

IHTG 800

(Inert High Temperature Grease)
No. 116

NLGI #2

DESCRIPTION:

IHTG 800 is a black buttery NLGI #2 grade grease. The base fluid is an extremely stable perfluorinated polyether (PFPE) oil thickened with a tetrafluoroethylene telomere. **IHTG 800** has exceptional chemical resistance against acids and alkalis. It possesses low volatility, and a wide-temperature service range. **IHTG 800** is rust inhibited, contains molybdenum disulfide, is nonflammable and an excellent boundary lubricant. **IHTG 800** is insoluble in petroleum derived products such as aircraft fuels, diesel and gasoline, and non halogenated solvents.

Halogenated solvents will dilute **IHTG 800**, but upon evaporation of the solvent the grease returns to its original texture and consistency.

TYPICAL OPERATING CONDITIONS:

Because **IHTG 800** 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 800** can withstand 280°C (536 °F) for long periods of time. **IHTG 800** greases are ideal candidates for fill-for-life applications in the uses cited above.

Due to the chemical resistance of all of the **IHTG** 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 insoluble in petroleum derived products and can be used in the face of fuels and natural gas. They are ideal in areas of pure oxygen infusion, and are non flammable making them usable in autoclaves.

***Caution:** Although **IHTG 800** is chemically inert, the Molybdenum Disulfide and additives contained in this product are not inert.*

FEATURES:

IHTG 800 is built from a tetrafluoroethylene telomere (PFTE) thickener, and an exceptionally stable Perfluorinated 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.
- Non Petroleum Soluble: They are not affected by petroleum fuels, solvents, or gases.

PERFORMANCE CHARACTERISTICS:

IHTG 800 will provide superior, long lasting protection against:

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|-------------------------------------|-------------------------------------|
| Extreme pressure | Water washout |
| Elevated temperatures | Acid contamination |
| Rust and oxidation | Corrosion |
| High temperature oil volatilization | Channeling due to cold temperatures |
| Petroleum fuels, solvents or gasses | |

TYPICAL SPECIFICATIONS:

NLGI Grade	Test Method	#2
Penetration, 60 Strokes		278
Penetration, 100,000 Strokes		270
Drop Point, °F, min.	ASTM D-2265	525
Timken OK Load, Lbs. min.	ASTM D-2509	90
Four-Ball EP Weld Point (kg):	ASTM D-2596	800
Rust Prevention	ASTM D-1743	Pass
Evaporative Weight Loss, 30 hours, 204°C (400°F) % Wt loss	ASTM D 972	<0.50
Water Washout, % loss, Max. @ 175°F	ASTM D-1264	.03
Base Oil Viscosity: @ 20°C, cSt @ 40°C, cSt	ASTM D-445	1495 438
Viscosity Index	ASTM D-2270	130

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 800 from going to the surface and protecting it.