



# TECHNICAL DATA

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## #271 SYNTHETIC FOOD GRADE GREASE H-1

Synthetic Food Grade Grease H-1 is a fully synthetic extreme pressure, anti-wear, high temperature grease 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 Grease H-1 meets the requirements for a USDA H-1 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 Grease H-1 can be used in the lubrication of ball, roller, journal and sliding bearing applications and chain 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

Egg Processing Plants  
Breweries and Wineries  
Vegetable and Fruit Processors  
Bakeries  
Pasta Manufacturers  
Oil Mills and Seed Cake Processors  
Cosmetic Manufacturers  
Paper and Paperboard Manufacturers  
Drinking and Potable Water Treatment Plants

Synthetic Food Grade Grease H-1 is compounded from the highest quality, severely hydro-finished technical white Polyalphaolefin (PAO) synthetic base fluids available. Blended into the hydro-finished technical white PAO synthetic base fluids are a bentone base thickener, adhesive/cohesive additive and other selected performance additives.

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The formulation provides Synthetic Food Grade Grease H-1 with the following outstanding performance features:

1. Excellent resistance to water washout and water spray-off
2. Excellent cold temperature starting and pumpability
3. Excellent shear and mechanical stability
4. Superior anti-wear and extreme pressure load carrying properties
5. Excellent rust and oxidation inhibiting characteristics
6. Excellent resistance to oxidation and thermal degradation
7. No dropping point
8. Excellent resistance to acidic compounds
9. Excellent resistance to wash out, pound out, splatter and squeeze out
10. Excellent ability to retain its consistency and resist separation of its base oils.

Further blended into Synthetic Food Grade Grease H-1 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 Grease H-1 during use. These preservatives are not an antiseptic or sterilizing agent but does effectively prevent bacterial growth and control microbiological proliferation if the Synthetic Food Grade Grease H-1 becomes contaminated during use.

Synthetic Food Grade Grease H-1 has an operating temperature range of -40° to 260°C (-40 to 500°F).

#### TYPICAL PROPERTIES

NLGI Grade	0	1	2
Type of Thickener	Bentone	Bentone	Bentone
Worked Penetration 60 Strokes (ASTM D-217)	355-385	310-340	265-295
Roll Stability (ASTM D-1831) % Change in consistency	9.0	9.0	9.0
Four Ball EP Test (ASTM D-2596) Weld Point, kg	250	250	250
Load Wear Index, kg	35	35	33.7
Four Ball Wear Test (ASTM D-2266) 40kg/1200rpm/1 hr./167°F Scar Diameter, mm	0.6	0.6	0.6

Typical properties continued on next page

NLGI Grade	0	1	2
Timken EP Test (ASTM D-2509) OK Load lbs.	50	50	50
Falex EP Continuous Load (ASTM D-3233 Procedure A) Failure Load, lbs	1300	1300	1360
Oxidation Stability (ASTM D-942) PSI Loss @ 100 hours	0.5	0.5	0.5
PSI Loss @ 300 hours	1.5	1.5	1.5
Rust Inhibition Test (ASTM D-1743)	1,1,1	1,1,1	1,1,1
Water Washout Characteristics (ASTM D-1264)	----	3.5%	3.3%
Water Spray Off Test (ASTM D-4049) % Loss	----	15%	15%
Evaporation Loss (ASTM D-2595) @ 121°C, 22 hours	1%	1%	0.5%
Copper Strip Corrosion Test (ASTM D-4048)	1a	1a	1a
Low Temperature Torque (ASTM D-1478) @ -54°C			
Starting Torque g. cm.	4,980	5,100	5,605
Running Torque g. cm	1,750	1,950	2,330
Lincoln Ventmeter			
PSI @ 38°C (100°F)	----	----	350
PSI @ -1°C (30°F)	200	300	450
PSI @ -18°C (0°F)	450	700	1000
PSI @ -29°C (-20°F)	1050	1100	1150
PSI @ -40°C (-40°F)	1300	1450	1750
<b><u>BASE OIL PROPERTIES</u></b>			
Viscosity 40°C cSt (ASTM D-445)	87.8	76.34	76.34
Viscosity 100°C cSt (ASTM D-445)	11.25	10.17	10.17
Viscosity Index (ASTM D-2270)	116	116	116
Flash Point °F/°C (ASTM D-92)	450°/232°	487°/253°	487°/253°
Pour Point °F/°C (ASTM D-97)	-40°/-40°	-35°/-37°	-35°/-37°

Packaging: #271 Synthetic Food Grade Grease is available in 420lb drums, 40lb pails,  
120lb kegs, 420lb drums and 30 tubes per case.