

ISO 22, 32, 46, 68 Hydraulic Fluids

NV EARTH Bio-based is a premium synthetic created through a unique process that produces the World's first biodegradable oil hydrocarbon. It is not "Veggie" oil which has been used for decades to replace petroleum (unsuccessfully) in environment sensitive applications. Veggie oils, although safe, are not compatible with petroleum, they will break down under extreme pressure/temperature very quickly and often times create insoluble gums/sludge. NV EARTH is compatible with petroleum, it does not affect seals and it will outperform conventional hydraulic oils that adhere to the ISO 15380 standard.

- Exceeds ISO 15380 Petroleum Standards
- 300-500% better oxidation than conventional petroleum
- 2-3x longer interval changes than conventional petroleum
- Food grade base oil
- High Shear Stability and Viscosity Index
- Compatible with petroleum, no seal or elastomer destruction
- Superior Oxidation profile
- Outstanding water separation (demulsibility D943)
- Ultimate Biodegradable (>60% in 28 days)



Standard	Density @ 15C	Viscosity @ 40C	Viscosity @ 100C	Viscosity Index	Pour Point C	Flash Point C	Biodegrade %
ISO 22	0.830	22	5.5	193	-51	191	>60
ISO 32	0.830	32	6.1	141	-42	242	>60
ISO 46	0.840	44	7.9	157	-45	242	>60
ISO 68	0.850	68	10.8	156	-39	245	>60

USDA BioPreferred

EPA VGP Compliant

EU Ecolabel Certified

EPA Environmentally Acceptable Lubricant



ISO 15380 Specifications for DGP Hydraulic Fluids

Test	Test protocol	ISO 46
Kin Viscosity @ 40°C	ASTM D445	43.78 cSt
Kin Viscosity @ 100°C	ASTM D445	8.01 cSt
Kin Viscosity @ 0°C	ASTM D445	372.4 cSt
Kin Viscosity @ -20°C	ASTM D445	1902 cSt
D2270 Viscosity index	ASTM D2270	157
D4052 Specific gravity	ASTM D4052	0.841
ASTM D1500 color	ASTM D1500	0.5
Appearance	visual	Clbr
Ash content ISO 6245 (D482)	ASTM D482	<0.001
D97 Pour Point	ASTM D97	-42°C
D2532 Low temp fluidity -20'C	ASTM D2532	Pass
D92 Flash Point	ASTM D92	241°C
D664 Acid Number	ASTM D664	0.67 mg KOH/g
Water content	ASTM D6304	51 mg/kg
Cleanliness level ISO 4406	ISO 4406	19/17/14
D665A Rust Test (24 hrs)	ASTM D665	Pass
D665B Rust Test (24 hrs)	ASTM D665	Pass

ISO 15380 Specifications for DGP Hydraulic Fluids

Test	Test protocol	ISO 46
Kin Viscosity @ 40°C	ASTM D445	43.78 cSt
Kin Viscosity @ 100°C	ASTM D445	8.01 cSt
Kin Viscosity @ 0°C	ASTM D445	372.4 cSt
Kin Viscosity @ -20°C	ASTM D445	1902 cSt
D2270 Viscosity index	ASTM D2270	157
D4052 Specific gravity	ASTM D4052	0.841
ASTM D1500 color	ASTM D1500	0.5
Appearance	visual	Clbr
Ash content ISO 6245 (D482)	ASTM D482	<0.001
D97 Pour Point	ASTM D97	-42°C
D2532 Low temp fluidity -20'C	ASTM D2532	Pass
D92 Flash Point	ASTM D92	241°C
D664 Acid Number	ASTM D664	0.67 mg KOH/g
Water content	ASTM D6304	51 mg/kg
Cleanliness level ISO 4406	ISO 4406	19/17/14
D665A Rust Test (24 hrs)	ASTM D665	Pass
D665B Rust Test (24 hrs)	ASTM D665	Pass

ISO 15380 Specifications for DGP Hydraulic Fluids

Bio vs Petroleum vs Syn vs Vegetable	DGP	Mobil DTE Excel	Mobil SHC 525	Mobil EAL 224H	Amsoil Biodegradable
Basestock	Bio-based	Petroleum	Synthetic Petrol	Vegetable	Ester
Ashless	Yes	No	No	Yes	Yes
KV 40 cSt	46	46	46	37	46
VI	157	97	154	212	200
Pour Point *C	-45	-33	-54	-34	-33
Renewable Content >60%	Yes	No	No	Yes	No
Biodegrade >60%	Yes	No	No	Yes	Yes
Copper Corrosion	1A	1A	1B	-	1A
FZG fail stage	14	12	11	12	12
RPVOT minutes	>1200	152	209	44	258
Hydrolytic Stability—D943	Yes	Yes	Yes	No	No
Ecolabel Certified	Yes	No	No	No	No
Pass Denison HF-0	Yes	Yes	Yes	No	No

The FIRST plant based synthetic to exceed petroleum standards and be completely compatible with no change in operating procedures or upgrades to equipment. Superior performance and environment friendly now go hand in hand