Sales, Service & Distribution Center
Newark, NJ 07105
Phone: 973-589-9150 Fax: 973-589-4432

Manufacturing, Sales, Service & Distribution Center
Toledo, OH 43605
Phone: 419-691-2491 Fax: 419-693-3806

Sales and Tech Service Support
Phone: 1-800-733-4755

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

PRODUCT DATA

LUBRIPLATE SYNXTREME FRH1-46

"This product is certified OU Kosher Pareve"
"This product is Halal Certified"

**NSF International H-1 Registered*
NSF ISO21469 Certification
FM Approval ID 0003057229

DESCRIPTION

LUBRIPLATE SYNXTREME FRH1-46 is a high performance hydraulic fluid designed for demanding industrial and food processing applications requiring fire resistance, and excellent anti-wear properties over wide temperature ranges. This product complies with CFR 21, section 178.3570.

APPLICATIONS

- **Excellent Anti-Wear Performance –** Exceptional load-carrying capabilities and specially formulated to provide effective corrosion protection and anti-wear performance in hydraulic systems. Rated as anti-wear, which means the potential for greater reliability, less downtime, and lower maintenance costs.
- **Fire Resistance –** High flash and fire points provide safety in applications calling for fire resistant fluids, thus providing operating confidence and potentially reduced insurance costs. FM approved, using FM test method 6930, has classified HF 46 Hydraulic Fluid as "Approved Industrial Fluids".
- **Biodegradability –** Readily biodegradable according to OECD 301F.

COMPATIBILITY

- **Other Hydraulic Fluids –** It is compatible with hydrocarbon-based hydraulic fluids. As with any fluid conversion, recognized industry procedures including system cleanup and flushing should be followed.
- **Elastomers –** Suitable for use with many elastomeric materials used in seals and gaskets. *Compatible elastomers are: Viton, Kalrez, Silicone, Polysulfide, EPR, Butyl Rubber, Buna N, Fluoraz, EPDM, Natural Black Rubber, Natural Red Rubber and Aflas.*
- **Plastics –** Compatibility should be assessed for any plastic components (such as reservoir sight glasses) exposed to a hydraulic fluid.
- **Paints –** Ester based fluids show some solvency for common oil-based paints but minimal solvency for many epoxy-based paints.

STORAGE RECOMMENDATIONS

Product should be stored in a dry covered area between 40°F to 120°F, away from direct sunlight.
Open containers, temperature, and moisture may alter normal shelf–life.

Typical Test Data

PROPERTY	TEST METHOD	TYPICAL RESULTS*
Performance Properties		**46**
Four-Ball Wear Test	ASTM D-4172	0.38
V104 Vane Pump Test (total mg wear)	ASTM D-7043	<10
Viscosity @ 40°C (cSt) Viscosity @ 100°C (cSt) Viscosity @ 0°C (cSt)	ASTM D-445	50.37 9.6 390
Viscosity Index	ASTM D-2270	176
Fire Properties		
Flash Point – Cleveland Open Cup, °C	ASTM D-92	312
Fire Point, °C	ASTM D-92	316
FM Approvals	Test Standard 6930	ID#0003057229
Physical - Chemical Properties		
Specific Gravity @ 60°F	ASTM D-1298	0.914
Foam Test – Sequence I, Initial Volume/ml Sequence II, Initial Volume/ml Sequence III, Initial Volume/ml	ASTM D-892	10/0 10/0 10/0
Pour Point, °C	ASTM D-97	-41
Ash Content (%)	ASTM D-482	0.008
Corrosion Protection (TORT)	ASTM D-665A	Pass
Copper Strip Corrosion	ISO 2160	1a, shiny
Weight, lbs./gal. (20°C)		7.617

PACKAGING AVAILABLE	Part No.
5 Gallon Pail	L1024-060
55 Gallon Drum	L1024-062

NSF International H-1 Registration No. ***153704***
(Meets former USDA 1998 Guidelines)

LUBRIPLATE® SYNXTREME FRH1-46

NSF H1 Registered, Food Machinery Grade
FM Approved, Fire Resistant Hydraulic Fluid

Designed For Demanding Industrial And Food Processing Applications Requiring Fire Resistance And Excellent Anti-Wear Performance.

Advantages -

- High-Performance, 100% Synthetic, Polyolester (POE)-Based.
- Factory Mutual Approved Fire Resistant Hydraulic Fluid.
- Exceptionally High Flash Point For Superior Fire Protection.
- Outstanding Shear Stability and High Viscosity Index.
- Provides Superior Anti-Wear Performance.
- NSF H1 Registered* and NSF ISO 21469 Certified Food Machinery Grade.
- Halal Certified and Kosher Approved.
- ECO-Friendly, Readily Biodegradable (OECD 301F).

