

IHTG 700

(Inert High Temperature Grease)
No. 114

NLGI #2

DESCRIPTION:

IHTG 700 Inert High Temperature Grease is a white buttery NLGI #2 grease. 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 a proprietary blend of organic and inorganic non melting lubricating solids producing very low frictional characteristics. **IHTG 700** is chemically inert, oxidative stable and is nonflammable.

IHTG 700 greases are an extremely important advancement to Frontier Lubricants line of PFPE Inert lubricating greases that now extends our thermal lubricating capabilities to 700°F. **IHTG 700 is available with ISO VG grade Polyether base fluids of 220, 460 and 680, allowing us to tailor the base fluid to meet an individual application's RPM requirements.**

TYPICAL OPERATING CONDITIONS:

Typical uses are to lubricate ball and roller bearings, gears, screw actuators, electrical contacts, and as an assembly lube on O-Rings and other gaskets for aerospace, automotive, and industrial applications. At high-temperatures **IHTG 700** can withstand 700°F (400°C) for long periods of time. **IHTG 700** is an ideal candidate for fill-for-life applications in the uses cited above.

Due to the chemical resistance of PFPE greases they are highly sought after in the chemical industry. They do not react with corrosive gases, liquids, or oxygen making them ideal valve lubricants. 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 700 is built from a proprietary base 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.

PERFORMANCE CHARACTERISTICS:

IHTG 700 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 |

TYPICAL SPECIFICATIONS:

NLGI Grade	Test Method	#2
Penetration, 60 Strokes		273
Penetration, 60,000 Strokes		268
Drop Point, °F, min.	ASTM D-2265	None
Timken OK Load, Lbs. min.	ASTM D-2509	90
Four-Ball EP Weld Point (kg):	ASTM D-2596	620
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: @ 100°C, cSt @ 40°C, cSt	ASTM D-445	87.4 590
Viscosity Index	ASTM D-2270	236

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 700 from going to the surface and protecting it.