

Premium AW Hydraulic Fluid

PRODUCT DESCRIPTION

Bel-Ray® Premium AW Hydraulic Fluids are premium anti-wear hydraulic fluids designed to provide exceptional pump protection, oxidation resistance, and water handling performance in demanding mobile equipment and industrial fluid power systems. Advanced anti-wear additive technology helps protect pumps and critical system components from wear, extending equipment life and supporting reliable operation.

They provide outstanding rust and corrosion protection to help safeguard equipment operating in wet conditions, and the excellent water separation characteristics help maintain lubrication performance in the presence of water contamination. These lubricants are blended with thermally stable mineral base oils and fortified with additive technology to resist oxidation and thermal degradation, which help prevent sludge and varnish from plugging valves and coating component surfaces, reducing hydraulic system efficiency.

Bel-Ray Premium AW Hydraulic Fluids meet the performance requirements of major hydraulic pump manufacturers and are recommended for modern high-pressure, high-speed, high-power-density hydraulic systems. They provide efficient power transmission and responsive hydraulic system operation.

PRODUCT FEATURES and BENEFITS

- Advanced anti-wear additives and corrosion inhibitors protect critical hydraulic system components from wear, rust, and corrosion to improve reliability and extend equipment life.
- Excellent low-temperature fluidity enables efficient oil flow and lubrication of hydraulic system pumps and components to minimize wear during cold starts and low-temperature operation.
- Good oxidation resistance and thermal stability minimize lubricant degradation and deposit formation to extend lubricant life in demanding applications, including modern high-power-density hydraulic systems with reduced sump volumes.
- Fast demulsibility promotes rapid water separation, helping maintain lubricant performance while allowing accumulated water to be readily drained.
- Strong foam resistance provides rapid air release and effective foam control in compact hydraulic systems with low fluid residence times, helping maintain responsive hydraulic system operation by preventing spongy control response.
- Balanced formulation is compatible with elastomers and seals to help minimize leakage and prevent contamination.
- High dielectric strength makes them suitable for hydraulic equipment operating near high-voltage electrical equipment.

DISTRIBUTED BY:

Calumet Branded Products, LLC
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APPLICATIONS

Bel-Ray Premium AW Hydraulic Fluids are recommended for a wide variety of mobile and industrial equipment, including:

- Construction equipment
- Mining machinery
- Material handling equipment
- Agricultural machinery
- Manufacturing equipment
- Hydraulic presses
- Injection molding equipment

Recommended for use in:

- High-pressure vane pumps
- Piston pumps
- Gear pumps
- General industrial hydraulic circuits

SPECIFICATIONS and APPROVALS

Bel-Ray Premium AW Hydraulic Fluids are recommended for use and meet the requirements for:

- AFNOR NF E 48-603 (HM)
- AIST (US Steel) 126, 127
- ASTM D6158 HL, HM
- Bosch Rexroth RDE-90235
- DIN 51524-2 HLP
- Danfoss / Eaton / Vickers E-FDGN-TB002-E, 35VQ25A, I-286-S, M-2950-S
- Fives Cincinnati P-68, P-69, P-70
- GB 11118.1-2011 (L-HL, L-HM)
- ISO 11158 (HM)
- JCMAS P041 HK
- Parker Denison HF-0, HF-1, HF-2
- SAE MS 1004 (HM)
- SEB 181222

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TECHNICAL DATA SHEET



PRODUCT DATA

Typical Properties						
Property	Test Method	ISO 22	ISO 32	ISO 46	ISO 68	ISO 100
Density @ 15°C (g/mL)	ASTM D4052	0.864	0.868	0.872	0.874	0.881
Viscosity @ 40°C (cSt)	ASTM D445	22.36	31.89	47.05	64.870	97.6
Viscosity @ 100°C (cSt)	ASTM D445	4.35	5.42	6.88	8.41	11.12
Viscosity Index	ASTM D2270	101	104	101	100	99
Flash Point, (°C)	ASTM D92	191	204	221	243	247
Pour Point, (°C)	ASTM D97	-48	-41	-37	-32	-27
Rust Prevention	ASTM D665A&B	Pass	Pass	Pass	Pass	Pass
Copper Corrosion, 3 h @ 100°C (Rating)	ASTM D130	1b	1b	1b	1b	1b
Dielectric Breakdown, (kV)	ASTM D877	44.4	43.5	42.7	42.1	44.7
Foam Test, Sequence I, Tendency/Stability (mL/mL)	ASTM D892	0/0	0/0	0/0	0/0	0/0
Foam Test, Sequence II, Tendency/Stability (mL/mL)	ASTM D892	0/0	0/0	0/0	0/0	0/0
Foam Test, Sequence III, Tendency/Stability (mL/mL)	ASTM D892	0/0	0/0	0/0	0/0	0/0
Demulsibility, Oil/Water/Emulsion (time), mL/mL/mL (min.)	ASTM D1401	38/39/3 (10)	40/40/0 (20)	40/40/0 (20)	39/40/1 (15)	40/40/0 (10)

HEALTH and SAFETY

Health and safety recommendations for products can be found on the Safety Data Sheet (SDS) at www.belray.com.

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