



PURITY™ FG EP GEAR FLUIDS

Introduction

Petro-Canada's PURITY™ FG EP Gear Fluids are advanced food grade lubricants formulated to deliver superior, longer lasting protection than leading specialty food grade lubricants.

PURITY™ FG's superiority results from more than 20 years formulating experience. Using the patented HT purity process, Petro-Canada produces a 99.9% pure, crystal clear base oil – the purest in the world. Free of impurities that can hinder performance and fortified with specially selected performance additives, PURITY™ FG EP Gear Fluids provide outstanding resistance to oxidation, and protection from wear and shock loading.

PURITY™ FG EP Gear Fluids also meet the highest food industry purity standards and fit perfectly in HACCP (Hazard Analysis and Critical Control Point) and GMP (Good Manufacturing Practice) plans.

Features and Benefits

- **Outstanding resistance to oxidative breakdown**
 - Keeps gear boxes free of sludge and varnish
 - Results in longer fluid life and reduced downtime even at high temperatures and in the presence of water and acidic contamination
- **Long-term protection from rust and corrosion**
 - Protects gears from moisture damage
 - Prevents the formation of emulsions that cause rust
 - Protects bronze and copper components
- **Excellent wear and extreme pressure protection**
 - Prevents seizure, scuffing and spalling under shock loading conditions
 - Reduces gear and bearing wear
 - Improves load bearing capability

- **Resistant to foaming and air entrapment**
 - Prevents reservoir overflow
 - Prevents gear damage caused by insufficient lubricant film due to aeration
- **Resistance to contamination**
 - Rapidly separates from water
- **Fully approved for use in and around food processing areas**
 - H1 registered by NSF
 - All fluids meet the requirements of the U.S. Department of Agriculture (USDA) as H1 lubricants for use in federally inspected meat and poultry plants where incidental food contact may occur
 - All fluid components comply with FDA 21 CFR 178.3570 "Lubricants with incidental food contact"
 - Approved by the Canadian Food Inspection Agency for use in registered food processing plants
 - Certified by Star K for use in the preparation of kosher food.
 - Certified Halal by IFANCA
- **Free of genetically modified substances (GMS)**



Applications

PURITY™ FG EP Gear Fluids provide outstanding lubrication in all enclosed gears (worm, helical, bevel and spur) operating under normal or heavy shock-loading conditions.

Because of their inherently low volatility, PURITY™ FG EP Gear Fluids may be used in oil mist lubricating systems where specific mist control additives are not required.

PURITY™ FG EP Gear Fluids can also be used in bearings and chain drives, providing long service life and clean operation.

What is the HT difference?

Petro-Canada starts with the patented HT purity process to produce water-white, 99.9% pure base oils. The result is a range of lubricants, specialty fluids and greases that deliver maximum performance for our customers.



Typical Performance Data

PROPERTY	TEST METHOD	PURITY™ FG EP GEAR FLUIDS				
		EP100	EP150	EP220	EP320	EP460
ISO Grade	-	100	150	220	320	460
SAE Grade	-	85W	90	90	90	140
AGMA Grade	-	3	4	5	6	7
Viscosity, cSt @ 40°C (SUS @ 100°F)	D445	103.2 (538)	144.1 (754)	205.8 (1089)	327.3 (1750)	479.1 (2582)
cSt @100°C (SUS @ 210°F)	D445	11.6 (66)	14.9 (79)	17.6 (91)	23.2 (116)	29.3 (144)
Viscosity Index	D2270	100	95	92	89	88
Flash Point, °C (°F)	D92	269 (516)	247 (477)	233 (451)	223 (433)	199 (390)
Pour Point, °C (°F)	D97	-15 (5)	-18 (0)	-18 (0)	-21 (-5.8)	-27 (-17)
Colour	D1500	<0.5	<0.5	<0.5	<0.5	<0.5
Water Separability, 82°C (180°F), mL (min.)	D1401	40-40-0 (10)	40-40-0 (15)	40-40-0 (15)	40-40-0 (25)	40-40-0 (25)
Rust Protection, A – Distilled Water B – Synthetic Sea Water	D665 D665	Pass Pass	Pass Pass	Pass Pass	Pass Pass	Pass Pass
Foaming Resistance, Sequence I	D892	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Anti-wear Protection: Four Ball Wear, mm (40 kg, 1200 rpm, 1 hr., 75°C)	D4172	0.40	0.39	0.37	0.37	0.37
Extreme Pressure Protection: Four Ball Weld, kg (lb)	D2783	126 (278)	126 (278)	126 (278)	126 (278)	126 (278)

The values quoted above are typical of normal production. They do not constitute a specification.

Health and Safety

Petro-Canada PURITY™ FG EP Gear Fluids have no adverse effect on health, provided they are used as directed. To obtain Material Safety Data Sheets (MSDS), contact one of our Techdata Info Lines.

TechData Info Lines

If you would like to know more about Petro-Canada Purity™ FG EP Gear Fluids or any other product in our complete line of quality lubricants, please contact us at:

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