



High Pressure Machine Oil

High Pressure Machine Oil is a high-quality antiwear lubricating oil developed for use in the fabrication of high-strength aluminum and aluminum alloy plates and sheets, such as those used in commercial and military aircraft, the aerospace industry, and in custom industrial applications. It is specially formulated to protect against distortion and provide excellent surface finish.

High Pressure Machine Oil is formulated to provide excellent wear protection and surface finish during aluminum stretching operations. It has excellent antiwear properties and high load-carrying capacity to protect against distortion. It has excellent oxidation resistance at high temperatures to provide long service life and protect against deposit formation and staining. It has excellent water-separating properties to minimize the formation of emulsions, protects hydraulic system components against rust and corrosion, and is resistant to excessive foam buildup. It also has good low-temperature properties for cold start-ups. It is nonstaining to aluminum, bronze and brass.

High Pressure Machine Oil meets the stringent minimum requirement for load-carrying capacity for hydraulic oils as measured by the Brugger Test.

Applications

- Fabrication of high-strength aluminum and aluminum alloy plates and sheets
- Rolling and stretching of aluminum
- Chain drives

Features/Benefits

- High load-carrying capacity to protect against metal distortion
- Excellent surface finish
- Nonstaining
- Excellent wear protection
- Protects against rust and corrosion
- Excellent water-separating properties
- Good foam resistance
- Good low-temperature performance

**Antiwear
Machine Oil For
Fabrication Of
Aluminum
Products**

CONTACT INFORMATION

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Typical Properties

ISO Grade	46
Specific Gravity @ 60°F	0.868
Density, lbs/gal @ 60°F	7.23
Color, ASTM D1500	0.5
Flash Point (COC), °C (°F)	215 (419)
Pour Point, °C (°F)	-36 (-33)
Viscosity,	
cSt @ 40°C	45.2
cSt @ 100°C	6.9
SUS @ 100°F	233
SUS @ 210°F	49.3
Viscosity Index	109
Acid Number, ASTM D974, mg KOH/g	1.0
Brugger Load-Carrying Capacity, DIN 51347-2, N/mm ²	30.2
Copper Corrosion, ASTM D130	1a
Demulsibility, ASTM D1401, minutes to pass	<10
Foam Test, ASTM D892, Seq. I, ml	0/0
Four-Ball Wear, ASTM D4172, Scar Diameter, mm	0.52
Oxidation Stability, RPVOT, ASTM D2272, minutes	234
Rust Test, ASTM D665 A&B	Pass

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3apps.phillips66.com/NetMSDS>.

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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