

## Product Information



# Industrial Extreme Pressure Gear Oil

**Multi-Purpose Industrial Gear Lubricants**  
**Blended to ISO Viscosity Specs**  
**Meet AGMA Gear Oil Specifications**

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### DESCRIPTION

**Gard® EP Gear Oils** are heavy-duty extreme-pressure industrial gear lubricants blended from highly refined bases stocks and extreme pressure (EP) additives, plus rust, oxidation, and foam inhibitors. These oils are intended for use in industrial gear boxes where ISO EP gear oils are recommended.

**Gard® EP Gear Oils** are suitable for use in automotive applications where GL-4 gear oils are recommended, but are not intended for use in automotive and heavy duty differentials using offset spiral bevel (Ring & Pinion Hypoid) gear sets. Use GL-5 gear oils for those applications. EP and GL-4 gear oils are commonly used in industrial gear boxes and are excellent heat transfer fluids. These gear oils are non-foaming and compatible with all brass and bronze bearings and have excellent demulsibility properties.

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### APPLICATION

- Industrial gear boxes where ISO EP or AGMA gear oils are recommended
- Automotive and heavy duty transmissions up to GL-4 levels
- Gear reducers
- Oilfield pumping units

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### BENEFITS

- Provide a thick hydro-dynamic film between gears
- Excellent film strength at high operating temperatures
- Full ep treatment for extreme pressure protection
- Excellent heat transfer properties to keep gearsets cool
- Outstanding resistance to foaming
- Prevents corrosion of copper and brass

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### PERFORMANCE LEVELS

|                |                                       |
|----------------|---------------------------------------|
| AGMA           | 9005-E02 (5EP), Clean S-200 Oxidation |
| DIN            | 51 517 Part 3                         |
| General Motors | LS-2                                  |
| FZG            | Pass 12, pass 13                      |
| David Brown    | S1.53.101 (5e)                        |
| Cincinnati     | Landis P-74 (C-220)                   |
| U.S. Steel     | 224                                   |
| API            | GL-3, GL-4 Extreme Pressure Gear Oils |



### CROSS PACKAGING DIVISION

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## Product Information

| TYPICAL PROPERTIES         | ISO (ASTM) Grade | 68     | 100   | 150   | 220   | 320   | 460   | 680   |
|----------------------------|------------------|--------|-------|-------|-------|-------|-------|-------|
|                            | AGMA Grade       |        |       |       |       |       |       |       |
| Specific Gravity at 15.6°C | D 1298           | 0.8751 | 0.881 | 0.882 | 0.886 | 0.892 | 0.889 | 0.890 |
| Viscosity cSt @ 40°C       | D445             | 70.0   | 100.0 | 150.0 | 220.0 | 310.0 | 440.0 | 680.0 |
| Viscosity cSt @ 100°C      | D445             | 8.9    | 11.0  | 14.5  | 22.1  | 23.6  | 29.3  | 35.0  |
| Viscosity Index            | D2270            | 100    | 100   | 95    | 121   | 96    | 85    | 80    |
| Pour Point °C              | D97              | -37    | -28   | -28   | -15   | -21   | -18   | -1    |
| Flash Point, Coc °C        | D92              | 235    | 243   | 243   | 232   | 232   | 254   | 254   |
| Timken Load - Min.         | D2586            | 70     | 70    | 70    | 70    | 70    | 70    | 70    |
| Four-ball Weld Load        | D2266            | 250    | 250   | 250   | 250   | 250   | 250   | 250   |
| Four-ball Wear (MM.)       | D5182            | 0.35   | 0.35  | 0.35  | 0.35  | 0.35  | 0.35  | 0.35  |
| FZG (Pass load stage)      | D130             | 12     | 12    | 12    | 12    | 12    | 12    | 12    |
| Copper Corrosion           | D2711            | 1A     | 1A    | 1A    | 1A    | 1A    | 1A    | 1A    |
| Demulsibility              |                  |        |       |       |       |       |       |       |
| - Free Water               |                  | 85     | 85    | 85    | 85    | 85    | 85    | 85    |
| - Water In Oil             |                  | 0.6    | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| - Emulsion                 |                  | 0      | 0     | 0     | 0     | 0     | 0     | 0     |
| AGMA                       |                  | 2EP    | 3EP   | 4EP   | 5EP   | 6EP   | 7EP   | 8EP   |

The information on this Product Data Sheet is believed to be accurate and is typical of current production. Specifications are subject to change without notice.

**Health And Safety Information** See separate Material Safety Data Sheets available on request.



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