



Rock Drill Oil

Phillips 66® Rock Drill Oil is an adhesive, extreme-pressure (EP) lubricant specially developed for the lubrication of air-powered tools such as rock drills, jackhammers, pavement breakers and drifters. It also is recommended for the lubrication of mining and industrial equipment operating in wet environments. It is formulated with an ashless, chlorine-free additive package for reduced environmental impact.

Rock Drill Oil is formulated with high-quality paraffinic base oils and a specially tailored non-chlorinated additive package to provide excellent protection for pneumatic percussion tools. It has high load-carrying capacity to protect against wear and seizure of sliding metal surfaces under heavy or shock-load conditions. The emulsion and metal surface adhesion properties allow a maintained lubricant film in the presence of moisture. It also provides protection against rust and corrosion. It also has good oxidation resistance and thermal stability at high temperatures for long service life. The non-chlorinated additive package helps reduce environmental impact in case of leaks or stray mist, and facilitates waste oil disposal.

Applications

- Pneumatic percussion tools such as jackhammers, pavement breakers and rock drills
- Mining equipment such as demolition hammers, chipping hammers and drifters
- Enclosed industrial gearboxes where leakage is a problem

Features/Benefits

- Non-chlorinated additive package for reduced environmental impact
- Excellent extreme-pressure properties
- Protects against wear and seizure
- Good adhesion to metal surfaces in the presence of moisture
- Resists dripping and leakage and low fogging tendency
- Good oxidation resistance and thermal stability
- Low odor
- Good foam resistance
- Eight viscosity grades for use over a wide range of temperature

**Adhesive,
Extreme-
Pressure Air
Tool Lubricant**





Rock Drill Oil

| Typical Properties | | | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ISO Grade | 32 | 46 | 68 | 100 | 150 | 220 | 320 | 460 |
| Specific Gravity @ 60°F | 0.863 | 0.868 | 0.872 | 0.876 | 0.881 | 0.886 | 0.890 | 0.895 |
| Density, lbs/gal @ 60°F | 7.19 | 7.22 | 7.26 | 7.30 | 7.34 | 7.38 | 7.41 | 7.45 |
| Color, ASTM D1500 | 1.5 | 1.5 | 2.5 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 |
| Flash Point (COC), °C (°F) | 198 (388) | 215 (419) | 222 (432) | 222 (432) | 228 (442) | 234 (453) | 243 (469) | 243 (469) |
| Pour Point, °C (°F) | -37 (-35) | -37 (-35) | -27 (-17) | -27 (-17) | -21 (-6) | -18 (0) | -18 (0) | -11 (12) |
| Viscosity | | | | | | | | |
| cSt @ 40°C | 32.0 | 46.0 | 68.0 | 100 | 150 | 220 | 320 | 460 |
| cSt @ 100°C | 5.7 | 7.2 | 9.2 | 12.3 | 15.7 | 20.2 | 25.2 | 31.7 |
| SUS @ 100°F | 165 | 236 | 351 | 518 | 784 | 1,158 | 1,698 | 2,385 |
| SUS @ 210°F | 45.3 | 50.3 | 57.3 | 68.8 | 82.6 | 102 | 125 | 155 |
| Viscosity Index | 119 | 117 | 112 | 115 | 108 | 106 | 102 | 102 |
| Acid Number, ASTM D664, mg KOH/g | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Falex EP Load, ASTM D3233, lbf | 4,225 | 4,225 | 4,225 | 4,225 | 4,225 | 4,225 | 4,225 | 4,225 |
| Four-Ball Wear, ASTM D4172, Scar Diameter, mm | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Four-Ball Weld Load, ASTM D2783, kgf | 315 | 315 | 315 | 315 | 315 | 315 | 315 | 315 |
| Rust Test, ASTM D665 A | Pass | Pass | Pass | Pass | Pass | Pass | Pass | Pass |
| Timken OK Load, ASTM D2782, lb | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/EN/products/Pages/MSDS.aspx>.

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.