August 22, 2012



GEAR & BEARING LUBRICANT

CIRRUS SYN EP



GENERAL DESCRIPTION

CIRRUS SYN EP gear lubricants are formulated with synthetic base stocks and fortified with select additive systems to enhance their exceptional performance. The PAO base fluid used has outstanding oxidation and thermal stability, naturally high viscosity index and excellent low temperature pumpability and fluidity. The unique additive system used provides increased oxidation stability, extreme pressure properties, and maximum protection against wear, rust, corrosion and foaming. In today's world of efficiency improvements, there has been much emphasis placed on reducing energy requirements for equipment used in plant operations. CIRRUS SYN EP gear lubricants have proven to reduce friction, there-by reducing the input power to operate the equipment or increasing the available power output. The reduction of fluid friction results in lower lubricant operating temperatures, prolonging the life of both the lubricant and the equipment. The additive system used in this product not only reduces frictional drag, but also protects gears against failures associated with heavy loading. CIRRUS SYN EP lubricants meets the requirements of U.S. Steel 224 specification, AGMA 9005-D94 specification, DIN 51517 Part 3 CLP specification and API GL-4 Gear Service Category.

APPLICATION

CIRRUS SYN EP lubricants are recommended for use in all types of enclosed gearing as well as plain and rolling element bearings. These lubricants are ideal for heavily loaded low speed gears and bearings where boundary or elasto-hydrodynamic lubrication (EHL) conditions exist, such as in mine hoist gear reducers. They are particularly recommended for gearboxes which operate under excessively high temperatures where good quality conventional oils rapidly oxidize.





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THILL CITE

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widely varying conditions of product use, which are beyond our control, it is strongly recommended that the product be tested for suit ability. Product typical this publication are current NOTE: The information in this publication is the result of careful testing in our laboratories, complemented by selected literature. It does not in any way constitute a guarantee, nor

Physical Properties

| | 000 1000 | 0 680 1000 | P 8EP 8EP | | 700 947 | 1 54.2 66.2 | 9 134 135 | 0.892 0.890 | 37) -30(-34) -20(-28) | 52) 485(252) 485(252) | 1A 1A | s Pass Pass | 65 65 | 315 400 | .30 .30 | 12+ 12+ |
|-------------------------------------|---------------|------------|-------------|-----------|-------------|--------------|-----------------|------------------|-----------------------|-----------------------|------------------|-------------|----------------|---------------------|--------------------|----------------------|
| | 320 460 | 320 460 | 6 EP 7 EP | | 342 490 | 32.8 43.1 | 134 139 | 0.878 0.882 | -40(-40) -35(-37) | 485(252) 485(252) | 1A 1A | Pass Pass | 65 65 | 315 315 | .30 | 12+ 12+ Pass Pass |
| | 220 | 220 | 5 EP (| | 232 | 25.4 | 139 | 0.877 0 | 45(43) 4 | 485(252) 48 | 14 | Pass | 92 | 315 | .34 | 12+ Pass |
| | 150 | 150 | 4 EP | | 147 | 17.8 | 133 | 0.868 | -49 (-45) | 485(252) | 14 | Pass | 92 | 315 | .39 | 12+ Pass |
| | 100 | 100 | 3 EP | | 95.7 | 12.9 | 132 | 0.862 | -42 (-41) | 485(252) | 14 | Pass | 92 | 200 | .30 | 12+ Pass |
| GEAR & BEARING LUBRICANT | 89 | 89 | 2 EP | | 67.1 | 6.6 | 130 | 0.859 | -44 (-42) | 480 (249) | 14 | Pass | 65 | 200 | .30 | 12+ Pass |
| | 46 | 46 | , | | 45.9 | 7.4 | 137 | 0.851 | 40 (40) | 475 (246) | 14 | Pass | 09 | 200 | .40 | 12+ Pass |
| | Р 32 | 32 | ١ | | 31.0 | 5.8 | 132 | 0.849 | -58 (-50) | 470 (243) | 14 | Pass | 09 | 200 | .50 | 12+ Pass |
| | CIRRUS SYN EP | ISO Grade | AGMA Number | Viscosity | @ 40°C, cSt | @ 100°C, cSt | Viscosity Index | Specific Gravity | Pour Pt. F°(C°) | Flash Pt. F°(C°) | Copper Corrosion | Rust Test | Timken OK, lbs | Four-Ball Weld, lbs | Four-Ball Scar, mm | FZG Gear Test |

