



LUBRICANTS

A HOLLYFRONTIER BUSINESS

# TECH DATA

## PURITY™ FG

### SYNTHETIC BARRIER FLUID

## INTRODUCTION

Petro-Canada Lubricants' PURITY FG Synthetic Barrier Fluids are advanced food grade barrier fluids formulated to deliver exceptional performance, by resisting degradation and deposit formation, and are also suitable for service in non-food grade industrial applications. These barrier fluids start clean and remain clean in the most demanding conditions.

PURITY FG Synthetic Barrier Fluid is a PAO based product formulated with specific additives to deliver exceptional protection against oxidation, corrosion, and wear. This NSF H1 registered product is designed to provide lubrication and cooling for mechanical seals to help maximize seal life.

The ideal barrier fluid for mechanical seals that contain process fluids flowing at temperatures above 60°C (140°F), is a very low viscosity Polyalphaolefin (PAO) based fluid with highly stable additives at minimal concentrations. This makes PURITY FG Synthetic Barrier Fluids the ideal candidates for barrier fluid service.

## PERFORMANCE BENEFITS

- Excellent low temperature properties and fluidity
- Resists degradation that can lead to the formation of deposits and shorten seal life
- High flash point
- Low vapor pressure
- Lowers the seal face temperature to prevent blistering of the carbon seal face
- Minimizes deposit formation that creates seal face wear
- Friction reduction due to a high viscosity index helps minimize face wear
- Does not contain metals that lead to process catalyst fouling
- Excellent heat transfer properties to help cool mechanical seals

## FULLY REGISTERED FOR USE IN AND AROUND FOOD PROCESSING AREAS

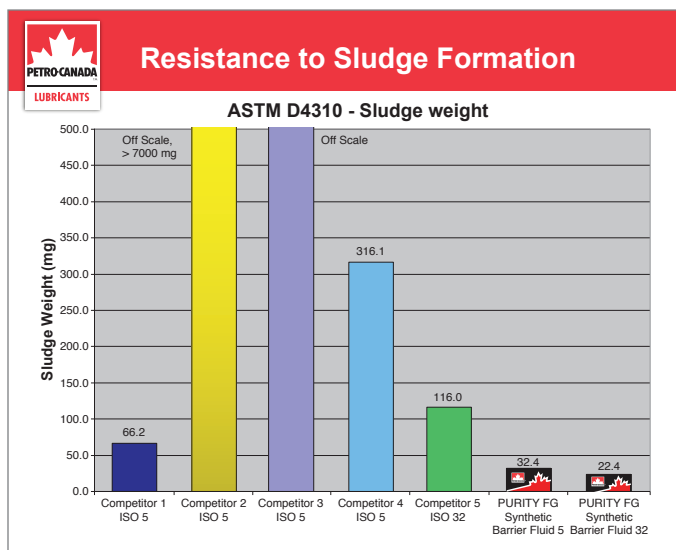
- H1 registered by NSF
- All components comply with FDA 21 CFR 178.3570 Lubricants with incidental food contact
- Certified Kosher Pareve by STAR-K
- Certified Halal by IFANCA
- Easily integrated into HACCP (Hazard Analysis and Critical Control Point) plans and GMP (Good Manufacturing Practice) programs.



Nonfood Compounds Program Listed H1



## EXCELLENT RESISTANCE TO DEGRADATION AND DEPOSIT FORMATION



Petro-Canada Lubricants starts with the 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.



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## VISCOSITY SELECTION GUIDELINES

In dynamic motion, low viscosity fluids exchange heat faster than high viscosity fluids. The viscosity of PURITY FG Synthetic Barrier Fluid 5 is 5.1 cSt @ 40°C, which is optimal for seal face cooling. Once the process fluid temperature rises above 204°C (400°F), use PURITY FG Synthetic Barrier Fluid 32 to maintain a barrier fluid vapor pressure low enough where the fluid will not flash if accidentally exposed to the atmosphere while at process fluid temperature.

## APPLICATIONS

- Seals where demanding application of barrier or buffer fluids are needed
- Seals requiring a light seal oil
- Seals where heat dissipation is critical
- Seal applications in gas, petroleum, and chemicals processing and pumping

## SUPPORT INFORMATION

- Synthetic PAO suitable for wide temperature range of operation
- Resists degradation and deposit formation
- For use in single or tandem mechanical seals
- For use in pressurized or non-pressurized seal plans
- Two ISO viscosity grades
- Compatible with many seal elastomers, such as Nitrile (Buna N), Fluoroelastomer (Viton). For more information, contact your Petro-Canada Lubricants Technical Services representative.

## TYPICAL PERFORMANCE DATA

Property	ASTM Test Method	PURITY™ FG Synthetic Barrier Fluid 5	PURITY™ FG Synthetic Barrier Fluid 32
Density, kg/L @ 15 °C	D4052	0.7992	0.8297
Viscosity cSt @ 40°C cSt @ 100°C	D445	5.1 1.7	30.7 5.8
Flash Point, COC, °C / °F	D92	149 / 300	259 / 498
Pour Point, °C / °F	D5950	-63 / -81	-66 / -89
Rust A	D665	Pass	Pass
Rust B	D665	Pass	Pass
Copper Strip Corrosion Test, 3 hours @ 100°C / 212°F	D130	1a	1b
Foaming Characteristics, Sequence 1, Vol. mL after blow/settling	D892	30/0	10/0
Initial Boiling Point, °C / °F	D7500	173 / 343	372 / 702
RPVOT, min	D2272	1331	1608
Acid Number, (mg KOH/g)	D664	0.6	0.35
Colour	D1500	< 0.5	< 0.5

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

Learn more about us: [lubricants.petro-canada.com](http://lubricants.petro-canada.com)  
Contact us: [lubecsr@petrocanadalsp.com](mailto:lubecsr@petrocanadalsp.com)

Committed to the disciplined operation of our business.



**Petro-Canada Lubricants Inc.**  
2310 Lakeshore Road W. Mississauga, Ontario, Canada L5J 1K2  
[lubricants.petro-canada.com](http://lubricants.petro-canada.com)

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