LE operates under an ISO 9001 Certified Quality System.

4010-4040 (H1) QUINPLEX® White Oils
4059 (H1) QUINPLEX® Penetrating Oil & Lubricant

These NSF H1 Lubricants are designed for use where superior anti-wear, rust and oxidation resistant properties and H1 performance is desired.

USER BENEFITS:

- **H1 Performance** - Perhaps the most critical requirement imposed on any lubricant. These extremely pure, non-staining, odorless, tasteless, translucent and non-irritating lubricants can be used with confidence where incidental food contact or staining can occur.
- **Increased Productivity** - Through extended equipment life and less downtime. This is crucial with high capital, continuous process equipment. Downtime cost can often be devastating when production schedules must be changed, delayed or cancelled.
- **Superior Anti-Wear Performance** - Provides a margin of safety with superior anti-wear properties. Many white oils do not offer this measure of wear protection, since anti-wear additives are not included.
- **One source for your H1 Lubricants** - Five versatile products for many different applications provide viscosity ranges to satisfy your requirements.

4010		ISO 46
4020	SAE 20	ISO 68
4030	SAE 30	ISO 100
4059	SAE 30	ISO 100 (Aerosol)*
4040	SAE 40	ISO 150

*Contains no ozone depleting chemicals

- 4059 has excellent penetrating characteristics, while leaving a protective oil coating upon evaporation of its H1 solvent.
- 4059 has excellent rust preventative characteristics. In a 100% humidity test chamber there was no rust after 48 hours with LE's 4059.
- Certified Kosher Pareve
- Certified Halal by IFANCA

TYPICAL APPLICATIONS

- Food Processing/Animal Feed Preparation - Lubricant and rust preventative for machinery and other equipment.
- Aluminum/Metallic Foil and Packages - Lubricant for drawing, stamping, forming and rolling metallic foil and packages used in food packaging.
- Textile - machinery lubricant.
- Paper - machinery lubricant.
- 4010-4040 for use in bearings, bushings, slides, chains, compressors, vacuum pumps and hydraulics.
- 4059 as a Penetrant and General Lubricant - Loosens corroded and frozen parts, protects surfaces from rust and corrosion, assists in water displacement, solvent helps dissolve and penetrate residues.

WHAT IS QUINPLEX®?

QUINPLEX is LE's exclusive proprietary additive created through LE's own R & D staff. This study was started in Europe and adapted by LE to Lubricant Technology thus providing yet another in a long series of unique LE contributions to the field of Lubrication. Quinplex imparts three important characteristics to 4010-4040-4059:
(1) Water Resistance
(2) Tackiness (clingability)
(3) Forms a barrier against corrosion and rust.

LUBRICATION ENGINEERS®, Inc.
Leaders in Lubricants
1919 E. Tulsa • Wichita, KS 67216 • 800-537-7683 • Fax: 800-228-1143 • www.LElubricants.com

TECHNICAL DATA

PHYSICAL CHARACTERISTICS - TYPICAL:

	4010	4020	4030	4040	4059
ISO Grade	46	68	100	150	100
Equivalent SAE Grade	10	20	30	40	30
Gravity, °API	27.1	26.7	26.2	26.3	25.9
Viscosity					
SUS @ 100°F	224	349.4	532	702.3	526.2
SUS @ 210°F	44.97	50.77	58.07	74.86	58.69
cSt @ 40°C	43.15	66.88	101	151.6	100.1
cSt @ 100°C	5.66	7.40	9.5	14.22	9.67
Flash Point, °F (°C)	370 (188)	390 (198)	410 (210)	428 (220)	400 (204)
Pour Point, °F (°C)	-33 (-36)	-27 (-33)	-22 (-30)	-22 (-30)	-17 (-27)

PERFORMANCE TEST REQUIREMENTS

Four Ball Wear, ASTM D4172, 40 Kg, Scar Dia., mm	0.39	0.39	0.39	0.39	---
Rust Test, ASTM D665A	Pass	Pass	Pass	Pass	Pass
Falex EP, ASTM D3233, lbs. force	1500	1500	1500	1500	---
Copper Strip Corrosion, ASTM D130	1b	1b	1b	1b	---
Foam Test, ASTM D892	10/0;0/0;20/0	10/0;0/0;20/0	0/0;0/0;0/0	0/0;0/0;0/0	---
Oxidation Resistance, RPVOT ASTM D2272, minutes	800	800	800	800	---

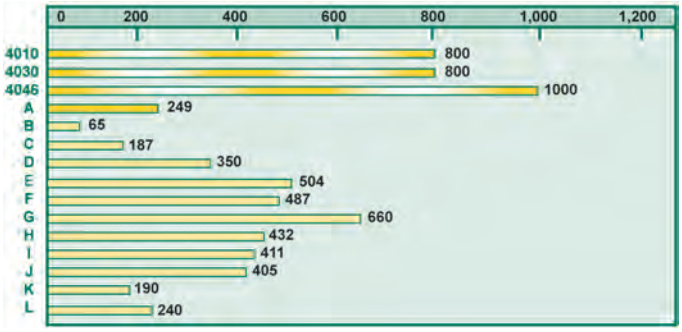
MEETS PERFORMANCE REQUIREMENTS OF:

NSF H1 Registered
Kosher Pareve
Halal (certified by IFANCA)

Angelus Sanitary Can Machine (except 4010)
Ex-cell-o Corp - Pure- Pack Machine (4030)
Hydreco (4010)

ROTARY BOMB OXIDATION TEST ASTM D2272 (RBOT)

OXIDATION INDUCTION TIME (MINUTES)



The RBOT ASTM D2272 Test illustrates the superior oxidation resistance of QUINPLEX® as compared to the various other compressor and industrial oils. In this test a sample of the oil is placed in a sealed container with water and a copper catalyst. It is pressurized with 90 psi of oxygen and heated to 150°C (302°F). The time is measured to a 25 psi drop in pressure. This signifies a significant reaction has occurred between the lubricant and the oxygen - oxidation. **QUINPLEX OILS HAVE LONGER OXIDATION LIFE LEVELS THAN ANY OF THE OTHER OILS TESTED - PETROLEUM OR SYNTHETIC!**

FOUR BALL WEAR TEST ASTM D4172

The four ball wear test is used to determine the relative wear preventative properties of lubricating fluids. Lubricants are compared based on the average size of the scar diameters worn in the three lower balls after rotation of the upper fourth ball in the test procedure. A smaller wear scar size indicates the lubricant is providing better wear protection. **QUINPLEX OILS HAVE THE SMALLEST SCAR AND BEST WEAR PROTECTION OF ALL OILS TESTED!**

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