

ECOMAX SE 68

Product code: 266100501

Biodegradable hydraulic fluid from renewable sources

These fluids are a range of environmentally acceptable hydraulic oils based on unsaturated vegetable based synthetic esters. It is formulated with high viscosity base oils which provide very low pour points as well. Its additive package ensures good oxidation stability and possesses good anti corrosion and anti-wear characteristics and less impact on aquatic and marine environments.

Benefits & Advantages

- Very high viscosity index
- High shear stability
- Good lubricating properties
- Good oxidation stability resulting in a very long lifetime and reduced cost
- Excellent seal compatibility
- Miscible with conventional mineral oils
- European Ecolabel reg. number NL/27/002
- Swedish Standard SS 15 54 34 SP listed
- CEC L-33-A-93 biodegradability of >90 %

Applications

These oils are recommended for mobile as well as stationary hydraulic systems replacing conventional mineral oils especially in areas with increased risk of spillage or accidental leakage. These installations are usually found in offshore applications and other marine environments such as harbor cranes, subsea and lifesaving equipment. The right choice of the viscosity depends very much on the working and ambient temperature of the equipment. ISO VG 22 and 32 are more suitable for the lower temperatures where ISO 46 is the most all-round product. In case of higher temperatures choose the ISO VG 68. ISO/FDIS 15380 HEES.

Typical Performance Data

| Typical | Test Method | Value |
|------------------------------------|-------------|-------|
| Density @ 20 °C, gr/m ³ | ISO 3675 | 0.92 |
| Viscosity @ 40 °C, cSt | ISO 3104 | 64-72 |
| Viscosity @ 100 °C, cSt | ISO 3104 | 11 |
| Viscosity Index | ASTM D2270 | 210 |
| Pour point, °C | ASTM D97 | -40 |
| Flash point, °C | ASTM D93 | 270 |
| Dry TOST, hours | ASTM D-943 | >600 |

All performance data on this Technical Data Sheet are indicative only and can vary during production.



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Environmental data

| | | |
|----------------------------|----------------------|--------------------------|
| Biodegradability, % | OECD 301 F | Readily biodegradable >8 |
| Toxicity | OECD 201-203, 401 | Non toxic |
| Bioaccumulation | OECD 305 D | No accumulation |
| Skin and eye irritation | OECD 401-402, 404-40 | Not irritant |
| Mutagenity | OECD 471 | Not mutagenic |
| Biological renewability, % | | >80 |

Vickers vane wear test

| Vane pump | Test Method | Limit,max | Result |
|-----------------------------------------------------|-------------|-----------|--------|
| 104C pump, 13.7 MPa, 1,200 min-1, 66 °C, 100 hrs | | | |
| • Ring, mg | ISO 20763 | 120 | <2 |
| • Vanes, mg | ASTM D7043 | 30 | <2 |
| 35VQ25 pump, 20.79 MPa, 2,400 min-1, 93 °C, 150 hrs | | | |
| • Ring, mg | ASTM D6973 | 75 | <2 |
| • Vanes, mg | | 15 | <2 |