



LUBRICANTS

A HOLLYFRONTIER BRAND

TECH DATA

PURITY™ FG SYNTHETIC EP GEAR FLUIDS

INTRODUCTION

Petro-Canada's PURITY™ FG SYNTHETIC EP Gear Fluids are advanced food grade fluids specially formulated for gear systems operating in the toughest food processing applications. The advanced chemistry provides longer fluid life and better protection against wear, over a wide range of operating temperatures.

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

SUPERIOR PERFORMANCE BENEFITS

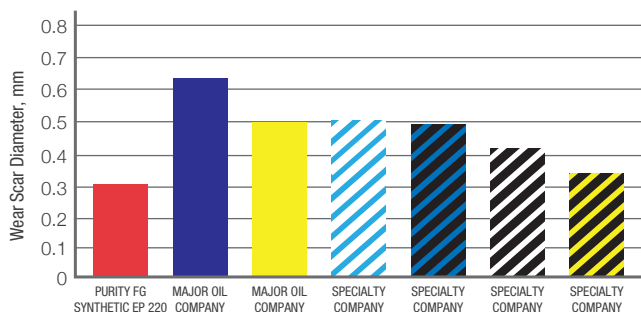
Higher load carrying capability and better protection against wear

- Excellent extreme pressure (EP) and anti-wear (AW) performance
- Protects gears, bearings and equipment operating under heavy loads
- Prevents seizure, scuffing and spalling

Strong resistance to lubricant breakdown in harsh operating environments

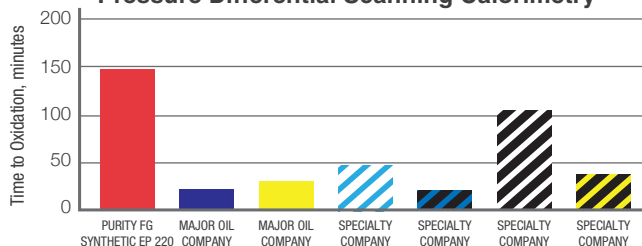
- Highly resistant to thermal and oxidative breakdown
- Helps to keep gear boxes free of carbon, sludge and varnish
- Results in longer fluid life which can help reduce downtime, even at high temperatures and in the presence of water or acidic contamination

WEAR PROTECTION ASTM D4172 – Four Ball Wear Test



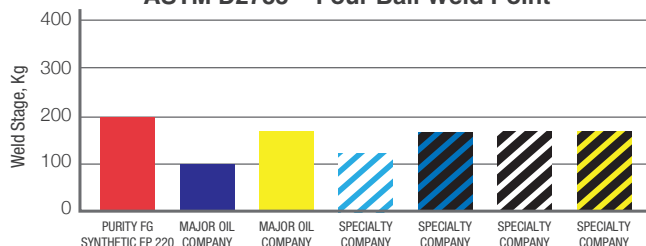
PURITY FG SYNTHETIC EP Gear Fluids deliver stronger wear protection than many major oil companies' and specialty lubricant suppliers' fluids. Less wear means fewer production upsets, higher productivity and helps to lower maintenance costs.

RESISTANCE TO OXIDATION Pressure Differential Scanning Calorimetry



PURITY FG SYNTHETIC EP Gear Fluid's stronger resistance to oxidative breakdown helps to keep gear boxes free of sludge and varnish, and can extend fluid change-out intervals.

LOAD CARRYING CAPABILITY ASTM D2783 – Four Ball Weld Point



PURITY FG SYNTHETIC EP Gear Fluids also provide higher load carrying capability than many major oil companies' and specialty lubricant suppliers' gear fluids, so it's ideal for food processing applications running under heavier loads.

Effective across a wide range of temperature extremes

- Normal operating range from -35°C / -31°F to 121°C / 250°F
- Ideal for gear boxes, pumps and bearings operating under wide temperature swings

MORE PERFORMANCE ADVANTAGES

Long-term protection against rust and corrosion

- Prolongs component life and guards against unplanned downtime

Resistant to foaming

- Prevents reservoir overflow
- Protects against gear damage caused by insufficient lubricant film formation

APPROVED FOR FOOD SAFETY

Fully approved for use in and around food processing operations

- H1 registered by NSF
- All fluid components comply with FDA 21 CFR 178.3570 "Lubricants with incidental food contact"
- Acceptable for use in food processing plants in Canada
- Certified Kosher and Pareve by Star K
- Certified Halal by IFANCA
- Fits perfectly in HACCP (Hazard Analysis and Critical Control Point) and GMP



Nonfood Compounds
Program Listed H1

Free of genetically modified substances (GMS)

Maintains food allergy safety

APPLICATIONS

PURITY™ FG SYNTHETIC EP Gear Fluids provide outstanding lubrication in all types of enclosed gear drives (worm, helical, bevel and spur). They are also recommended for lubricating plain and anti-friction bearings. They are especially effective in food processing applications running under heavier loads, or subject to high or low temperature extremes.

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

TYPICAL PERFORMANCE DATA

Property	Test Method	SYNTHETIC EP 220	SYNTHETIC EP 460
ISO Grade	–	220	460
AGMA Viscosity Grade	–	5	7
Density, kg/L at 15°C	ASTM D4052	0.848	0.855
Colour	ASTM D1500	<0.5	<0.5
Viscosity, cSt @ 40°C / SUS @ 100°F cSt @ 100°C / SUS @ 210°F	ASTM D445 / D2161	213 / 1098 26.4 / 129	450 / 2357 41.7 / 201
Viscosity Index	ASTM D2270	158	143
Flash Point (COC), °C / °F	ASTM D92	273 / 523	257 / 495
Pour Point, °C / °F	ASTM D5950	-40 / -40	-42 / -44
Water Separability at 82°C / 180°F mL, fluid-water-emulsion (minutes to separation)	ASTM D1401	40-38-2 (10)	40-40-0 (20)
Wear Protection and Load Carrying Capability: Four Ball Wear, scar diam (mm) Four Ball Weld, kg / lb	ASTM D4172 ASTM D2783	0.31 200 / 441	0.34 160 / 352
Corrosion Protection: Copper Corrosion, 3h @ 121 °C Rust A - Distilled Water	ASTM D130 ASTM D665	1B Pass	1A Pass

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

Learn more about us: lubricants.petro-canada.com

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Committed to the disciplined operation of our business.



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