Molysyn Manufacturing Co.

TECHNICAL DATA

M-410 MULTI GRADE SYNTHETIC FOOD GRADE H-1 GREASE

Multi Synthetic Food Grade Grease H-1 with Microshield® 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 with Microshield® 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 with Microshield® 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 Microshield® 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 with Microshield® is a unique blend of USDA and FDA acceptable microbialcides known as Microshield® for knockdown performance against a broad spectrum of bacteria, yeast and molds. Microshield® provides 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 with Microshield® due use. Microshield® is not an antiseptic or sterilizing agent but they do however effectively prevent bacterial growth and control microbiological proliferation if the Synthetic Food Grade Grease H-1 with Microshield® becomes contaminated during use.

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

TYPICAL PROPERTIES

NLGI Grade	1	2
Type of Thickener	Bentone	Bentone
Worked Penetration 60 Strokes (ASTM D-217)	355-385	
Roll Stability (ASTM D-1831)	310-340	265-295
% Change in consistency	9.0	
Four Ball EP Test (ASTM D-2596)		
Weld Point, kg	250	250
Load Wear Index, kg	35	33.7
Four Ball Wear Test (ASTM D-2266)		
40kg/1200rpm/1 hr./167°F		
Scar Diameter, mm	0.6	
Timken EP Test (ASTM D-2509)		
OK Load lbs.	50	
Falex EP Continuous Load (ASTM D-3233 Procedure A)		
Failure Load, lbs	1300	
Oxidation Stability (ASTM D-942)		
PSI Loss @ 100 hours	0.5	
PSI Loss @ 300 hours	1.5	
Rust Inhibition Test (ASTM D-1743)	1,1,1	
Water Washout Characteristics (ASTM D-1264)	----	1% @ 121°C, 22 hours
Water Spray Off Test (ASTM D-4049)		
% Loss	----	
Evaporation Loss (ASTM D-2595)		
	1.5	1.5
Copper Strip Corrosion Test (ASTM D-4048)	1a	1a
Low Temperature Torque (ASTM D-1478)		
@ -54°C		
Starting Torque g. cm.	4,980	5,100
Running Torque g. cm	1,750	1,950

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Typical Properties Continued

NLGI Grade	0	1	2
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
BASE OIL PROPERTIES			
Viscosity 40°C cSt (ASTM D-445)			
Viscosity 100°C cSt (ASTM D-445)			
Viscosity Index (ASTM D-2270)	87.8	76.34	76.34
Flash Point °Φ/°X (ASTM D-92)	11.25	10.17	10.17
Pour Point °Φ/°X (ASTM D-97)	116	116	116
	450°/232°	487°/253°	487°/253°
	-40°/-40°	-35°/-37°	-35°/-37°