



BIO FLOW ISO 46

HYDRAULIC OIL AW 46

BIO FLOW 46 is ultimately biodegradable vegetable based hydraulic fluid formulated to meets and exceeds Vickers U.S. Steel. BIO FLOW 46 is designed to perform in fleet, marine, and industrial hydraulic system that require Anti-Wear (AW), anti-rust, anti-oxidation, anti-foam properties.

BIO FLOW 46 is designed to meet environmentally friendly, zinc-free requirement. It has also been developed that meets or exceeds high pressure pump requirements. The anti-wear performance meets the requirements for Vickers vane pump stand tests and exceeds DIN load stage 10 that is recommended for piston and gear pumps. BIO FLOW 46 is use in economical field for hydraulic equipment operating outside, where unpredictable higher moisture and dusty environments are more prominent, and the equipment require more frequent oil change intervals.

PERFORMANCE LEVELS: Meets and Exceeds

Vickers 35VQ25A for M-2950-S and I-286-S, CICINNATI LAMB (MILACRON) P-68-69-70

(Denison) HF0/HF2/T6H20C DIN-51524-2, BOSH REXROTH RE90220

Typical properties

PROPERTY	TYPICAL VALUES
ISO GRADE	AW 46
VISCOSITY @ 40°C, CST (ASTM D 445)	46.50
VISCOSITY @ 100°C, CST (ASTM D 445)	6.85
VISCOSITY INDEX	102
RELATIVE DENSITY @20°C	0.8750
28	0.50
AIR RELEASE VALUE @50°C	8
POUR POINT °C	-24
CLOSED FLASH POINT °C	228
FOAM SEQUENCE 1, MINS	NILL/0
DEMULSIFICATION (D1401) MINS	15
4-BALL 1HR WEAR @ 30KG, 1640 RPM, MM	0.4
FZG (A/8.3/90) FAIL STAGE	12
VICKERS HP VANE PUMP TEST	25

Advantages

- Environment friendly
- Excellent oxidation and thermal stability
- Excellent anti-wear protection
- Prevent Rust and corrosion
- Improved foam and air entrainment performance
- Minimum viscosity changes over a wide temperature range.
- Meets major pump manufacturer's requirements
- Good stability in the presence of water





Performance Specification

- Meets Cincinnati Milacron and Vickers hydraulic oil specifications.
- Meets major pump manufacturer's requirements

Applications

- Black Bulls BIO FLOW 46 most commonly used for hydraulic systems with vane, piston, or gear-type pumps, also compatible to lubricate lightly loaded reciprocating compressors.

