



H1 Quinplex® White Gear Lubricant (4090, 4140, 4250)

Protects Gearboxes in Food Production Applications

Recommended for a variety of gearboxes and other critical applications in food and beverage manufacturing facilities, H1 Quinplex® White Gear Lubricant (4090-4250) is NSF H1 registered for incidental food contact and was formulated to withstand severe loading conditions and prevent rust and corrosion. H1 Quinplex White Gear Lubricant contains a carefully selected blend of pure mineral and synthetic base stocks to provide superior protection at a wide range of operating temperatures. It also offers anti-wear protection, differentiating it from many other white oils on the market. To ensure good metal adhesion, it contains a shear stable polymeric tackifier system including Quinplex®, LE's proprietary impact-resistant additive.

H1 Quinplex White Gear Lubricant helps factories avoid unplanned downtime and expensive repairs by providing long-lasting, reliable protection that keeps critical equipment running.



Beneficial Qualities

Food Grade

- Formulated with pure mineral and synthetic base oils
- Registered NSF H1 for incidental food contact
- Certified Halal by IFANCA
- Certified Kosher Pareve
- Is non-staining, odorless, tasteless, translucent and non-irritating

Rust & Corrosion Barrier

- Is tacky and clings to metal surfaces
- Provides crucial water resistance
- Prevents rust and corrosion

Anti-Wear Protection

- Includes anti-wear additive package, unlike many other white oils

Available Grades

- 220 ISO / 90 SAE (4090)
- 460 ISO / 140 SAE (4140)
- 680 ISO / 250 SAE (4250)

Proprietary Additive

LE's proprietary additives are used exclusively in LE lubricants. H1 Quinplex White Gear 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.



H1 Quinplex® White Gear Lubricant

	<u>4090</u>	<u>4140</u>	<u>4250</u>
Color	Water White	Water White	Water White
ISO VG / SAE Grade	220 / 90	460 / 140	680 / 250
Relative Density @ 60°F/60°F, ASTM D1298	0.894	0.894	0.894
Viscosity @ 100°C, cSt, ASTM D445	19.32	29.70	44.65
Viscosity @ 40°C, cSt, ASTM D445	217.3	459.0	682.0
Viscosity Index ASTM D2270	-	90	-
Flash Point °C (°F), (COC), ASTM D92	201 (394)	200 (392)	220 (428)
Pour Point °C (°F), ASTM D97	-15 (+5)	-15 (+5)	-12 (+10)
Rust Test 4 hrs @ 60°C, Sea H2O, ASTM D665B	Pass	Pass	Pass
Copper Corrosion 3 hrs @ 121°C, ASTM D130	1b	1b	1b
Four-Ball EP Weld Point kgf, ASTM D2783	160	160	160
Four-Ball EP Load Wear Index kgf, ASTM D2783	32	32	32
Four-Ball Wear @ 75°C, 1,200 rpm, 15 kgf, 60 minutes, mm wear, ASTM D4172	0.39	0.39	0.36
Demulsibility Characteristics EP 82°C, 90 ml H₂O, ASTM D2711B			
% of H ₂ O in oil	2.0	0.20	0.11
Total ml of free H ₂ O	90	90	90
ml of emulsion	0.2	0.2	0.1
Foaming Characteristics @ 24°C/93.5°C/24°C, 3 sequences, ml of foam/time to break, ASTM D892	0/0, 0/0, 0/0	0/0, 0/0, 0/0	0/0, 0/0, 0/0

Performance Requirements Met or Exceeded

All grades:

- Halal (certified by IFANCA)
- Kosher Pareve
- NSF H1

4090 only:

- Angelus Sanitary Can Machine
- Lanham-Proofer Chain

Typical Applications

- Equipment where incidental food contact may occur, including:
 - ◇ Slides, guides, chains, conveyor chains
 - ◇ Valves
 - ◇ Bearings
 - ◇ Gearboxes
 - ◇ Open gears
 - ◇ Worm gear applications



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