



POLYMER 400

MULTIPURPOSE, WATER-RESISTANT LUBRICANT

- GEAR OILS
- MOTOR OILS
- HYDRAULIC OILS
- PIPE COATINGS
- THREAD SEALANTS
- BEARING GREASES
- SPECIALTY GREASES
- THREAD COMPOUNDS
- SUCKER ROD COATINGS
- OUTSIDE PRESERVATIVES
- WIRELINE GREASE SEALS
- CLEANERS & DEGREASERS
- PIPE STORAGE COMPOUNDS
- RUST & CORROSION INHIBITORS
- THREAD LOCKING COMPOUNDS
- VALVE LUBRICANTS & SEALANTS
- TOOL JOINT & DRILL COLLAR COMPOUNDS

PRODUCT DESCRIPTION

Polymer 400 is an excellent multipurpose, water-repellent grease, used where washout resistance is critical to the operation. Because of its excellent stability and EP characteristics, Polymer 400 remains on the bearing surface longer, extends lubrication intervals, and prolongs bearing life. Polymer 400 is fluoromated with LIQUILON® to provide a microscopic lubricating coating that eliminates metal-to-metal contact, provides residual lubrication long after conventional lubricants have washed out, and adds stability and resistance to chemical change. Polymer 400 fulfills complete lubricating grease requirements.

APPLICATION

Polymer 400 is for application to a variety of wireline, drilling tools, equipment, vehicle lubrication, sealing, WKM gate, and pipeline ball valves. Polymer 400 is also used for lubrication to those areas of downhole tools where washout by drilling fluids, muds, and other downhole contaminants is common. Polymer 400 is an ideal lubricant when applied to wheel bearings and water pumps. Polymer 400 applications include bearings, high-temperature applications, water well rigs, wireline downhole tools, wireline vehicles, and pumps for grease injection systems. It is generally used for farm machinery and in industrial, automotive, marine, and manufacturing industries.

- **BENEFITS**
- **Made with LIQUILON**
- **Reduces friction and wear**
- **Resists wash out**
- **Provides residual lubrication to critical areas of downhole tools**
- **Premium multipurpose grease for all operations**
- **Prevents corrosion**
- **Services temperatures from -30°F to >450°F (-34°C to >232°C)—will vary depending on NLGI grade**

TYPICAL OBSERVATIONS

Color	Light Green*
Texture	Smooth, Stringy
Thickener	Lithium Complex
Flash Point, ASTM D-92	530°F (277°C)
Dropping Point, ASTM D-2265	513°F (267°C)
Corrosion Preventive Properties, ASTM D-1743 @ 127°F (51°C)	Pass
Evaporation Loss, ASTM D-972 @ 210°F (98°C)	Nil
Viscosity of Base Oil	
cSt, @ 40°C	154.3
cSt, @ 100°C	12.1
Water Washout Characteristics, ASTM D-1264 @ 100°F (37°C)	2.8%
Four Ball Wear Test, ASTM D-2266, 40 Kg	
1200 rpm @ 167°F (80°C),	
1 Hr. Average Wear Scar. Diam, mm	0.72
Oil Separation, ASTM D-1742 @ 77°F (25°C)	2.6%
Oxidation Stability, ASTM D-942 @ 210°F (98°C), 100 Hrs, PSI Loss	2.0
Wheel Bearing Leakage, ASTM D-1263 @ 235°F (112°C)	
660 rpm, and 6 Hrs.	
No Presence of Varnish, Gum, or Lacquer-Like Materials on the Bearing Surface	0.19 grs.
Roll Stability, ASTM D-1831, 2 Hr. @ 77°F (25°C)	
Initial Penetration @ 77°F (25°C)	268
Final Penetration @ 77°F (25°C)	279
Change	+11
4-Ball EP Weld Load, Kgf (ASTM D-2596)	315 Pass 400 Weld
Timken Load, lb, ASTM D-2509	70
Shelf Life (unopened container)	Four Years

* When exposed to UV light, the surface of this product may turn a brownish color. The color change will NOT affect the performance properties of this product.

	400N00	400N0	400N1	400N2
Density, lb/gal @ 77°F (25°C)	7.15	7.306	7.40	7.50
Specific Gravity @ 77°F (25°C)	0.856	0.874	0.88	0.899
Penetration, ASTM D-217 @ 77°F (25°C)	400-430	355-385	310-340	280-290



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Manufactured by
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