Product Information

H1 Quinplex® Food Machinery Lubricant (4025-4022)

Semi-Synthetic Grease Protects Against Moisture & Other Harsh Conditions at Food Manufacturing Plants

H1 Quinplex® Food Machinery Lubricant (4025-4022) is a semi-synthetic grease suitable for a broad operating temperature range. In addition to being a food grade grease – NSF H1 registered for incidental food contact – it is also robust enough to withstand moisture, high temperatures, extreme pressures and other harsh conditions found at food manufacturing plants. It features an aluminum complex thickener base, providing extreme water resistance, excellent mechanical stability, reversibility and tackiness. Key additives include Quinplex, LE's proprietary impact-resistant additive, and a rust and oxidation inhibitor. Switching to H1 Quinplex Food Machinery Lubricant results in longer bearing life, fewer equipment repairs, less downtime and lower lubricant consumption.

Beneficial Qualities

Food Grade

- Formulated with high-viscosity pure food grade base oil
- Registered NSF H1 for incidental food contact
- Certified Kosher Pareve

Water Resistant

- Will not wash out or emulsify when coming in contact with water
- Stays in contact zone, even in high-moisture environments
  - o Won't wash out of bearings
- Protects against rust and corrosion

Temperature Resistant

- Performs well in a broad temperature range
- Provides excellent service at moderately high temperatures
- Will not melt or run from bearings

Extreme Pressure & Wear Resistant

- Superior EP load-carrying capability
- Exceptional anti-wear protection • Clings tenaciously to metal, resisting repeated impact
  - o Won't pound out or sling off
- Exhibits long-lasting mechanical stability, does not change consistency after being worked thousands of times

Available Grades

- NLGI 2 (4025) – also available as an aerosol spray
- NLGI 1 (4024)
- NLGI 0 (4023)
- NLGI 00 (4022)

Proprietary Additive

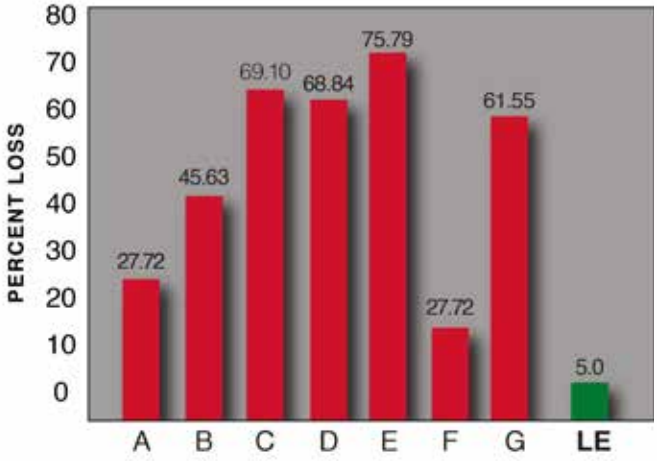
LE's proprietary additives are used exclusively in LE lubricants. H1 Quinplex® Food Machinery Lubricant contains Quinplex.

Quinplex® impact-resistant additive contributes to outstanding water resistance, tackiness and enhanced mechanical stability, and helps to form a barrier against corrosion.

LE vs. Competitive Food Grade Lubes

LE | H1 Quinplex 4025 | A-G | Competitive NLGI 2 Greases

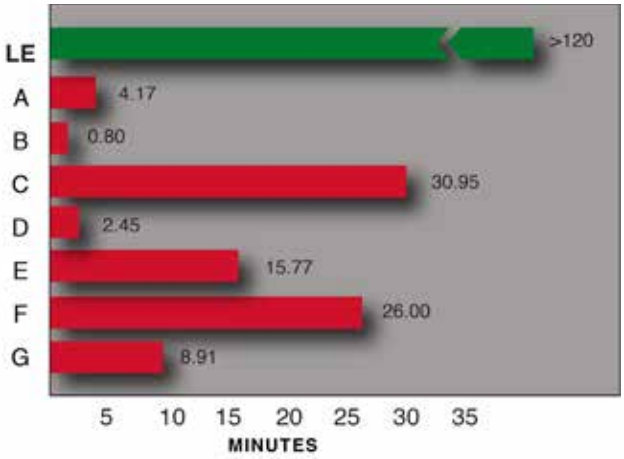
Water Resistance



Water Spray-off, ASTM D4049

The significantly lower percent loss in the Water Spray-off test proves that the LE grease outperforms the competitors in resisting water, staying in place rather than washing off.

