Krytox™ XHT
Performance Lubricants

Extreme High Temperature Oils

Product Information

Krytox™ XHT series oils are special extreme high temperature grade oils with low evaporation and extra treatment to allow use at temperatures above the range of normal perfluoropolyether (PFPE) oils. These oils provide excellent lubrication over a broad temperature range. Krytox™ XHT series oils are nonflammable and chemically inert.

Krytox™ XHT oils allow extended lubrication intervals and longer equipment life. The oil can begin to slowly evaporate at temperatures above 330 °C (626 °F), and this will occur at an increasing rate as temperatures increase. Re-lubrication could be required at these temperatures to achieve optimum life.

Krytox™ PFPE Oils

Krytox™ PFPE oils are clear, colorless, fluorinated synthetic oils that are nonreactive, nonflammable, safe in chemical and oxygen service, and long lasting. Krytox™ is a PFPE—also called perfluoroalkylether (PFAE) or perfluoropolyalkylether (PFPAE)—with the following chemical structure:

$$F\text{-}(CF(CF_3)\text{-}CF_2\text{-}O)_n\text{-}CF_2CF_3 \quad \text{where } n=10 \text{ to } 60$$

Compatibility with Metals

Due to their low surface tensions, Krytox™ oils easily wet metallic surfaces, and, because of their inertness, Krytox™ oils have little or no adverse effect on metals. Testing of metals at 340 °C (644 °F) in the absence of air has shown little evidence of corrosion. In the presence of air, corrosion was slightly higher. The presence of molybdenum in the metals improved corrosion resistance.

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Typical Properties of Krytox™ XHT PFPE Oil*

	XHT-500 (H-1)	XHT-750	XHT-1000
Estimated Useful Range, °C (°F)	-20/300 (-4/572)	-15/350 (5/662)	-5/360 (23/680)
Base Oil Viscosity, cSt			
20 °C (68 °F)	1,712	2,610	3,500
40 °C (104 °F)	500	738	1,023
100 °C (212 °F)	46.4	64.6	88.5
Oil Viscosity Index	148	157	171
Oil Pour Point, °C (°F)	-25 (-13)	-15 (5)	-5 (23)
Oil Density, g/mL			
0 °C (32 °F)	1.95	1.95	1.95
100 °C (212 °F)	1.78	1.78	1.78
Oil Volatility, % in 22 hr			
204 °C (400 °F)	<1	—	—
260 °C (500 °F)	0.8	0.6	0.5
Vapor Pressure			
20 °C (68 °F) (Knudsen)	$\leq 1 \times 10^{-9}$	$\leq 3 \times 10^{-14}$	$\leq 4 \times 10^{-15}$
100 °C (212 °F) (Knudsen)	$\leq 8 \times 10^{-7}$	$\leq 1 \times 10^{-9}$	$\leq 2 \times 10^{-10}$
200 °C (392 °F) (Knudsen)	$\leq 1 \times 10^{-4}$	$\leq 2 \times 10^{-6}$	$\leq 3 \times 10^{-7}$
Food Contact Approval	NSF H-1	None	None

* This table gives typical properties (not specifications) based on historical production performance. Chemours does not make any express or implied warranty that these products will continue to have these typical properties.

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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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