



## PURITY\* FG AW HYDRAULIC FLUIDS

### Introduction

Petro-Canada's PURITY\* FG AW Hydraulic 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 25 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 AW Hydraulic Fluids have better resistance to oxidative breakdown than leading specialty food grade fluids. Tough enough to handle wet food processing environments with acidic contaminants and wide temperature swings, PURITY\* FG AW Hydraulic Fluids extend equipment life and reduce operational downtime.

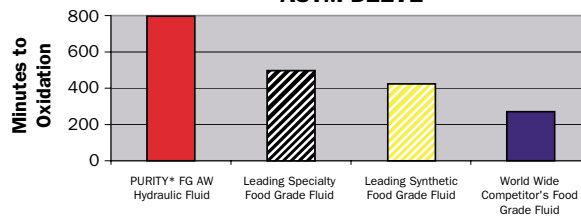
PURITY FG AW Hydraulic Fluids also meet the highest food industry purity standards and fit perfectly in HACCP (Hazard Analysis and Critical Control Point) and GMP (Good Manufacturing Practice) plans. All Fluids are H1 registered by NSF and are approved by the CFIA for incidental food contact in registered food processing plants.

### Features and Benefits

- **Resists oxidative breakdown better than leading specialty food grade hydraulic fluids**
  - Outstanding resistance to oxidative breakdown even at high temperatures and in the presence of water and acidic contamination

- Keeps systems free of sludge and varnish to ensure smooth and reliable operation of hydraulic valves and actuators
- Results in longer fluid life and reduced downtime in tough operating environments

**Resistance to Oxidation  
ASTM D2272**



- **Excellent anti-wear protection**
  - Protects metal pump parts from scuffing and scoring
  - Protects equipment operating at maximized production rates for extended periods in tough conditions
  - Extends equipment life
  - Improves operating reliability over a wide range of pump output pressures
  - 46 grade passes Vickers 35VQ25A test and all grades pass FZG > 12
- **Long-term protection from rust and corrosion**
  - Prevents pump, actuator and circulating system damage in moist or wet operations

#### 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.



- **Excellent resistance to contamination**
  - Rapidly separates from water without loss of performance additives
  - Maintains consistency and fluid performance in the presence of food acids, juices and by-products
- **Highly resistant to foaming and air entrapment**
  - Prevents reservoir overflow
  - Eliminates “sponginess” from hydraulic systems and damage caused by pump cavitation

## Food Grade Approvals

- **Fully approved for use in and around food processing areas**
  - H1 registered by NSF
  - 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



- **Maintains food allergy safety**
  - To the best of our knowledge contains no peanuts, tree nuts, or their derivatives
  - Manufactured in a facility that does not manufacture, store, or otherwise handle any peanut or tree nut product

## Applications

PURITY FG AW Hydraulic Fluids provide excellent performance in high pressure systems including applications operating at more than 1000 PSI (7000 kPa). They may also be used to lubricate anti-friction bearings and general circulating systems.

PURITY FG AW Hydraulic Fluids can also be used in inline oilers in pneumatic systems commonly found in food packaging applications. PURITY\* FG AW Hydraulic Fluids are ideal because they deliver clean, non-varnishing performance even in extended service, and are essentially odourless in the exhaust air.

## Typical Performance Data

PROPERTY	TEST METHOD	PURITY* FG AW HYDRAULIC FLUIDS			
		AW32	AW46	AW68	AW100
ISO Grade	–	32	46	68	100
SAE Grade	–	10	20	20	30
Viscosity, cSt @ 40°C / SUS @ 100°F cSt @100°C / SUS @ 210°F	D445	29.8 / 154 5.2 / 44	45.4 / 234 6.8 / 49	63.3 / 328 8.4 / 55	101.5 / 529 11.5 / 66
Viscosity Index	D2270	101	102	102	99
Flash Point, °C / °F	D92	225 / 437	245 / 473	253 / 487	267 / 513
Pour Point, °C / °F	D97	-18 / 0	-18 / 0	-18 / 0	-15 / 5
Colour	D1500	0.5	0.5	<0.5	<0.5
Water Separability, 54°C (129°F), mL (min.) 82°C (180°F), mL (min.)	D1401	40-40-0 (15) –	40-40-0 (15) –	40-40-0 (15) –	– 40-40-0 (15)
Rust Protection, A - Distilled Water B - Synthetic Sea Water	D665 D665	Pass Pass	Pass Pass	Pass Pass	Pass Pass
Foaming Resistance, Sequence I	D892	0 / 0	0 / 0	0 / 0	0 / 0
Wear Protection: Four Ball Wear, scar diam., mm 35VQ25A Vickers Test	D4172	0.46 –	0.48 Pass	0.49 –	0.44 –
Scuffing Load Capacity: FZG, Failure Load Stage	D5182 A/8.3/90	>12	>12	>12	>12
Oxidation Resistance: RBOT, in minutes TOST, in hours	ASTM D2272 ASTM D943	844 >10,000	885 >10,000	886 >10,000	888 >10,000

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

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