



CITGO CITGEAR® XCO OILS

Date 10/13

DESCRIPTION: CITGO CITGEAR XCO Oils are premium lubricants that provide excellent bearing and gear lubrication performance in steel industry applications such as high speed rod mills.

BENEFITS: CITGO CITGO CITGEAR XCO Oils are formulated with high quality paraffinic base oils and contain additive systems that assure:

- Excellent oil/water separation which allow water removal from gear and bearing systems
- High level of wear protection for critical machinery
- Outstanding rust and corrosion protection in wet environments
- Excellent oxidation stability for long service life
- Premium anti-foam properties
- High thermal stability minimizes formation of heat related sludge and varnishes

APPLICATIONS: CITGO CITGEAR XCO Oils are recommended for use in high speed rod mill circulation systems and other gear and bearing lubrication applications. CITGO CITGEAR XCO Oils are recommended for use in Danieli and Morgan (Siemens AG) high speed rod mills.

TYPICAL PROPERTIES:**CITGO CITGEAR® XCO OILS**

| Grade | 100 | 220 | 320 | 460 |
|--|-----------|-----------|-----------|-----------|
| Material Code | 631100001 | 631102001 | 631103001 | 631104001 |
| Gravity, ASTM D 4052, °API | 30.3 | 27.3 | 26.7 | 26.2 |
| Density, lb/gal at 60 °F | 7.3 | 7.4 | 7.4 | 7.5 |
| Flash Point, ASTM D 92, COC, °F (°C) | 482 (250) | 522 (272) | 561 (294) | 554 (290) |
| Viscosity, ASTM D 445, cSt at 40°C | 92 | 220 | 320 | 447 |
| cSt at 100°C | 10.7 | 18.6 | 23.8 | 29.7 |
| Viscosity Index, ASTM D 2270 | 100 | 94 | 94 | 95 |
| Pour Point, ASTM D 97, °F (°C) | -6 (-21) | 10 (-12) | 10 (-12) | 10 (-12) |
| Color, ASTM D 1500 | L1.0 | L4.0 | L4.0 | L5.0 |
| Rust Test, ASTM D 665 A and B | Pass | Pass | Pass | Pass |
| Water Separation, ASTM D 1401 at 180°F (ml Emulsion at 30 minutes) | 3.0 Max. | 3.0 Max. | 3.0 Max. | 3.0 Max. |
| Foam Test, ASTM D 892, Sequence I, II, III | Pass | Pass | Pass | Pass |
| Four Ball Wear, ASTM D 4172 mm @ 20 kg | 0.38 | 0.34 | 0.37 | 0.30 |