



Open Gear Lube

Open Gear Lube is a viscous, tacky, petroleum resin-based gear lubricant cut back with a volatile, non-chlorinated solvent for ease of application. It is recommended primarily for the lubrication and cushioning of open and semi-enclosed gears on mining shovels, draglines and excavation equipment used in underground and surface mines and in rock quarries. It also may be used for the lubrication of some cable-actuated equipment.

Open Gear Lube is specially formulated to provide high load-carrying capacity to protect heavily loaded gears from scoring and galling. It forms a heavy, tenacious film (after solvent evaporation) that adheres well to metal surfaces and will not harden or flake off at low temperatures. This film provides good resistance to water washout and protects gears against rust and corrosion.

Open Gear Lube is available in three grades for use over a wide range of operating temperatures.

Applications

- Open and semi-enclosed gears found on mining shovels, draglines and excavation equipment
- Guides and sliding surfaces with large clearances, where asphaltic-type lubricants are specified
- Cables on draglines, clamshells, hoists and other cable-operated equipment where cable clamp safety devices are not used

Open Gear Lube meets the requirements of the following industry specification:

- ANSI/AGMA Standard 9005-E02

Features/Benefits

- Excellent adhesion to metal surfaces
- Forms a heavy, tenacious film to lubricate and cushion gear teeth
- Good extreme-pressure properties for protection under heavy or shock loads
- Good resistance to water washout
- Protects against rust and corrosion
- Will not flake off at low temperatures
- Does not contain any chlorine, lead or carcinogens
- Easy application, by spraying, brushing or dripping⁽¹⁾
- Suitable for use with automatic lubrication equipment

**Chlorine-Free,
Solvent-Cutback
Open Gear
Lubricant For
Shovels &
Draglines**

CONTACT INFORMATION

**Phillips66
Lubricants.com**

U.S. Customer
Service:
1-800-368-7128

Technical Hotline:
1-877-445-9198

International
Customer Service:
1-832-765-2500

E-mail address:
**lubricants@
p66.com**



⁽¹⁾ **Caution:** This product contains solvent. Proper ventilation and fire safety precautions must be taken during application.

Open Gear Lube
Typical Properties

Grade	585 W	585 NC	595 NC
Specific Gravity @ 60°F	0.980	0.978	1.000
Density, lbs/gal @ 60°F	8.16	8.14	8.33
Color, Visual	Black	Black	Black
Appearance	Viscous	Viscous	Viscous
Consistency	Semifluid	Semifluid	Semifluid
Flash Point (COC), with solvent, °C (°F)	150 (302)	>93 (>199)	>93 (>199)
Solvent Content, wt %	26	12	8
Viscosity, without solvent:			
cSt @ 100°C	540	540	540
SUS @ 210°F	2,600	2,600	2,600
Copper Corrosion, ASTM D130	4a	4a	4a
Four-Ball EP, ASTM D2596,			
Weld Load, kgf	400	400	400
Load-Wear Index, kgf	53	65	65
Four-Ball Wear, ASTM D2266, Scar Diameter, mm	0.40	0.50	0.50
Rust Test, ASTM D1743	Pass	Pass	Pass
Timken OK Load, ASTM D2782, lb	45	45	45
Usable Temperature Range,			
°C	-40 to 0	-18 to 10	0 to 49
°F	-40 to 32	0 to 50	32 to 120

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3apps.phillips66.com/NetMSDS>.

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.