



ISO-9001 Registered Quality System.
ISO-21469 Compliant.

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PRODUCT DATA

LUBRIPLATE ZF INDUSTRIAL OILS

DESCRIPTION

LUBRIPLATE ZF Industrial Oils are premium Zinc-free, ashless, anti-wear fluids designed to perform in the most demanding hydraulic systems and air compressors. These heavy duty, high performance oils can withstand elevated temperatures and high pressures resulting in lower maintenance costs as well as extended oil life.

LUBRIPLATE ZF Industrial Oils do not contain any silicone compounds.

LUBRIPLATE ZF Industrial Oils meet the following requirements:

OEM

Vickers (Eaton)
General Motors
Cincinnati Machine
Bosch Rexroth
German Steel Industry
DIN 51524
AFNOR NF E 48-603
U.S. Steel
SAE

SPECIFICATION

M-2950-S & I-286-S
LS-2
P-68, P-70, P-69
RE 90 220
SEB 181222
Part I & II
Part I & II
No. 126, 127, 136
MS 1004

LUBRIPLATE ZF Industrial Oils are non-toxic to aquatic life, exceeding *U.S. EPA LC50 test requirements adopted by the U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency*. These environmentally safe industrial oils are compatible with other mineral based industrial oils and are easily recyclable.



Typical Test Data – See Back

ZF Industrial Oil 46

FEATURES

- ⇒ Good hydrolytic stability
 - ⇒ Superior anti-wear protection
- ⇒ Good oxidative & thermal stability prevents sludge and controls deposit
- ⇒ Outstanding demulsifying, foaming & air release properties
 - ⇒ Excellent rust & corrosion protection
 - ⇒ Excellent filterability
- ⇒ Compatible with Calcium & Zinc containing fluid
 - ⇒ No ZnDTP, Zinc-free
- ⇒ Low phosphorus & Low sulfur EP/AW additive package

BENEFITS

- ⇒ Reduces pump wear & protects against cavitation
 - ⇒ Keeps the hydraulic system corrosion free
- ⇒ Enables smooth functioning of servo valves & extends the life of oil & filters
- ⇒ Provides a long service life under severe wet & dry operating conditions
- ⇒ Helps extend maintenance intervals & increases equipment uptime
 - ⇒ Lowers overall maintenance costs which helps production efficiency
- ⇒ Being Zinc-free, ashless (metal free) helps minimize disposal & effluent treatment costs
- ⇒ Supports the trend to limit heavy metal contamination of the environment

PACKAGING AVAILABLE

	<u>ZF-32</u>	<u>ZF-46</u>
5 Gallon Pail	L0948-060	L0949-060
55 Gallon Drum	L0948-062	L0949-062

PACKAGING AVAILABLE

	<u>ZF-68</u>	<u>ZF-100</u>
5 Gallon Pail	L0950-060	L0953-060
55 Gallon Drum	L0950-062	L0953-062

PROPERTY	TEST METHOD	TYPICAL RESULTS*			
		ZF-32	ZF-46	ZF-68	ZF-100
Viscosity cSt @ 40°C	ASTM D-445	34.79	46.34	69.83	101.1
cSt @ 100°C	ASTM D-445	5.2	6.4	8.2	11.25
SUS @ 100°F	ASTM D-2161	173	240	328	522
SUS @ 210°F	ASTM D-2161	47	51	55	65.4
SAE		10	20	20	30
ISO		32	46	68	100
Viscosity Index	ASTM D-2270	129	117	106	97
Flash Point	ASTM D-92	440°F/227°C	470°F/243°C	475°F/246°C	475°F/246°C
Fire Point	ASTM D-92	480°F/249°C	510°F/266°C	510°F/266°C	545°F/285°C
Pour Point	ASTM D-97	-40°F/-40°C	-35°F/-37°C	-20°F/-29°C	-10°F/-23°C
Gravity	ASTM D-287	32.3	32.0	31.8	29.2
Color	ASTM D-1500	L-1	L-1	L-1.5	L-2.5
Aniline Point	ASTM D-611	220°F	240°F	250°F	259°F
Oxidation	ASTM D-943	***Typically above 3000 hours***			
Dielectric Strength	ASTM D-877	***Typically above 35 kV***			

ZF Industrial Oil 32

TEST METHOD:

ASTM D-877

DESCRIPTION:

Dielectric Breakdown Voltage of Insulating Liquids
3 kv/sec ramp rate, 0.10-inch electrode gap,
1-inch disk electrodes

RESULTS:

Breakdown Voltage (kilovolts)

Run 1	42.56
Run 2	35.26
Run 3	40.69
Run 4	32.74
Run 5	37.52
Average Breakdown	37.75

