



## 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.

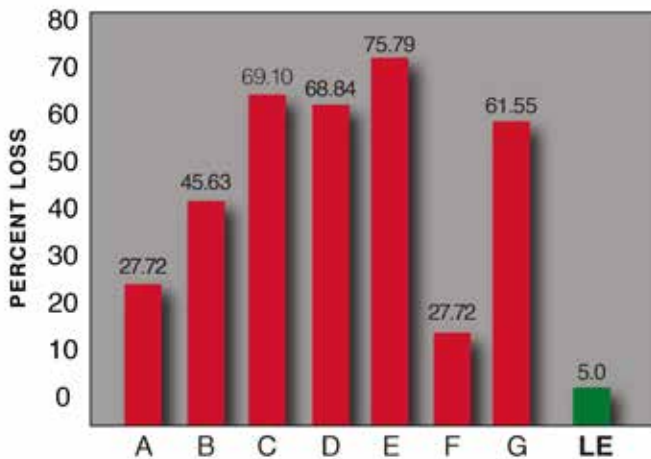


# LE vs. Competitive Food Grade Lubes

LE | H1 Quinplex 4025

A-G | Competitive NLGI 2 Greases

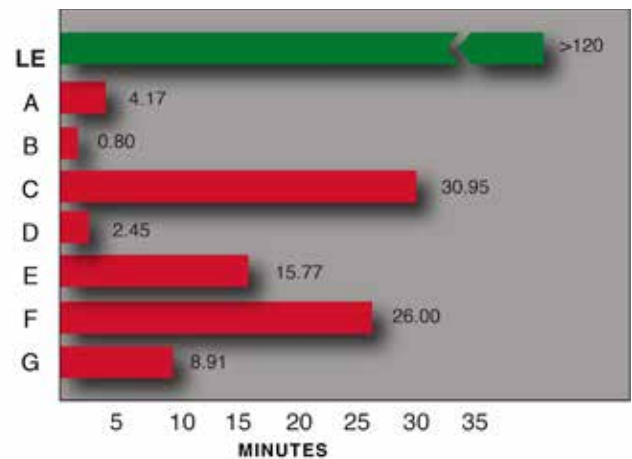
## Water Resistance



### 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.

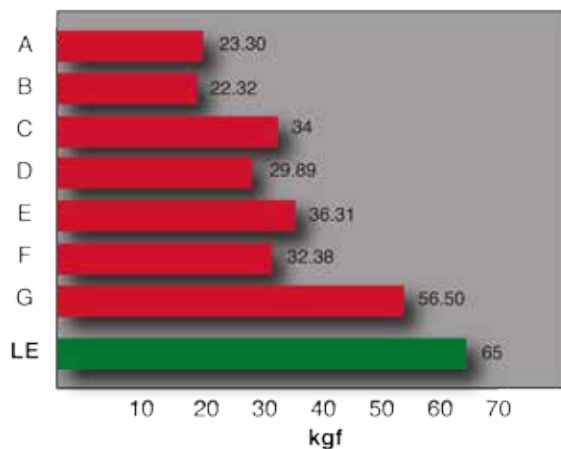
## Temperature Resistance



### 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.

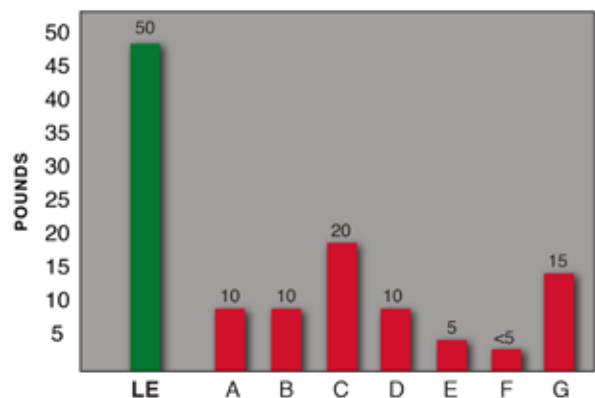
## Wear Resistance



### 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

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

Quinplex® is a registered trademark of Lubrication Engineers, Inc.

