

KLONDIKE Biodegradable AW Hydraulic Fluids: ISO 32, 46



PRODUCT DESCRIPTION

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids are readily biodegradable, non-toxic, ashless oils designed for high performance hydraulic systems in mobile and stationary equipment. These fluids provide excellent operating and maintenance benefits across a broad temperature range for increased productivity, performance, and hydraulic pump protection.

APPLICATIONS

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids are recommended for vane, piston, or gear-type hydraulic pumps in heavy duty, industrial machinery and mobile equipment and are highly recommended for use in monitored or environmentally sensitive locations. These premium oils effectively replace conventional hydraulic oils in any application where possible oil leakage may lead to undesirable, negative environmental impact. Typical applications include mining, marine, exploration, drilling, forestry and woodland equipment applications as well as indoor and outdoor industrial mills, factories, and construction equipment. These vegetable-based non-toxic fluids may also be used as general purpose lubricants to replace straight grade mineral oils or conventional rust and oxidation inhibited oils where these fluids are recommended.

Check your owner's manual for recommended fluid viscosity.



FEATURES AND BENEFITS

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids are manufactured with the highest quality, ultra-pure biodegradable canola base oil and high performance ashless additives. These advanced, thermally stable oils are designed for use in both high and low pressure hydraulic systems for industrial and mobile applications. A unique combination of antiwear and friction modifying agents as well as metal passivators, demulsifiers, rust inhibitors, and defoaming agents ensure these specialized oils maximize hydraulic performance and provide trouble free service in high output hydraulic systems operating at high temperature and pressure. Naturally high viscosity index provides outstanding shear stability and viscosity control, resisting oxidation and chemical breakdown.

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids are designed to minimize environmental impact and have low environmental persistence. These fluids are totally biodegradable and exceed established criteria for "readily" biodegradable status (OECD 301-B >60% within 28 days).

Developed as a complete alternative to mineral based hydraulic fluids, KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids may safely be mixed with conventional and synthetic hydraulic oils if necessary. However, mixing with conventional or synthetic oils will void biodegradable status.

Biodegradability established via CEC/Sturm test methods and meets OECD 203 requirements for aquatic toxicity.

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids deliver value through the following benefits:

- **High viscosity index** – minimal viscosity change across wide temperature range delivers consistent, reliable performance.
- **High oxidation stability** – resists heat induced oil thickening and deposit formation in high pressure, high temperature service applications
- **Antiwear protection** – premium ashless antiwear additives minimize metal to metal contact even in high pressure operation
- **Outstanding versatility** – used in both mobile and stationary hydraulic equipment – wherever conventional hydraulic fluids are used



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SPECIFICATIONS AND APPROVALS

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids are recommended for use in equipment manufactured by Eaton Vickers, Denison, Komatsu, Sauer-Danfoss, Oilgear, Hydreco, Dynex and others.

KLONDIKE Biodegradable Anti-Wear Hydraulic Fluids are recommended for use where the following specifications are required:

- **ASTM D6158**
- **Bosch Rexroth**
- **Eaton-Vickers** 35VQ25A pump, M-2950-S (Mobile) and I-286-S (Stationary)
- **Parker Hannifin (Denison)** HFO, HF1, HF2, T6H20C
- **DIN 51524-2**
- **General Motors** LS2 Specification, LH for antiwear hydraulic fluids
- **ISO 6743/4, 11158 L-HM**
- **Komatsu**
- **MAG Cincinnati, Cincinnati Machine**
- **JCMAS HK-1**
- **AFNOR NFE 48-603HM**
- **Lee-Norse 100-1**
- **Jeffrey No. 87**
- **Ford M-6C32**
- **B.F. Goodrich 0152**
- **Racine, Variable Volume Vane Pumps**
- **USS 127**

TYPICAL TECHNICAL PROPERTIES

PROPERTY	TEST METHOD	KLONDIKE	
		ISO 32	ISO 46
Oxidation hours, min	ASTM D943	3000+	3000+
Viscosity @ 40°C (cSt)	ASTM D445	33.0	49.5
Viscosity @ 100°C (cSt)	ASTM D445	7.42	11.67
Viscosity Index	ASTM D2270	221	240
Flash Point °C	ASTM D92	>250	>250
Pour Point °C	ASTM D5950	-33	-24
Zinc, wt %	ASTM D4927	0.00	0.00
Gravity; °API	ASTM D4052	21.3	21.6
Specific Gravity @ 60°F	ASTM D4052	0.913	0.916
4-Ball wear data			
1hr, 167°F, 1200rpm, 40kg		0.30/0.30	0.30/0.30
1hr, 130°F, 1800rpm, 20kg		0.30/0.30	0.30/0.30
1hr, 167°F, 1200rpm, 40kg		0.30/0.30	0.30/0.30
Biodegradability CEC/Sturm		100%	100%
Ecotoxicity Data			
Fathead minnow		96hr. LC-50 = >10,000 ppm	
Daphnia magna		48hr. EC-50 = >10,000 ppm WAF	

All stated physical properties are typical of standard production and may vary.



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HEALTH AND SAFETY

This product is not expected to have adverse health implications when used for its intended application. For detailed information on safe handling of this product, refer to its Material Safety Data Sheet (MSDS). To obtain an MSDS on this or any other KLONDIKE product, please visit www.klondikelubricants.com or call 1-877-293-4691. When disposing of used product, be responsible to the environment.

BRAVING THE FORCE OF MOVEMENT

KLONDIKE stands for robust, reliable, high quality products tailored to suit the requirements of the on- and off-road heavy duty, automotive and industrial markets. Our solutions span from trend-setting retail lubricants through small-batch custom formulations to large bulk orders ready for immediate delivery.

The extensive KLONDIKE product range includes premium oils, lubricants, greases, chemicals and specialty fluids formulated with virgin base oils and protective inhibitors. Designed to handle the most extreme climates and operating conditions, the KLONDIKE products protect and extend the life of your equipment, optimize performance and improve productivity while meeting and exceeding industry standards and specifications.

KLONDIKE Lubricants Corporation

Toll-free 1-877-293-4691

info@klondikelubricants.com
www.klondikelubricants.com

