

PureDrill™ HT-30

Drilling Mud Base Fluid



Performance and Safety

Petro-Canada's PureDrill HT-30 introduces a breakthrough for onshore producers who want to maximize drilling efficiency while improving health, safety and environmental practices. PureDrill HT-30 is the latest advancement in drilling mud base fluid performance from Petro-Canada – the brand producers around the world have come to trust for greater performance over diesel-based systems.

Potential Performance Benefits	PureDrill-Based	Diesel-Based	Water-Based
Improved hole stability versus water-based mud	✓	✓	✗
Enhanced rates of penetration	✓	✗	✗
Reduced bit runs	✓	✗	✗
Reduced environmental impact	✓	✗	✓
Reduced risk of fire	✓	✗	✓
Faster and safer cleanup	✓	✗	✓
Virtually non-toxic, odourless, biodegradable	✓	✗	✓

Environmental, Health & Safety Benefits

PureDrill HT-30 is a unique blend of synthetic isoalkane fluid and severely hydrocracked low toxicity mineral oil.



Petro-Canada produces HT-30 using the patented HT purity process combined with hydroisomerization.

The result is pure drilling mud base fluid that's clear like water, virtually non-toxic and environmentally friendly.

Here are the advantages:

- Reduced toxicity. Not controlled under OSHA or WHMIS
- Extremely low PNA content well below AEUB Tier 1 Standards
- Helps reduce disposal costs
- Low aromatics and toxicity allow biodegradation at significantly higher hydrocarbon concentrations
- Faster biodegradation of oil on cuttings
- PureDrill HT-30 features a higher flash point than diesel, helping to reduce the risk of fire or explosion
- Faster, safer rig cleanup
- Helps to eliminate skin and eye irritation that can result from exposure to diesel-based systems

Facts about PureDrill HT-30

Born in the oil patch, Petro-Canada's family of PureDrill advanced drilling mud base fluids has gained its credentials for superior performance in some of the world's most rugged and environmentally sensitive areas. Onshore and offshore producers have experienced significant uptime benefits by switching to PureDrill, including reduced drilling costs, less downtime and increased drilling rates.

- Increases lubricity and hole stability
- Suitable for use in higher temperature applications
- Helps to enhance rates of penetration
- Potentially improves drill bit life
- Helps reduce bit balling
- Helps improve BOP seal life
- Helps reduce corrosion (as a rust inhibitor)
- Helps control formation reactivity
- Minimal impact on many elastomers
- Proven effective for use as a:
 - Heat string fluid
 - Diluent for liquid mud additives
 - Base gel fluid
 - ROP Enhancer
 - Differential fluid

Dependable Supply Today and Tomorrow

- Delivery to where and when you need it
- Available only from Petro-Canada – one of the world's most dependable producers of advanced fluids

Typical Performance Data

PROPERTY	TEST METHOD	PETRO-CANADA PUREDRILL™ HT-30	DIESEL (ULSD)
PM Flash Point, °C/°F Hazardous Material Label Combustible Liquid (OSHA)	ASTM D93	94/201 No	64/147 Yes
Saturates, weight % Aromatics, weight % UV	PCM 435	>98 2.0	74.5 25.5
BTEX, ppm Benzene Toluene Ethylbenzene Xylene	GC/MS Method	<1 <1 <1 <1	>3000 42 645 391 2189
Polynuclear Aromatic, ppm	HRMS EPA Method	<10	>1300
Visual Pollution	Sheen	No	Yes
Density, kg/L @ 15°C (60°F)	ASTM D4052	0.82	0.84
Viscosity, cSt @ 40°C SUS @ 100°F	ASTM D445	2.6 34.6	1.6 to 2.4
Colour	ASTM D1500	<0.5	Yellow
Aniline Point, °C/°F	ASTM D611	83/181	60/140
Pour Point, °C/°F	ASTM D5950	-36/-33	-27/-17
Sulfur, wppm	ASTM D5453	<1	6
Base Oil Toxicological Summary			
96-hour LC ₅₀ Trout toxicity, ppm		>500,000*	Fail
MICROTOX™	EPS 1/RM/24	Pass (EC50 >91%)*	Fail (EC50 <1.4%)
Biodegradability, %	OECD 301B or 306 @ 28 days	20 to 60 (inherently biodegradable)*	
Human Health & Safety			
Acute Oral LD ₅₀ (rat), mg/kg		>5000 (Virtually Non-toxic)	Toxic
Acute Dermal LD ₅₀ (rabbit), mg/kg		>2000 (Not An Irritant)	Irritant
Acute Eye Irritation / Corrosion		Slightly Irritating	Irritant
Inhalation TLV® ¹ , mg/m³		5	Irritant
Mutagenicity	Modified Ames	Negative	
Potential Carcinogenic Label		No	Yes

¹TLV - Threshold Limit Value - Quantity a person can be exposed to in an 8 hour period. TLV is a registered trademark of American Confederation of Government Industrial Hygienists.
* Results obtained with a similar product.
The values quoted above are typical of normal production. They do not constitute a specification.
™MICROTOX is a registered trademark of Microbics Corp.

Rubber Compatibility

PureDrill HT-30 has significantly better elastomer compatibility in comparison with diesel (eg with Buna-N rubber). This has the potential of lengthening the life span of articles, which are either made of elastomers or those that incorporate elastomer components.

Health & Safety

To obtain Material Safety Data Sheets, contact one of Petro-Canada's TechData Info Lines. Our Customer Order Management Team is ready to respond quickly to any questions you may have.



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