are based on the ISO 100-grade PFPE oil, each AUT grade has a unique formulation to provide flexible options for anti-corrosion protection for your equipment.

Krytox™ AUT 2045	Additive-free
Krytox™ AUT 2245	Traditional sodium nitrite, anti-corrosion additive
Krytox™ AUT 2A45	Corrosion inhibited with proven soluble additive technology
Krytox™ AUT 2E45	Sodium nitrite-free, anti-corrosion additive

High Performance Standards Require a High Performing Lubricant

Greases

- Krytox™ AUT 2045 is a white grease based on PFPE. PFPE lubricants demonstrate outstanding product life and unequalled performance. AUT 2045, like most Krytox™ greases, combines the base oil with polytetrafluoroethylene (PTFE) powder as a thickener. The use of PFPE as a base oil provides superior chemical and thermal stability to all Krytox™ grease product lines.
- Krytox™ AUT 2245 grease addresses a broad range of applications from O-ring to bearing lubrication over a wide temperature range, where corrosion is a potential issue. It is thickened with PTFE and contains sodium nitrite, a traditional anti-corrosion additive.
- Krytox™ AUT 2A45 grease is formulated with soluble additives that exhibit excellent resistance to water washout, repel moisture, and provide extra protection from corrosion of metal parts and bearing surfaces. With no solid additives, bearings run quieter and wear less—extending bearing and component life.
- Krytox™ AUT 2E45 grease is a nitrite-free lubricant that is formulated with anti-rust additives that are effective at low concentration levels and environmentally friendly, as well as do not pose any restrictions on long-term recyclability of the grease.

Oil

All grease grades in the AUT series are based on Krytox™ AUT 1045 oil, an ISO 100-grade PFPE oil. Krytox™ AUT 1045 should be considered for any automotive application requiring the use of an oil, from bearings and small plastic gear boxes to NVH solutions.

Typical Properties of the Krytox™ AUT Series Greases

Appearance	White, Creamy Consistency
Estimated Useful Temperature Range	-44-200 °C (-47-392 °F)
Base Oil Viscosity, cSt	
20 °C (68 °F)	310
40 °C (104 °F)	100
100 °C (212 °F)	12.5
200 °C (392 °F)	2.5
Oil Separation, wt% after 30 hr	
99 °C (210 °F)	4
Max. Oil Volatility, % in 22 hr, ASTM D2595	
66 °C (150 °F)	0.1
121 °C (250 °F)	0.5
204 °C (400 °F)	2
Dropping Point	NA
Standard NLGI Grade	2
Specific Gravity at 0 °C (32 °F), g/cm ³	2.0

These values are typical properties and not specifications.

Typical Properties of Krytox™ AUT 1045 Oil

ISO Grade	100
Density, 50 °C (122 °F)	1.84
Estimated Useful Temperature Range	-40-200 °C (-40-392 °F)
Oil Viscosity,	
40 °C (104 °F)	100
100 °C (212 °F)	12.5
Pour Point	-41 °C (-42 °F)

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Bearing Life Data

Bearing Life, ASTM D3336	Hours
10,000 rpm, 200 °C (392 °F) Krytox™ AUT 2245	5,300+
10,000 rpm, 180 °C (356 °F) Krytox™ AUT 2A45	6,500+
Krytox™ AUT 2E45	5,500+

Preparing Bearings for Krytox™ AUT 2245 Grease

New unlubricated components and bearings are typically coated with rust preventive oils to prevent corrosion while they are in storage before use. New components 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 component 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 it to be thrown off by the action of the bearing. The preservatives will also oxidize and harden, and can create debris that will contaminate the grease.

Storage and Shelf Life

With the exception of Krytox™ AUT 2A45 grease, which has a shelf life of up to 3 yr if the package remains unopened and is stored in a clean, dry and cool location, the AUT series of lubricants should have an indefinite shelf life in the same conditions.

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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