



EnBio MP68

Your responsible choice for a sustainable environment

Product Description

EnBio MP68 is a patented high performance, cost effective, energy saving environmentally safe, biodegradable, synthetic hydraulic fluid designed specifically for use in hydraulic systems in equipment used in environmentally sensitive areas, such as marine, agriculture, mining, dockside, forestry, industrial, amusement and mobile equipment. EnBio MP68 hydraulic fluid meets or exceeds Bosch-Rexroth, Danfoss (Sauer), Eaton, and Parker's (Vickers) specifications.

Product Features & Benefits

- High viscosity index, which means EnBio MP68, can be used over a wide temperature range having only a minimal impact on the bulk fluid viscosity. No need to use two different grades of hydraulic oil for summer and winter, where one gets high temperature differences, for example New York.
- Outstanding anti-wear performance has been demonstrated which means a longer, more reliable service life, which in turn means lower maintenance costs and less down time.
- A unique additive package provides unsurpassed thermal and oxidative stability, which means that EnBio MP68 remains clean, will not sludge or varnish and lasts 3-4 times longer than vegetable hydraulic oils.
- EnBio MP68 is classified as readily biodegradable (by OECD 301B / 301F test method) and is dyed blue for ease of detection when a spill occurs.
- Classified Ecologically harmless, as it has no significant hazard to small mammals, plant life or aquatic life. Under OECD guideline 420 for acute oral toxicity testing, EnBio MP68 is classified as a "compound, which does not present a significant acute toxic risk if swallow
- Should EnBio MP68 accidentally spill into waterways it will NOT form a streak on water (sheen) nor will it form an emulsion or sludge thereby preventing the destruction of future and existing food supplies, breeding animals and habitats which exist on the surface or in contact with water.
- It has been shown through numerous tests, that EnBio MP68's low toxicity, readily biodegradability and **NO** sheen make it ideally suited for the environmentally sensitive applications in or around water.
- Lower friction losses and higher gear efficiencies, leads to reduced sump temperatures, which in turn means better performance and lower maintenance costs.
- A High VI and low coefficient of friction leads to lower Energy consumption (Fuel savings) by increasing pump efficiency due to optimized viscosities at start up, normal operation and peak load conditions.



Typical Physical & Chemical Properties

Test	Method	Typical Results
Appearance		Blue fluid
ISO Viscosity Grade		68
Viscosity @ 40°C (Cst)	ASTM D445	69.8
Viscosity @ 100°C (Cst)	ASTM D445	14.5
Viscosity @ 0 °C (Cst)	ASTM D445	698.8
Specific Gravity @ 20°C	ASTM D1298	1.06
Viscosity Index	ASTM D2270	219
Flash Point (open cup) (°F)	ASTM D92	552
Flash Point (Closed cup) (°F)	ASTM D93	479
Fire Point (°F)	ASTM D92	610
Pour Point (°F)	ASTM D97	-48
Foam Test — seq.1,11,111	ASTM D892	0/0:20/0:0/0
Corrosion Protection	ASTM D665 (A & B)	Pass
Copper Strip Corrosion	ASTM D130	1B
Turbine Oxidation	ASTM D934	>5000 Hours
Fourball Anti-Wear (mm wear scar)	ASTM D4172	0.37
Fourball EP (mm wear scar)	ASTM D2783	0.36
Sonic Shear Stability		
- initial viscosity @ 40°C (Cst)	ASTM D5621	69.84
- irradiated viscosity @ 40°C (Cst)		69.0
- initial viscosity @ 100°C (Cst)	ASTM D5621	14.53
- irradiated viscosity @ 100°C (Cst)		14.49
Fuel Injection Shear Stability Test	ASTM D 3945	NO Viscosity Loss
V104 Vane Pump Test (mg/hr)	DIN 51,389 M-	0.019
35 VQ Vickers Vane Pump Test	2950-S	Pass
FZG Visual Gear Test	ASTM D5182	Passes 12 stages
Modified Sturm Biodegradability Test (28 days)	OECD 301B/301F	Readily Biodegradable
Sea Water		
96 hour Sheephead Minnow LC50 (mg/l)		> 1000
96 hour Mysid Shrimp LC50(mg/l)		> 1000
Fresh Water		
96 hour Fathead Minnow LC50 (mg/l)	OECD 203	>50 000
16 hour Bacterial Inhibition IC50 (mg/l)		22 000
48 Hour Daphina Magna EC (mg/l)	OECD 202	>40 000