

Hydraulic Fluid Technical Data Sheet

Hydraulic fluids are essentially incompressible liquids that transfer power through a piping system. During operation, the system operates under pressure so the viscosity of the fluid must be high enough to minimize leakage. Conversely, high viscosity hurts flow properties and efficiency as viscous heating of the fluid becomes significant. Since hydraulic fluids may operate over a range of temperatures, the pour point and viscosity index are important. The fluid provides lubrication to the pump and valves and helps to prevent corrosion of metal parts. It must also be compatible with elastomeric sealing materials. The fluid may need to perform under conditions that can cause oxidation, hydrolysis, or contamination, and it should not be toxic or harmful when leaked or discarded.

Hydraulic systems are commonly used in transportation and industrial applications, and the service conditions vary significantly. Water or mineral oil fluids are adequate for many uses, and synthetic esters are used when biodegradability, fire resistance, or other advanced performance characteristics are required. International Standards Organization (ISO) classifies fire resistant synthetic ester fluids in the HFDU category.

Synthetic Ester	Chemistry	Viscosity @40 °C(cSt)	Viscosity @100 °C(cSt)	Viscosity Index	Flash Pt. (°C)	Pour Pt. (°C)
Lubricit 2-EHO	Monoester	8	3	190	215	-40
Lubricit DINA	Diester	11	3	140	220	-60
Lexolube 3I-310	Polyol	14	3	120	230	-65
Lubricit TMP C9	Polyol	21	5	140	285	-30
Lubricit DTDA	Diester	22	5	150	245	-55
Lubricit NGDO	Polyol	24	6	200	270	-60
Lexolube 2X-109	Diester	27	5	140	260	-60
Lubricit PE 49	Polyol	33	6	150	315	-45
Lubricit TMP THCFA	Polyol	37	7	155	300	-15
Lubricit TMP C18	Polyol	46	9	190	325	-45
Lubricit PE 418	Polyol	66	12	185	340	-35
Lexolube PQ-68	Polyol	68	9	105	250	-30
Lubricit 9526	Complex	330	45	185	320	-40
Lexolube CP-460LC	Complex	460	46	150	290	-25
Lexolube CG-3000	Complex	3000	290	230	320	-20

Features

- ▶ High flash and fire point
- ▶ Excellent lubricity
- ▶ Biodegradability
- ▶ Seal swell
- ▶ Wide temperature performance

Applications

- ▶ Fire resistant (HFDU) oils
- ▶ Mobile machinery
- ▶ Marine (VGP) hydraulics
- ▶ Environmentally friendly oils
- ▶ Food processing

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