

## PRODUCT DATA SHEET

### **MIN-LUBE™**

#### **High Performance Grease**

**MIN-LUBE grease** is designed specifically for lubrication in severe environments as well as food and pharmaceutical related industries. It is a ISO100 mineral oil base thickened with a proprietary calcium sulfonate complex and a carefully selected additive package focused on thermal, oxidative, and mechanical stability. It contains Micronox® to provide antimicrobial protection for this product which is groundbreaking technology that prevents degradation of the lubricant.

#### **Product Features:**

- Extreme Pressure and Wear Protection
- Working Temperature range: -15 °F to 550 °F
- Highly resistant to water, steam, acid, and many chemicals
- Excellent Thermal and Oxidative Stability
- NSF Nonfood Compound Category Code: H1
- Does not contain metals, PTFE or silicone
- High load bearing properties
- Excellent Corrosion Protection
- Does not soften or run out
- Ideal for mold components
- Ideal for bearings, bushings, cams, cables, chains, conveyors, gears, etc.
- Compatible with lithium type greases

#### **Customer Benefits:**

- Recommended for the food and pharmaceutical industries in applications of chance of incidental food contact.
- Provides superior load and wear protection to bearings and long life to machinery.
- It works effectively for extended periods under water ingress in food processing and other industries with excellent rust protection.
- Designed to work effectively in the temperature range of -15 °F to 550 °F
- Anti-Microbial ingredients protect the grease from degradation.

#### **Suggested Applications:**

- Food and Pharmaceutical
- Plastics Molding
- Automotive
- Marine

#### **Packaging:**

- 16-ounce net weight Jar
- 16-ounce net weight Cartridge Sold in a case of 12
- 5 gallon (35 lb.) Pail
- 55 gallon (400 lb.) Drum

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Product Name/Number	MIN-LUBE™ / NML-	
	Result	Test Method
Color / Texture	Off-White / Smooth	
NSF Registration No. / Category Code	166198 / H1	
Soap Type	Calcium Sulfonate Complex	
NLGI Grade	2	
Penetration, Unworked	265-295	ASTM D 217
Penetration, Worked 100,000 strokes	265-295	ASTM D 217
Roll Stability, % Change	3.1	ASTM D 1831
Dropping Point, °F (°C), min	600 (316)	ASTM D 2265
Water Washout @ 175°F (79.4°C), % loss	0.5	ASTM D 1264
Four-Ball Wear, mm	0.38	ASTM D 2266
Timken OK Load, lbs.	60	ASTM D 2509
4-Ball Weld point, kgf	500	ASTM D 2596
4-Ball EP Load Wear Index, kgf	62	ASTM D 2596
Wheel Bearing Life Test, hours	180	ASTM D 3527
Grease Oxidation, psi loss, 1000 hrs	9.0	ASTM D 942
Rust Test	Pass	ASTM D 1743
Oil Separation Test, %	Nil	ASTM D 1742
Salt Fog Corrosion (hrs to failure)	>300	ASTM B 117
Base Fluid Viscosity Index	92	ASTM D 2270
Base Fluid Viscosity @ 40°C, cSt	95	ASTM D 445
Base Fluid Viscosity @ 100°C, cSt	10.5	ASTM D 445
Base Fluid Flash Point °F (°C)	482 (250)	ASTM D 92
Base Fluid Fire Point °F (°C)	572 (300)	ASTM D 92
Base Fluid Pour Point °F (°C)	+10 (-12)	ASTM D 97

**Outstanding Mechanical Stability** — Shows little change in Cone Penetration (ASTM D 217) or consistency after 100,000 strokes. There is no evidence of shear breakdown in the Roll Stability Test (ASTM D 1831), even in an extended high temperature, modified version to increase the test's severity.

**Excellent Extreme Pressure (EP) and Anti-wear Performance** — Illustrated with Timken OK Values (ASTM D 2509) of 60 pounds or greater and 4-Ball EP (ASTM D 2596) LWI results of over 60 kgf with a weld point of 500 kgf. 4-Ball Wear (ASTM D 2266) performance is equally impressive with typical wear scar of less than 0.40 mm.

**Protects Against Rust and Corrosion** — Easily passes the standard Corrosion Preventive Properties Test (ASTM D 1743). A severe, Salt Fog Test (ASTM B 117) yields passing performance in excess of 300 hours, something few food grade greases of any other technology can achieve.

**Excellent Water Resistance.** Exceptional Water resistance is shown in Water Washout Test ASTM D 1264, exhibiting a 0.5% loss at 175F