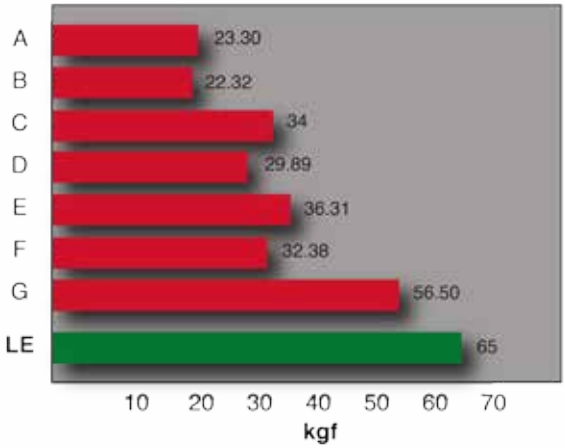
Temperature Resistance



Oxidation by PDSC, ASTM D5483

The minutes to onset of oxidation of the LE grease is four times that of the nearest competitor tested, indicating its ability to resist heat.

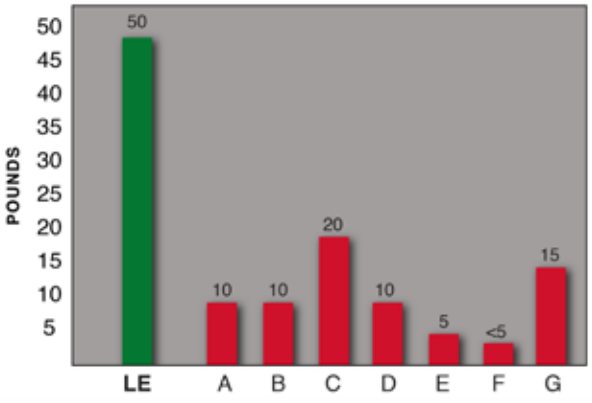
Wear Resistance



Four-Ball EP Load Wear Index, ASTM D2596

This test is a measure of a lubricant's ability to carry a load and minimize wear. The higher the value, the better the job the lubricant does. The LE grease outperforms all of the competitive greases tested.

Extreme Pressure Performance



Timken OK Load, ASTM D2509

The higher Timken load carried shows that The LE grease has superior EP load-carrying capability over the competitive greases tested.

H1 Quinplex® Food Machinery Lubricant

Typical Applications

- Blenders
- Bottle Washers
- Cams
- Carbonators
- Conveyors
- Cookers
- Crowners
- De-hairing Machines
- Dividers
- Electric Motors
- Extractors
- Feather Pickers
- Filling Machines
- Food Carts
- Knives
- Labelers
- Mixers
- Molders
- O-Rings
- Packaging Machines
- Proofers
- Saws
- Sifters
- Slicers
- Slides
- Wrappers

H1 Quinplex® Food Machinery Lubricant

	4025	4024	4023	4022
Thickener Type	Aluminum complex	Aluminum complex	Aluminum complex	Aluminum complex
Texture	Smooth Tacky	Smooth Tacky	Smooth Tacky	Smooth Tacky
Color	White	White	White	White
NLGI Grade	2	1	0	00
Worked 60 Penetration ASTM D217	287	322	367	409
Dropping Point °C (°F), ASTM D2265	256 (493)	232 (450)	214 (417)	--
Base Fluid Characteristics				
Flash Point °C (°F) (COC), ASTM D92	216 (421)	216 (421)	216 (421)	216 (420)
Viscosity @ 100°C, cSt, ASTM D445	8.4	8.4	8.4	8.4
Viscosity @ 40°C, cSt, ASTM D445	69.1	69.1	69.1	69.1
Pour Point °C (°F), ASTM D97	-30 (-22)	-30 (-22)	-30 (-22)	-30 (-22)
Oxidation drop in psi @ 100 hrs, ASTM D942	5	5	5	5
Oxidation by PDSC minutes @ 155°C, ASTM D5483	>120	>120	>120	>120
Corrosion Prevention DI H2O, ASTM D1743	Pass	Pass	Pass	Pass
Oil Separation 30 hrs @ 100°C, % bleed, ASTM D6184	2	8	10	--
Timken OK Load lbs, ASTM D2509	50	40	40	40
Four-Ball EP Weld Point kgf, ASTM D2596	400	400	400	400
Four-Ball EP Load Wear Index kgf, ASTM D2596	65	65	65	65
SRV-EP 50°C, 1 mm stroke, 50 Hz frequency, ball on disc, max load w/o seizure, N, ASTM D5706	1,200	1,200	1,200	1,200
Four-Ball Wear @ 75°C, 1,200 rpm, 40 kgf, 60 minutes, mm wear, ASTM D2266	0.39	0.48	0.49	0.47
Water Spray-off % loss, ASTM D4049	5	--	--	--

Performance Requirements Met or Exceeded

- NSF H1 registered for incidental food contact
- Kosher Pareve
- 4025 & 4024: Ex-Cell-O Corp-Pure-Pak Machine
- 4025: General Mills - A Lubricant

Recommendations

Number	NLGI Grade	Maximum Bearing Speed (rpm)	Operating Temperature
4025	2	3,000	-1 to 204˚C (30 to 400˚F)
4024	1	6,000	-18 to 177˚C (0 to 350˚F)
4023	0	6,000	-26 to 149˚C (-15 to 300˚F)
4022	00	6,000	-26 to 149˚C (-15 to 300˚F)

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