SINCE 1839
Schaeffer's
SPECIALIZED LUBRICANTS

TECHNICAL DATA

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ISO 9001 CERTIFIED

276 SYNTHETIC FOOD GRADE GEAR LUBE H1

Synthetic Food Grade Gear Lube H1 is a synthetic blend, anti-wear, extreme pressure food grade oil that is specially formulated for use in the lubrication of food, feed and pharmaceutical processing and packaging equipment, especially those pieces of equipment that are subjected to high loads and high moisture conditions.

Synthetic Food Grade Gear Lube H1 meets the requirements for a USDA H1 quality lubricant and the requirements of the United States Code of Federal Regulations 21CFR 178.3570, 178.3620(b), and 573.680 of the United States Food and Drug Administration's Regulations.

Synthetic Food Grade Gear Lube H1 can be used in the lubrication of all types of enclosed gear, chain guide, chain and conveyor applications where there is a chance of incidental contact with food, foodstuffs, drinking water, potable water or ground water may occur. Typically, these applications can be found in the following industries:

Meat and Poultry Processing Plants
Fish and Seafood Processing Plants
Soft Drink and Bottling Plants
Cheese and Cheese Product Producers
Snack Food Manufacturers
Pet Food and Animal Feed Producers
Pharmaceutical and Drug Manufacturers
Food and Beverage Container Manufacturers
Water Well Drillers
Sugar Mills
Egg Processing Plants
Breweries and Wineries
Vegetable and Fruit Processors
Bakeries
Pasta Manufacturers
Oil Mills and Seed Cake Processors
Cosmetic Manufacturers
Paper and Paperboard Manufactures
Drinking and Potable Water Treatment Plants
Sugar Refineries

Synthetic Food Grade Gear Lube H1 is blended from a combination of highest quality, highly refined, severely hydro-finished and purified non-toxic technical white polyalphaolefin (PAO) synthetic base fluids and technical white and U.S.P. grade paraffinic white oils available. These technical white PAO synthetic base fluids and technical white and U.S.P. grade paraffinic white oils provide Synthetic Food Grade Gear Lube H1 with the following advantages:

- Excellent lubricity and film strength
- Superior oxidative stability
- Excellent resistance to thermal degradation
- A high viscosity index
- Excellent hydrolytic stability
- Excellent resistance to acidic compounds
- Very good low temperature properties
- A reduction in operating temperatures
- Compatibility with all types of seals and coatings
- Extended drain intervals

Blended into the technical white PAO synthetic base fluids and technical white and U.S.P. grade paraffinic white oils is a highly specialized non-toxic food grade approved additive package which provides the Synthetic Food Grade Gear Lube H1 with the following outstanding performance features:

- Exceptional anti-wear and load carrying capabilities
- Excellent rust and corrosion inhibiting properties
- Enhanced oxidation stability
- Excellent anti-foam and air release properties
- Enhanced oxidation stability.

Further blended into Synthetic Food Grade Gear Lube H1 is a unique blend of USDA and FDA acceptable preservatives. These food grade preservatives provide the product with an effective way to control, inhibit and retard the growth of bacteria, yeast and molds that may come into contact with Synthetic Food Grade Gear Lube H1 during use. These preservatives are not an antiseptic or sterilizing agent but Synthetic Food Grade Gear Lube H1 does effectively prevent bacterial growth and control microbiological proliferation if the lubricant becomes contaminated during use.

TYPICAL PROPERTIES

ISO Grade	**100**	**150**		**220**	**320**		**460**	**680**
SAE Grade			**90**			**140**		
AGMA Grade	3EP	4EP	----	5EP	6Ep	----	7EP	8EP
Specific Gravity @ 60°F/15.5°C	0.8719	0.8783	0.84	0.8443	0.8789	0.86	0.8583	0.8843
Viscosity @ 40°C cSt (ASTM D-445)	90.00-100	144-165	190-255	200-250	320-345	300-449	420-470	619-635
Viscosity @ 100°C cSt (ASTM D-445)	10.50-13.50	15.00-21.50	19.00-23.00	16.50-23.50	29.00-35.00	35.00-42.00	35.00-40.00	50.00-60.00
Viscosity Index (ASTM D-2270)	118	130	113	120	134	154	128	149
Flash Point °F/°C (ASTM D-92)	428°/220°	442°/228°	440°/227°	440°/227°	450°/232°	455°/235°	455°/235°	460°/238°
Fire Point °F/°C (ASTM D-92)	440°/227°	470°/243°	470°/243°	470°/243°	470°/243°	480°/249°	480°/249°	485°/252°
Pour Point °F/°C (ASTM D-92)	-15°/-26°	-10°/-23°	-10°/-23°	-10°/-23°	0°/-18°	0°/-18°	0°/-18°	10°/-12°
Copper Strip Corrosion Test (ASTM D-130)	1a	1a	1a	1a	1a	1a	1a	1a
Rust Test (ASTM D-665)								
Procedure A (Distilled Water)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Procedure B (Salt Water)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Demulsibility Test (ASTM D-1401)								
Oil-Water-Emulsion @ 20 minutes	40-40-0	40-40-0	40-40-0	40-40-0	40-40-0	40-40-0	40-40-0	40-40-0
Oxidation Stability Test (ASTM D-943)								
Hours to TAN of 2	4000	4000	4000	4000	4000	4000	4000	4000
Falex Continuous Load (ASTM D-3233)								
Procedure A								
Failure Load, lbs.	1250	1250	1250	1360	1360	1500	1500	1500
Four Ball Wear Test (ASTM D-4172)								
(1hr/40kg/130°F(54°C))								
Wear Scar Diameter, mm	0.45	0.45	0.45	0.45	0.4	0.35	0.35	0.3
Timken EP Test (ASTM D-2782)								
OK Load. lbs	30	35	40	40	40	40	40	40
Total Acid Number (ASTM D-664)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
% Evaporation Loss (ASTM D-2887)								
@ 700°F/372°C	7.0	5.5	3.8	3.8	3.8	4	4.0	4.1
% Evaporation Loss (ASTM D-972)								
22 hours @ 225°F/107°C	2	1.5	1.5	1.5	1.5	1	1	1
Foam Test (ASTM D-892)								
Sequence I	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Sequence II	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Sequence III	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
FZG A/8.3/90 (ASTM D-5182)								
Load Failure Stage	11th	11th	12th	12th	12th	12th	12th	12th