



TECHNICAL DATA SHEET

CLARET™ ENCLOSED GEAR OIL

Whitmore's Claret™ enclosed gear oils have been formulated to meet the unique demands of heavily loaded, industrial gearing systems. Claret™ contains molybdenum disulfide, a colloidal lubricant which provides extreme pressure protection under severe load and shock load.

Anti-wear and extreme pressure protection are assured with Claret™, even under boundary lubrication conditions. Claret™ is suitable for use in both steel-on-steel and steel-on-bronze applications such as worm gears. It may also be used to replace compounded oils in many applications.

Claret™ oils feature long-lasting, anti-foaming protection which aids in reducing wear, lowering operating temperatures and protecting seals. The blend of carefully selected base stocks provides excellent oxidation stability and extended service life of the lubricant.

All viscosity grades of Claret™ meet the requirements of DIN 51517-3.

BENEFITS:

- **SOLID LUBRICANTS** - contains molybdenum disulfide for extreme pressure protection under severe load and shock load.
- **ANTI-WEAR** - protects even under severe conditions to extend gear life.
- **ANTI-FOAM** - extends oil life, reduces wear, protects seals and lowers temperatures.
- **VERSATILE** - suitable for all enclosed gear systems which require an EP oil, even worm gearing.
- **OXIDATION RESISTANT** - provides longer service intervals with fewer changeouts.

APPLICATIONS:

Claret™ was specifically formulated for enclosed gear driven pulverizers and other severe gearing applications found in mining equipment, power plants, steel mills, cement plants and other industries. Meets U.S. Steel 224 and AGMA 9005-D94 specifications.

| ASTM # | | TYPICAL CHARACTERISTICS | | | | | | |
|-----------------------|--|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| D-445 | ISO Grade | 68 | 150 | 220 | 320 | 460 | 680 | 1500 |
| | SAE Grade | 80 | 90 | 90 | 90 | 140 | 140 | N/A |
| | AGMA Grade | 2 EP | 4 EP | 5 EP | 6 EP | 7 EP | 8 EP | 9 EP |
| D-2161 | Kinematic Viscosity | | | | | | | |
| | cSt @ 40°C | 70 | 159 | 235 | 345 | 475 | 736 | 1,630 |
| D-2270 | cSt @ 100°C | 9 | 15 | 22 | 27 | 31 | 37 | 65 |
| | Saybolt Viscosity | | | | | | | |
| | SUS @ 100°F | 943 | 749 | 1,295 | 1,783 | 2,512 | 3,980 | 8,831 |
| D-97 | SUS @ 210°F | 56 | 79 | 110 | 131 | 157 | 179 | 315 |
| | Viscosity Index | 99 | 91 | 111 | 101 | 96 | 82 | 91 |
| D-97 | Pour Point, °F (°C) | -20 (-29) | -10 (-23) | 0 (-18) | 5 (-15) | 5 (-15) | 15 (-9) | 25 (-4) |
| | Cleveland Open Cup | | | | | | | |
| Gardner Method | Density, | | | | | | | |
| | lb/gal @ 60°F (15.5°C) | 7.40 | 7.46 | 7.50 | 7.52 | 7.55 | 7.80 | 7.84 |
| D-92 | Specific Gravity, | | | | | | | |
| | g/cc @ 60°F (15.5°C) | 0.888 | 0.896 | 0.900 | 0.905 | 0.905 | 0.939 | 0.941 |
| D-2782 | Flash Point, °F (°C) | 400 (204) | 400 (204) | 400 (204) | 400 (204) | 400 (204) | 400 (204) | 425 (218) |
| | Cleveland Open Cup | | | | | | | |
| D-2783 | Timken OK Load, lb | 60 | 65 | 65 | 65 | 70 | 70 | 70 |
| D-4172 | Four Ball EP, Weld Point, kg | 400 | 400 | 500 | 500 | 500 | 500 | 500 |
| D-2893 | Four Ball Wear | | | | | | | |
| | Scar Width, mm @ 40 kgf | 0.60 | 0.60 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| D-2893 | Oxidation for Lubricating Oils, | | | | | | | |
| | % Viscosity Change | <6 | <6 | <6 | <6 | <6 | <6 | <5 |
| | FZG Test, Stages Passed | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

PACKAGING

| | | |
|-------|------|-------|
| Drums | Kegs | Pails |
|-------|------|-------|

THE WHITMORE MANUFACTURING COMPANY

930 Whitmore Drive • P.O. Box 9300 • Rockwall, Texas 75087 • USA • (972) 771-1000 • Fax: (972) 722-2108

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Performance Under Pressure Since 1893

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