



Hydroclear™ AW Hydraulic Fluid

Conoco Hydroclear™ AW Hydraulic Fluid is a premium quality antiwear hydraulic fluid developed for use in a wide variety of industrial and mobile hydraulic systems operating under high pressure, high temperature conditions, where detergency, cleanliness and deposit control are required. It is particularly recommended for use in Van Dorn/Demag and Husky plastic injection molding machines, where deposit control in the hydraulic circuit of the electro-pneumatic servo valves is essential for trouble-free operation.

Hydroclear™ AW Hydraulic Fluid is available in five single viscosity grades: ISO 22, 32, 46, 68 and 100; and three multi-viscosity grades: MV32, MV46 and MV68. It is manufactured with pure hydrocracked paraffinic base oils and fortified with an effective antiwear additive plus oxidation and rust inhibitors to provide superior wear protection, oxidation resistance and thermal stability, control of deposits, and rust and corrosion protection. It also has excellent demulsibility in the presence of water and good foam resistance.

Hydroclear™ AW Hydraulic Fluid meets the performance requirements of the leading hydraulic pump manufacturers, such as Bosch Rexroth, Cincinnati Lamb, Denison Hydraulics, Oilgear, Racine, Sundstrand, Vickers (Eaton) and Voith. The ISO VG 46 and 68 grades are approved by Van Dorn/Demag and Husky for use in the hydraulic systems of their equipment. The multi-viscosity (MV) grades are specially developed for use in mobile equipment such as cherry pickers, bucket trucks and tree-trimming units operating at very low and high temperatures. They have a high dielectric strength for use as insulating oils.*

* **Note:** In order to maintain its high dielectric strength, the oil must be kept clean and dry. Contamination with even a small amount of water will decrease the dielectric strength.

Applications

- Hydraulic systems of plastic injection molding machines
- Automated machine tools
- Plain and rolling element bearings used in electric motors

**Premium Antiwear
Hydraulic Fluid
For Plastic
Injection Molding
Presses**

**U.S. Technical
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1-800-255-9556**

**U.S. Customer
Service:
1-800-640-1956**

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- Chain drives
- Hydraulic systems on dump trucks, motor graders, bulldozers and forklifts
- Service station lifts
- Hydraulic presses, shears, jacks and punches in machine shops
- High-line repair trucks (multi-viscosity grades only)

Hydroclear™ AW Hydraulic Fluid meets the performance requirements of:

- DIN 51524 Part 2, Antiwear Hydraulic Oils, Type HLP (single grades)
- DIN 51524 Part 3, Antiwear Hydraulic Oils, Type HVLP (multi-viscosity grades)
- ISO 11158:1997 for Hydraulic Fluids, Family H (all grades)

Outstanding Features

- Superior performance in plastic injection molding machines
- Excellent wear protection for hydraulic pumps and motors
- Excellent deposit control
- Excellent corrosion protection
- High dielectric strength
- Excellent water-separating characteristics
- Good foam resistance
- Excellent year-round performance (multi-viscosity grades)

Due to continual product research and development, the information contained herein is subject to change without notification.

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Typical Properties

ISO Grade	22	32	46	68	100	MV32	MV46	MV68
Specific Gravity @ 15.6°C (60°F)	0.859	0.862	0.868	0.871	0.873	0.864	0.871	0.873
Density, lbs/gal	7.16	7.19	7.23	7.26	7.27	7.21	7.26	7.28
Color, ASTM D1500	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Flash Point (COC),								
°C	196	216	227	238	252	204	216	227
°F	385	421	441	460	486	399	421	441
Pour Point,								
°C	-40	-37	-35	-33	-32	-48	-43	-40
°F	-40	-35	-31	-27	-26	-54	-45	-40
Viscosity,								
cSt @ 40°C	22.8	31.0	46.0	68.0	100	35.0	45.4	68.0
cSt @ 100°C	4.4	5.4	6.8	8.0	11.0	7.7	8.0	10.0
SUS @ 100°F	115	165	237	353	523	177	231	349
SUS @ 210°F	41	44	49	56	64	52	53	60
Viscosity Index	104	104	100	99	98	195	150	130
Acid Number, ASTM D974, mg KOH/g	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Copper Corrosion, ASTM D130	1a	1a	1a	1a	1a	1a	1a	1a
Dielectric Strength, ASTM D877, kv*	35	35	35	35	35	35	35	35
Four-Ball Wear, ASTM D4172,								
Scar Diameter, mm	0.40	0.40	0.35	0.35	0.32	0.40	0.35	0.35
FZG Gear Test, ASTM D5182, Pass Stage	10	11	12	12	12	11	12	12
Oxidation Stability,								
TOST, ASTM D943, hours	7,500	7,500	7,500	7,500	7,000	7,000	7,000	7,000
RPVOT, ASTM D2272, minutes	—	331	322	290	280	330	325	—
Rust Test, ASTM D665 A&B	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

*At the point of manufacture.

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