IHTG 150 and IHTG 460

(Inert High Temperature Grease)

No. 115

NLGI #2

DESCRIPTION:

IHTG 150 and IHTG 460 are white buttery NLGI #2 greases. The base fluid is an extremely stable perfluorinated polyether (PFPE) oil with exceptional chemical resistance, exceptional heat transfer characteristics coupled with very low volatility, and a wide temperature service range. The thickening agent is micronized tetrafluoroethylene telomere (PFTE). **IHTG 150 and 460** are chemically inert, oxidative stable and is nonflammable.

TYPICAL OPERATING CONDITIONS:

Because **IHTG 150 and 460** greases have low pour points and low starting torque they are used in cryogenic applications. Typical uses are to lubricate ball and roller bearings, gears, screw actuators, electrical contacts, and as an assembly lube on O-rings, and other elastomers. At high-temperatures **IHTG 150 and 460** can withstand 280ºC (536 °F) for long periods of time. **IHTG 150 and 460** greases are ideal candidates for fill-for-life applications in the uses cited above.

Due to the chemical resistance of all of the **IHTG 150 and 460** series of greases they are used in the chemical industry. Because they do not react with oxygen, they see use in oxygen valves. They do not react with corrosive gases, and liquids, such as in chlorine valves. They do not react with strong acids and alkali such as fuming sulfuric acid and strong NaOH. Thus, they lubricate a myriad of chemical pumps. They are ideal in areas of pure oxygen infusion, and are non-flammable making them usable in autoclaves.

FEATURES:

IHTG 150 and 460 are built from a micronized tetrafluoroethylene telomere (PFTE) thickener, and an exceptionally stable Perflourinated Polyether base fluid giving it the following unique features:

- Chemically Inert: They are not affected by chemicals, which attack other greases.
- Non-flammable: They will not catch fire.
- Low Volatility: The low vapor pressure yields long life at high-temperatures.
- High Volume Resistivity: This makes them suitable for electronic applications.
- High Viscosity Index and Low Pour Point: These properties allow them to be used at extremely high and low temperatures.
- No Effect on Seals, Elastomers, and Paints: They will not swell or shrink over 95% of the commercial elastomers and seals at high temperatures.
- Non-Toxic and Biologically Inert: They comply with local and Federal safety and health regulations.
- Extremely Hydrolytically Stable: They will not react with water even at high temperatures as in the case of highly pressurized steam.

PERFORMANCE CHARACTERISTICS:

IHTG 150 and 460 will provide superior, long lasting protection against:

Extreme pressure	Water washout
Elevated temperatures	Acid contamination
Rust and oxidation	Corrosion
High temperature oil volatilization	Channeling due to cold temperatures

TYPICAL SPECIFICATIONS:

Grade	**Test Method**	**150**	**460**
Color and Texture		Opaque White, Smooth & Buttery	
Specific Gravity @20°C (68°F) g/ml		1.81	1.80
Worked Penetration, @ 25°C, (77°F)	ASTM D-1403	275	270
Unworked Penetration 60 Strokes @ 25°C (77°F)	ASTM D-2265	265 – 290	265 – 290
Dropping Point, °C (°F)	ASTM D-2596	275°C (527°F)	272°C (522°F)
Four Ball EP Weld Load, Kg.		620 kg.	620 kg.
Evaporation Weight Loss, 30 hrs., @149°C (300°F)		< 0.50%	<0.50%
Base Fluid Type	ASTM D-445	Perfluorinated Polyether	
ISO VG Grade		150	460
Viscosity @ 40°C (104°F)		162.0 cSt	448.0 cSt
Viscosity @ 100°C (212°F)		19.5 cSt	49.5 cSt
Viscosity @ 20°C (68°F)		500.0 cSt	1360.0 cSt
Viscosity Index	ASTM D-2270	138	172
Pour Point, °C (°F)		-27°C (-17°F)	-36°C (-33°F)
Operating Temperature Range °C °F		 -27 to 288 - 17 to 550	 -36 to 220 -33 to 428

Values shown here are typical, and may vary

Although it is very inert (under certain conditions), newly exposed surfaces of aluminum and magnesium may react with the grease. Before applying the grease, the surface should be clean of any organic rust inhibitors. The mineral oil based corrosion inhibitors prevent IHTG 150 and IHTG 460 from going to the surface and protecting it.