LI30030 rev 4-14



Canadian Food Inspection Agency  
Agence canadienne d'inspection des aliments

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04-10-26

File #L046

Terry H. Smith  
Lubrication Engineers, Inc.  
1010 East Tulsa Street  
P.O. Box 16447  
Wichita, KS 67216-0447  
U.S.A.

RE/OBJET: **L046 Lubrication Engineers, Inc.  
Wichita, KS 67216-0447, U.S.A.**

04/10/26	n	2701 H1 Oven Chain Lubricant
04/10/26	n	4010 H1 Quinplex White Oil ISO VG 46
04/10/26	n	4020 H1 Quinplex White Oil ISO VG 68/SAE 20
04/10/26	n	4023 H1 Quinplex Food Machinery Lubricant NLGI 0
04/10/26	n	4024 H1 Quinplex Food Machinery Lubricant NLGI 1
04/10/26	n	4025 H1 Quinplex Food Machinery Lubricant NLGI 2
04/10/26	n	4025 H1 Quinplex Food Machinery Lubricant (Aerosol)
04/10/26	n	6751 H1 Machine Oil SAE 40
04/10/26	n	4046 Quinplex Synthetic Food Grade Oil ISO VG 46
04/10/26	n	4030 H1 Quinplex White Oil ISO VG 100/SAE 30
04/10/26	n	4058 H1 Quinplex Penetrating Oil & Lubricant
04/10/26	n	4090 H1 Quinplex White Gear Lubricant SAE 90/ISO VG 220
04/10/26	n	4140 H1 Quinplex White Gear Lubricant SAE 140/ISO VG 460
04/10/26	n	4201 H1 White Utility Oil
04/10/26	n	4204 H1 White Utility Oil ISO VG 46
04/10/26	n	4059 H1 Quinplex Penetrating Oil & Lubricant Aerosol
04/10/26	n	4008 Quinplex White Worm Gear Lubricant ISO VG 680
04/10/26	n	4007 Quinplex White Worm Gear Lubricant ISO VG 460

This will acknowledge your email of 04/10/14 concerning the aforementioned products for which acceptance has been requested for use in Registered Establishments.

The final printing of your labels has been reviewed and the contents, as they apply to the use in connection with food in Registered Establishments, appear satisfactory. No objection, therefore, will be taken to the use of the above products in Registered Establishments provided that they are used in keeping with the instructions outlined on the labels.

Nous accusons réception de vos courriels datées du 04/10/14 concernant les produits en rubrique dont vous demandez l'autorisation pour l'usage dans les établissements agréés.

Les épreuves finales des étiquettes ont été revues et le contenu nous apparaît acceptable en ce qui a trait à l'utilisation des produits en relation avec les denrées alimentaires. Nous ne nous opposerons pas à ce que les établissements agréés utilisent les produits en question, à condition qu'ils soient utilisés conformément selon les recommandations d'application indiquées sur l'étiquette.

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This acceptance is not to be misconstrued as an endorsement for this or similar products. Their use in Registered Establishments will depend upon their continued acceptability to all concerned.

Should any changes occur either in the formulations, or in the labelling format, then this acceptance shall be considered **NULL** and **VOID**.

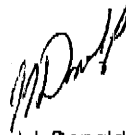
Yours truly,

La présente ne doit pas être interprétée comme une acceptation inconditionnelle du produit ou de produits similaires dont l'emploi dans les établissements agréés dépendra du degré de satisfaction des intéressés.

Cette acceptation sera considérée comme **NULL** si l'on y apporte une modification quelconque dans la préparation commerciale ou sur les étiquettes.

Je vous prie d'agréer l'expression de nos sentiments les meilleurs.

Agent de Programmes Techniques  
Produits chimiques non alimentaires & intégrité des contenants  
Section de l'analyse des risques alimentaires  
Direction générale de la salubrité des aliments



J.J. Donald  
Technical Program Officer  
Non-Food Chemicals & Container Integrity  
Food Safety Risk Analysis Unit  
Food Safety Directorate

JJD/sb

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Visit our Reference Listing Website/Visitez notre liste de référence sur le site internet  
<http://www.inspection.gc.ca/english/ppc/reference/conf.shtml>  
<http://www.inspection.gc.ca/francais/ppc/reference/conf.shtml>

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