Krytox™ XHT-BD, XHT-BDX, and XHT-BDZ

Performance Lubricants

Product Information

Krytox™ XHT-BD series oils are special extreme high temperature greases with low oil evaporation that are thickened with a non-melting thickener to allow use at temperatures above the melting point of common greases. They have excellent lubrication over a broad temperature range. Krytox™ XHT-BD series greases are nonflammable and chemically inert. Krytox™ allows extended lubrication intervals and longer equipment life.

Krytox™ XHT-BD greases are designed for use where the temperatures are in the 288 °C (500 °F) range and higher, where there is a danger of melting the standard PTFE thickener. This grease uses a special non-melting high temperature thickener. The base oil is an extremely viscous oil that provides good viscosity and lower evaporation at high temperatures. Krytox™ XHT-BD greases are for use in low speed bearings or in pillow housings and will shear at high speeds, causing loss of oil in sealed bearings. The oil in the grease 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.

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-BD Series PFPE Grease*

	XHT-BD	XHT-BDX	XHT-BDZ
Standard NLGI Penetration Grade	1.5	1.5	1.5
Estimated Useful Range, °C (°F)	–20–300 (–4–572) with spikes to 330 (626)	–15–350 (5–662) with intermittent spikes to 400 (752)	–5–360 (23–680) with intermittent spikes to ⩾400 (⩾752)
Pour Point, °C (°F)	–25 (–13)	–20 (–4)	–15 (5)
Base Oil Viscosity, cSt 20 °C (68 °F) 40 °C (104 °F) 100 °C (212 °F)	 1,712 500 47	 2,610 738 65	 3,500 1,023 88
Oil Separation in 30 hr at 99 °C (210 °F), %	6	5	5
Oil Volatility in 22 hr at 260 °C (500 °F), %, D2595	2.1	1.5	1.1
Vapor Pressure, torr 20 °C (68 °F) (Knudsen) 100 °C (212 °F) (Knudsen) 200 °C (392 °F) (Knudsen)	 $\leqslant 1 \times 10^{-9}$ $\leqslant 8 \times 10^{-7}$ $\leqslant 1 \times 10^{-4}$	 $\leqslant 3 \times 10^{-14}$ $\leqslant 1 \times 10^{-9}$ $\leqslant 2 \times 10^{-6}$	 $\leqslant 4 \times 10^{-15}$ $\leqslant 2 \times 10^{-10}$ $\leqslant 3 \times 10^{-7}$
Appearance	White, creamy consistency	White, creamy consistency	White, creamy consistency
Specific Gravity at 0 °C (32 °F)	2.00	2.00	2.00

* 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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