

# ADVANTAGE EP GEAR OILS

## OVERVIEW

ADVANTAGE EP GEAR OILS are premium quality industrial gear lubricants made from highly refined base stocks and modern additive technology. These lubricants are designed to provide excellent performance when load carrying capacity is required due to extreme pressures and shock loading.

## FEATURES & BENEFITS

ADVANTAGE EP GEAR OILS offer high thermal stability and utilize a modern Extreme Pressure additive system to maintain clean gear and bearing surfaces, minimize deposits, inhibit rust and corrosion and provide excellent water separation.

## APPLICATIONS

ADVANTAGE EP GEAR OILS are designed for industrial enclosed gearing where an AGMA extreme pressure lubricant is specified. Spur, helical, bevel, and worm gear configurations subject to heavy loading and shock loading. Bath, splash, circulating or spray mist lubrication as applicable to the required viscosity grade.

## SPECIFICATIONS

AGMA EP 9005-E02 • Cincinnati Lamb P-63 (ISO 68), P-76 (ISO 100), P-77 (ISO 150), P-74 (ISO 220), P-59 (ISO 320), P-35 (ISO 460) • David Brown M, A, E • DIN 51517, Part 3 (CLP) • ISO 12925-1 CKC/CKD • U.S. Steel 224

### TYPICAL PROPERTIES

| PRODUCT CODES                       | 616   | 629    | 625    | 617    | 621    | 618    | 683    |
|-------------------------------------|-------|--------|--------|--------|--------|--------|--------|
| Product                             | EP 68 | EP 100 | EP 150 | EP 220 | EP 320 | EP 460 | EP 680 |
| AGMA Number                         | 2EP   | 3EP    | 4EP    | 5EP    | 6EP    | 7EP    | 8EP    |
| Viscosity, cSt @ 40 °C, ASTM D445   | 68    | 100    | 150    | 220    | 320    | 460    | 680    |
| Viscosity, cSt @ 100 °C ASTM D445   | 8.8   | 11.0   | 15.0   | 19.3   | 25.0   | 28.5   | 53.0   |
| Viscosity Index ASTM D2270          | 99    | 98     | 98     | 95     | 95     | 95     | 113    |
| Flash Point, COC, °C, min. ASTM D92 | 205   | 230    | 240    | 240    | 240    | 240    | 240    |
| Pour Point, ° C ASTM D97            | -30   | -25    | -25    | -15    | -15    | -15    | -5     |
| FZG gear test, stages DIN 51354     | 12    | 12     | 12     | 12     | 12     | 12     | 12     |
| Timken OK Load, lb. ASTM D2782      | 60    | 60     | 60     | 60     | 60     | 60     | 60     |
| 4-Ball Wear Test ASTM D2783         |       |        |        |        |        |        |        |
| Load-wear index, kgf                | 46.1  | 46.5   | 46.6   | 48.5   | 50.1   | 52.2   | 53.3   |
| Weld Point, kgf                     | 250   | 250    | 250    | 250    | 250    | 250    | 250    |
| Steel Pin, Corrosion, ASTM D665 A/B | Pass  | Pass   | Pass   | Pass   | Pass   | Pass   | Pass   |
| Copper Corrosion, ASTM D130         | 1B    | 1B     | 1B     | 1B     | 1B     | 1B     | 1B     |
| Foam Seq. I/II/III, ASTM D892       | 0/0   | 0/0    | 0/0    | 0/0    | 0/0    | 0/0    | 0/0    |
| Demulsibility, ASTM D2711           |       |        |        |        |        |        |        |
| Free Water, ml                      | 82.1  | 80.6   | 82.0   | 86.4   | 81.9   | 84.6   | 84.1   |
| Water in oil, %                     | 0.6   | 0.4    | 0.2    | 0.2    | 0.3    | 0.5    | 0.4    |
| Emulsion, ml                        | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| Demulsibility, ASTM D1401           |       |        |        |        |        |        |        |
| Emulsion at 82°C, ml                | 10    | 12     | 20     | 25     | 25     | 30     | 30     |
| Density, ASTM D4052                 | .874  | .881   | .892   | .891   | .891   | .887   | .892   |