



High Pressure Machine Oil

Phillips 66® High Pressure Machine Oil is a high-quality, high pressure anti-wear hydraulic oil meeting the requirements of DIN 51524-2. It was specifically developed for use in the fabrication of high-strength aluminum and aluminum alloy plates and extruded shapes, such as those used in commercial and military aircraft, the aerospace industry, and in custom industrial applications.

High Pressure Machine Oil is formulated to provide enhanced anti-wear protection in high pressure hydraulic systems like those used for the fabrication and machining of aluminum. It has excellent oxidation resistance at high temperatures to provide long service life and protect against deposit formation. It has excellent water-separating properties to minimize the formation of emulsions, protects hydraulic system components against rust and corrosion, and is resistant to foam buildup. It also has good low-temperature properties for cold start-ups and is non-staining to aluminum, bronze, and brass.

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

Applications

- Fabrication of high-strength aluminum and aluminum alloy plates and sheets
- Extrusion of aluminum bar-stock and structural shapes

Features/Benefits

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

High Pressure Anti-Wear Machine Oil for the Fabrication of Aluminum Products





High Pressure Machine Oil

Typical Properties		
ISO Grade		46
Specific Gravity @ 60°F		0.867
Density, lbs/gal @ 60°F		7.22
Color	ASTM D1500	0.5
Flash Point (COC), °C (°F)	ASTM D92	231 (448)
Pour Point, °C (°F)	ASTM D97	-41 (-42)
Viscosity		
cSt @ 40°C	ASTM D445	46.0
cSt @ 100°C		7.0
Viscosity Index	ASTM D2270	105
Acid Number, mg KOH/g	ASTM D974	0.5
Brugger Load-Carrying Capacity, N/mm ²	DIN 51347-2	>30
Copper Corrosion, 3 hrs @ 100°C	ASTM D130	1a
Demulsibility, 54°C, minutes to pass	ASTM D1401	20
FZG Scuffing Test, failure load stage	ASTM D5182	12
Four-Ball Wear Test, Scar Diameter, mm	ASTM D4172	0.42
Oxidation Stability, RPVOT, minutes	ASTM D2272	340
Rust Test	ASTM D665 A&B	Pass

Health & Safety Information

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