



Rugged™ Biodegradable Synthetic Blend Zinc-Free Hydraulic Oil

Rugged™ Biodegradable Synthetic Blend Zinc-Free Hydraulic Oil is high quality zinc-free biodegradable hydraulic oil offering excellent oxidation protection with a unique zinc-free additive system. Rugged™ Biodegradable Zinc-Free oils are available in an ISO 32 and 46 viscosity ranges to meet many equipment specifications.

Rugged™ Biodegradable Synthetic Blend Zinc-Free Hydraulic Oil is formulated to replace conventional zinc-containing hydraulic fluids where the environment is of utmost concern. Formulated with synthetic ester base oils, these products provide the optimum balance between performance and protection of our environment.

Intended applications include equipment used in marine environments, parks, wild life areas, recreational areas, golf courses, mines, etc. **Rugged™ Biodegradable Synthetic Blend Zinc-Free Hydraulic Oil** minimizes the environmental impact of accidental leaks and spills.

Recommended Applications:

- Vickers 104C Vane Pump Test

Important Characteristics:

Rugged™ Biodegradable Synthetic Blend Zinc-Free Hydraulic Oil is blended with selected premium quality base oils and selected additives to provide these essential characteristics:

- Readily Biodegradable.
- Contains no Zinc or other heavy metals.
- Filterability and demulsibility.
- Excellent thermal and oxidation stability.

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	TYPICAL PROPERTIES		
ISO-Viscosity Grade	ASTM D-2422	32	46
Specific Gravity	ASTM D-4052	.912	.914
Flash Point °F/°C	ASTM D-92	328 (164)	500 (260)
Pour Point °F/°C	ASTM D-97	-30 (-34)	-32.8 (-36)
Viscosity @ 40 °C	ASTM D-445	36.9	43.4
Viscosity @ 100 °C	ASTM D-445	8.1	9.65
Viscosity Index	ASTM D-2270	202	212
ASTM Rust Test	ASTM D-665 A&B	Pass	Pass
Acid Number mg KOH/g	ASTM D974	0.3	0.3
Copper Corrosion	ASTM D130	Pass	Pass
4 Ball Wear Test	ASTM D4172	0.45	0.42
Aquatic Toxicity, Rainbow Trout 1000mg/L 96h LC50	OECD 203 1-12	Non-toxic	Non-toxic
Biodegradability in 28 days	OECD 301B, %	>70	>70

A superior product by Colorado Petroleum Products Company

11-07-2018 JDS