



# Product Bulletin



## GULF EXTREME INDUSTRIAL EP GEAR OILS

**Gulf Extreme Industrial EP Gear Oils** are high quality, extreme-pressure (EP) industrial gear oils, designed to deliver superior performance in enclosed gear drives that often operate under heavy or shock load conditions. These AGMA EP gear oils are fortified with advanced technology chemistry that provides a high level of resistance to micropitting and gear tooth surface fatigue often found in heavily loaded gearboxes with surface hardened gear tooth surfaces.

### FEATURES AND BENEFITS:

**Gulf Extreme Industrial EP Gear Oils** are formulated with highly refined base oils and a unique additive system that provides for outstanding rust and corrosion protection of all metal surfaces and advanced water separation properties. These lubricants provide outstanding protection in industrial gear sets operating under severe conditions such as intermittent shock loads, high peak loads, and heavy tooth loads. Additionally, they offer the following benefits:

- Excellent load carrying ability
- Outstanding water separation characteristics
- High resistance to micropitting and metal surface fatigue
- Protection from galling, scuffing and welding of gear teeth
- Non-corrosive to bronze, brass, copper and other copper alloy parts

### APPLICATIONS:

**Gulf Industrial EP Gear Oils** are categorized by the American Gear Manufacturers Association (AGMA) for use in a wide variety of industrial gear sets. They are ideal for enclosed industrial gear sets where extreme pressure is critical for component protection. Typical gear applications include spur, bevel, helical, worm, and industrial hypoid gear cases. Typical bearing applications include plain, ball, roller, and sleeve bearings. They are recommended for the lubrication of slides, ways, sprockets, chain drives, winches, hoists, and machine tools. Additionally, these industrial gear oils meet the following performance requirements (for the appropriate viscosity grades):

- AGMA 250.04, 251.02
- AGMA 9005-E02 EP
- DIN 51517, Part 3
- US Steel 224
- David Brown S1.53.101
- Cincinnati Machine
- ISO 12925-1 Type CKD

**NU-TIER BRANDS, INC.**

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**AVAILABILITY:**

**Gulf Extreme Industrial EP Gear Oils** are available throughout Gulf's marketing area. Your Gulf representative can provide specific information. Need additional information? Call Gulf @ 1-800-566-GULF (4853) or visit [Nutierbrands.com](http://Nutierbrands.com).

**\*Typical Properties**

| <b>ISO Viscosity Grade</b> | <b>Test Method</b> | <b>68</b> | <b>100</b> | <b>150</b> | <b>220</b> | <b>320</b> | <b>460</b> |
|----------------------------|--------------------|-----------|------------|------------|------------|------------|------------|
| AGMA Grade                 |                    | 2EP       | 3EP        | 4EP        | 5EP        | 6EP        | 7EP        |
| Product Code               |                    | 343068    | 343100     | 343150     | 343220     | 343320     | 343460     |
| Viscosity, cSt @ 40°C      | ASTM D-445         | 68        | 100        | 150        | 220        | 320        | 460        |
| Viscosity, cSt @ 100°C     | ASTM D-445         | 8.6       | 11.0       | 14.2       | 18.5       | 23.9       | 31.0       |
| Viscosity Index            | ASTM D-2270        | 99        | 97         | 97         | 96         | 95         | 95         |
| Flash Point, COC, °F       | ASTM D-92          | 430       | 440        | 440        | 445        | 480        | 490        |
| Foam Test                  | ASTM D-892         | Pass      | Pass       | Pass       | Pass       | Pass       | Pass       |
| FZG Scuffing Test, stages  | ASTM D-5182        | 12        | 12         | 12         | 12         | 12         | 12         |
| Timken OK Load, lbs        | ASTM D-2782        | 65        | 70         | 80         | 65         | 70         | 75         |
| Four Ball EP Weld, kg      | ASTM D-2783        | 315       | 315        | 315        | 315        | 315        | 315        |
| Four-Ball Wear Test, mm    | ASTM D-4172        | 0.28      | 0.30       | 0.29       | 0.23       | 0.21       | 0.20       |
| API Gravity, 60°F          | ASTM D-1298A       | 30.6      | 30.2       | 28.0       | 27.5       | 27.0       | 26.3       |
| Density, lbs/gal (g/L)     | Calculated         | 7.27      | 7.29       | 7.37       | 7.41       | 7.44       | 7.47       |

**\* Typical test data are average values only. Minor variations are to be expected in normal manufacturing.**