

AZOLLA ZS



LUBRICATION



TOTAL

Multipurpose Anti-Wear Hydraulic Oil

APPLICATIONS

Hydraulic systems.

- **AZOLLA ZS** oils are premium anti-wear hydraulic fluids and lubricants. They meet or exceed the requirements of the leading manufacturers of hydraulic equipment and are available in a wide range of viscosities from ISO 22 to ISO 150.
- **AZOLLA ZS** oils have been specifically designed to be used in all types of hydraulic pumps and motors that require the use of anti-wear hydraulic oils. The appropriate viscosity grade will provide excellent service in plain and anti-friction bearings and moderate service in gear reducers.

SPECIFICATIONS

International standards

OEM standards

- DIN 51524 Part 2 Category HLP
- ISO 6743/4 Category L-HM
- AFNOR E48603 Category HM; AIST 126, 127
- Bosch Rexroth RE 90220 ; MAG (Cincinnati Machine) P68, P69, P70
- Parker (formerly Denison) HF-0, HF-1, HF-2;
- SEB 18122;
- Vickers I-286-S, M-2950-S

ADVANTAGES

Long equipment life and high operating reliability.

- High resistance to oxidation and thermal degradation.
- Excellent anti-wear properties.
- Inert towards metals (non-staining and no corrosive wear).
- Good compatibility with elastomers and seals.
- Excellent water-oil separation properties.
- Excellent anti-foaming, anti-corrosion, and anti-oxidation properties.

CHARACTERISTICS

TYPICAL CHARACTERISTICS--AZOLLA ZS

ISO grade	22	32	46	68	100	150
Viscosity at 40°C, cSt (ASTM D 445)	22.0	32.0	46.0	68.0	100.0	150.0
Viscosity at 100°C, cSt (ASTM D 445)	4.2	5.3	6.2	8.7	11.1	14.2
Viscosity Index (ASTM D 2270)	> 99	> 99	> 99	> 99	> 99	> 99
Density @ 60°F, lbs./gal.	7.19	7.24	7.28	7.30	7.35	7.38
Specific Gravity @ 60/60°F	0.861	0.867	0.872	0.874	0.881	0.884
Pour Point, °F (°C) (ASTM D 97)	-20 (-29)	-20 (-29)	-20 (-29)	-15 (-26)	0 (-18)	0 (-18)
Flash Point, COC, °F (°C) (ASTM D 92)	403 (207)	420 (216)	437 (225)	459 (237)	482 (250)	491 (255)
Copper Strip Corrosion (ASTM D 130)	1A	1A	1A	1A	1A	1A
4 Ball Wear Test, mm (ASTM D 2266) (75°C, 40kg, 1 hr @ 1200rpm)	0.45	0.45	0.45	0.45	0.45	0.45
Oxidation Test (ASTM D 943)	>6,500	>6,500	>6,500	6500	6500	6500

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AZOLLA

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This lubricant must be applied as recommended and used for the application for which it was designed. TOTAL Specialties USA, Inc. will have no responsibility for any injury to persons or property resulting from misuse or misapplication of the lubricant. A safety data sheet conforming to the OSHA Hazard Communication Standard 29 CFR Section 1910.1200 can be downloaded at www.totalspecialties.com. Copyright 2016 All rights reserved.