



PURITY™ FG EP GEAR FLUIDS WITH MICROL™†

Introduction

Petro-Canada's PURITY™ FG EP Gear Fluids are advanced food grade lubricants formulated to deliver effective and long lasting protection. PURITY FG's favourable properties result from more than 30 years of formulating experience. Using the HT purity process, Petro-Canada produces 99.9% pure, crystal clear base oil – among the purest in the world. Virtually 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 good protection from wear and shock loading.

PURITY FG EP Gear Fluids with MICROL contain an antimicrobial preservative to protect the lubricant from deterioration, fouling and odour caused by microorganisms. This helps to ensure the lubricant continues to operate as designed despite harsh operating conditions. MICROL is the first EPA registered antimicrobial preservative for lubricants with incidental food contact (EPA Reg. No. 82076-1).

PURITY FG EP Gear Fluids with MICROL have the required industry credentials and fit perfectly in HACCP (Hazard Analysis and Critical Control Point) and GMP (Good Manufacturing Practice) plans.

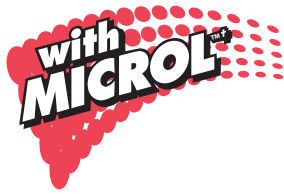
Features and Benefits

- **Excellent resistance to oxidative breakdown**
- **Protects against rust and corrosion**
 - Protects gears from moisture damage
 - Minimizes the formation of emulsions that cause rust
 - Protects bronze and copper components
- **Excellent wear and extreme pressure protection**
 - Works against seizure, scuffing and spalling under shock loading conditions
 - Minimizes gear and bearing wear
- **Resists foaming**
 - Helps reduce the risk of reservoir overflow
 - Works against gear damage caused by insufficient lubricant film due to aeration
- **Resists effects of water contamination**
 - Rapidly separates from water
- **Contains MICROL preservative to protect against lubricant degradation**
 - MICROL antimicrobial protection is now included in select grades of Petro-Canada's PURITY FG EP Gear Fluids to provide antimicrobial product protection
 - MICROL antimicrobial protection is not a substitute for normal plant cleanliness. MICROL antimicrobial protection helps to protect PURITY FG fluids from microbes that can cause odour and product degradation

What is the HT difference?

Petro-Canada 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.





Food Industry Credentials and Environmental Registrations

- **PURITY FG EP Gear Fluids with MICROL are fully registered for use in and around food processing areas, as indicated below:**
 - PURITY FG EP Gear Fluids with MICROL are NSF H1 registered
 - MICROL antimicrobial preservative is registered with the U.S. EPA (No. 82076-1) for protection of the lubricant from microbial degradation
 - All fluid components comply with FDA 21 CFR 178.3570, "Lubricants with incidental food contact"
 - PURITY FG EP Gear Fluids with MICROL are acceptable for use in food processing facilities in Canada
 - PURITY FG EP Gear Fluids with MICROL are permitted to be used in equipment for the preparation of Kosher food



Nonfood Compounds
Program Listed H1

Applications

PURITY FG EP Gear Fluids with MICROL are recommended for all enclosed gears (worm, helical, bevel and spur) operating under normal or heavy shock-loading conditions at moderate temperatures.

PURITY FG EP Gear Fluids with MICROL can also be used in bearings and chain drives.

Typical Performance Data

| PROPERTY | PURITY FG EP GEAR FLUIDS WITH MICROL | | | |
|---|--------------------------------------|-----------------|-----------------|-----------------|
| | TEST METHOD | 100 | 150 | 220 |
| ISO Grade | - | 100 | 150 | 220 |
| AGMA Viscosity Grade | - | 3 | 4 | 5 |
| Viscosity, cSt @ 40°C (SUS @ 100°F) | D445 | 101 (528) | 143 (749) | 224 (1184) |
| cSt @100°C (SUS @ 210°F) | D445 | 11.4 (65) | 14.3 (76) | 18.9 (96) |
| Viscosity Index | D2270 | 99 | 97 | 94 |
| Flash Point, COC, °C (°F) | D92 | 271 (520) | 219 (426) | 211 (412) |
| Pour Point, °C (°F) | D5950 | -12 (10) | -15 (5) | -18 (0) |
| Colour | D1500 | <0.5 | <0.5 | <0.5 |
| Water Separability, 82°C (180°F), mL (min.) | D1401 | 43-37-0 (15) | 43-37-0 (15) | 43-37-0 (15) |
| Rust Protection, A – Distilled Water | D665 | Pass | Pass | Pass |
| B – Synthetic Sea Water | D665 | Pass | Pass | Pass |
| Foaming Resistance, Sequence I | D892 | 10/0 | 10/0 | 0/0 |
| Anti-wear Protection: Four Ball Wear, mm (40 kg, 1200 rpm, 1 hr., 75°C) | D4172 | 0.44 | 0.47 | 0.51 |
| Extreme Pressure Protection: Four Ball Weld, kg (lb) | D2783 | 126 | 126 | 160 |

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

Health and Safety

To obtain Material Safety Data Sheet (MSDS), contact one of our TechData Info Lines.

TechData Info Lines

To place an order, please call a Customer Order Management Representative at :

Canada (English) Phone 1-800-268-5850
(French) Phone 1-800-576-1686
United States Phone 1-877-730-2369
Latin America Phone +1-416-730-2369
Europe Phone +1-416-730-2389
Asia Phone +1-416-730-2372
China Phone +86 (21) 6362-0066

You can also e-mail us at lubecsr@suncor.com



To learn more about how Petro-Canada lubricants, specialty fluids, oils and greases can help maximize your equipment performance, savings and productivity, please contact us at :

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Europe Phone +44 (0) 121-781-7264
Germany Phone +49 (0) 201-726 2913
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