Specifications -

Performance Properties	Test Method	Results
Four Ball Wear Test	ASTM D-4172	0.38
V104C Vane Pump Test (total mg wear)	ASTM D-7043	<10
Viscosity @ 40°C (cSt)	ASTM D-445	50.37
Viscosity @ 100°C (cSt)	ASTM D-445	9.6
Viscosity @ 0°C (cSt)	ASTM D-445	390
Viscosity Index	ASTM D-2270	176
Fire Resistance Properties		
Flash Point – Cleveland Open Cup	ASTM D-92	593°F / 312°C
Fire Point	ASTM D-92	600°F / 316°C
FM Approvals	Test Standard 6930	ID#0003057229
Physical - Chemical Properties		
Specific Gravity @ (60°F / 16°C)	ASTM D-1298	0.914
Foam Test – Sequence I, Initial Volume/ml	ASTM D-892	10/0
Foam Test – Sequence II, Initial Volume/ml	ASTM D-892	10/0
Foam Test – Sequence III, Initial Volume/ml	ASTM D-892	10/0
Pour Point	ASTM D-97	-41
Ash Content (%)	ASTM D-482	0.008
Corrosion Protection (TORT)	ASTM D-665A	Pass
Copper Strip Corrosion	ISO 2160	1a, shiny
Weight, lbs/gal. @ (68°F / 20°C)	-	7.617
Packaging Available	**5 Gallon Pail**	**55 Gallon Drum**
Part Number	L1024-060	L1024-062

*NSF H1 Registration Number 153704. This product complies with CFR 21, section 178.3570 for applications with incidental food contact.

LUBRIPLATE LUBRICANTS COMPANY
Newark, NJ 07105 / Toledo, OH 43605 / 800-733-4755 / www.lubriplate.com / LubeXpert@lubriplate.com

LUBRIPLATE® SYNXTREME FRH1-46

APPLICATIONS

LUBRIPLATE SYNXTREME FRH1-46 is a high performance hydraulic fluid designed for demanding industrial and food processing applications requiring fire resistance, and excellent anti-wear properties over wide temperature ranges.

FEATURES

Excellent Anti-Wear Performance – Exceptional load-carrying capabilities and specially formulated to provide effective corrosion protection and anti-wear performance in hydraulic systems. Rated as anti-wear, which means the potential for greater reliability, less downtime, and lower maintenance costs.

Fire Resistance – High flash and fire points provide safety in applications calling for fire resistant fluids, thus providing operating confidence and potentially reduced insurance costs. FM approved, using FM test method 6930, has classified SYNXTREME FRH1-46 Hydraulic Fluid as "Approved Industrial Fluid".

NSF H1 Registered, Food Machinery Grade – This product complies with CFR 21, section 178.3570.

Biodegradability – Readily biodegradable according to OECD 301F.

COMPATIBILITY

Other Hydraulic Fluids – LUBRIPLATE SYNXTREME FRH1-46 is compatible with hydrocarbon-based hydraulic fluids. As with any fluid conversion, recognized industry procedures including system cleanup and flushing should be followed.

Elastomers – Suitable for use with many elastomeric materials used in seals and gaskets. Compatible elastomers are: Viton, Kalrez, Silicone, Polysulfide, EPR, Butyl Rubber, Buna N, Fluoraz, EPDM, Natural Black Rubber, Natural Red Rubber and Aflas.

Plastics – Compatibility should be assessed for any plastic components (such as reservoir sight glasses) exposed to a hydraulic fluid.

Paints – Ester based fluids show some solvency for common oil-based paints but minimal solvency for many epoxy-based paints.

CONVERTING HYDRAULIC SYSTEMS FROM OTHER FLUIDS TO SYNXTREME FRH1-46

As with any fluid conversion, recognized industry procedures including system cleanup and flushing should be followed. **LUBRIPLATE HYDROFLUSH** synthetic, cleaning and flushing fluid is recommended. LUBRIPLATE HYDROFLUSH is available in 5 Gallon Pails - Part Number L0798-60 and 55 Gallon Drums - Part No. L0798-062.

1. Completely drain and clean the reservoir, while the old fluid is warm.

2. Drain and blow-out piping, tubing, headers, hoses, valve stacks and manifolds with clean dry air.

3. Drain pumps, accumulators, hydraulic motors and cylinders to insure removal of all fluids.

4. Dismantle, wash and clean strainers.

5. Drain & clean filter housings. Determine filter element compatibility with the SYNXTREME FRH1-46 fluid and replace or clean as necessary.

6. Thoroughly drain and clean coolers.

7. Close the system and circulate a small amount of **LUBRIPLATE HYDROFLUSH** fluid at low pressure.

8. Thoroughly drain the system and if possible run crackle test. If test estimates higher that .05-.10% moisture, then repeat step 7.

9. Thoroughly drain system (repeating Steps 1-6 above) and refill promptly with new SYNXTREME FRH1-46 fluid.

10. After system is in operation, inspect carefully for leakage during the next two to three weeks.

DRAIN
Reservoir, and blow-out piping, tubing, headers, hoses, valve stacks and manifolds

↓

CHARGE
Close the system and circulate a small amount of LUBRIPLATE HYDROFLUSH

↓

DRAIN SYSTEM
Blow dry air, repeat step 7 if needed

↓

CHARGE
With LUBRIPLATE SYNXTREME FRH1-46 Fluid

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Printed in USA
Revised 10/5/2016