

Castrol Optigear

High performance and long-term gear oils based on mineral oil with MICROFLUX TRANS™, the loadactive additive combination

Description

OPTIGEAR™ are solid-free high performance gear oils for long-term or life-time lubrication. They exceed the performance of conventional gear oils or oils with solids even at high speeds and under difficult operating conditions. The additive combination MICROFLUX TRANS™ adjusts itself to changing loads and actively prevents wear.

Application

- Long-term and life-time lubrication even when subjected to difficult mechanical conditions
- Spur and bevel gears even under shock loads
- All kinds of rolling bearings
- Gear-tooth couplings
- Drive units of rail borne vehicles

Advantages

- extraordinary load carrying capacity
- extremely extended operating period even under high loads and speed
- reduction of the coefficient of friction and temperature
- improvement of the surface quality
- smoothing of existing surface damage
- excellent corrosion protection
- reduced running-in period
- maximum operational reliability
- extended service life of gears
- reduced energy, maintenance and disposal costs

Typical Characteristics

| | Test method | Unit | Value | | | | | | | |
|--|--|-------|-------------|-----------|-----------|------------|------------|------------|------------|------------|
| | | | 32 | 46 | 68 | 100 | 150 | 220 | 320 | 460 |
| CASTROL OPTIGEAR™ | - | - | 32 | 46 | 68 | 100 | 150 | 220 | 320 | 460 |
| Colour | visual | - | dark green | | | | | | | |
| Base | - | - | mineral oil | | | | | | | |
| ISO viscosity grade | DIN 51519 | - | 32 | 46 | 68 | 100 | 150 | 220 | 320 | 460 |
| Density at + 15°C/+ 59°F | DIN 51757 | kg/m³ | 880 | 885 | 890 | 892 | 901 | 909 | 917 | 924 |
| Kin. viscosity at + 40°C/+ 104°F at + 100°C/+ 212°F | DIN 51562 | mm²/s | 32.50 | 45.40 | 67.50 | 103.7 | 146.3 | 215.6 | 317.7 | 428.3 |
| | | | 5.65 | 7.10 | 8.80 | 11.5 | 14.8 | 19.0 | 23.5 | 29.6 |
| Viscosity index | DIN ISO 2909 | - | 114 | 115 | 102 | 98 | 100 | 99 | 93 | 97 |
| Pour point | DIN ISO 3016 | °C | -27 | -27 | -24 | -24 | -24 | -21 | -12 | -12 |
| | | °F | -16.6 | -16.6 | -11.2 | -11.2 | -11.2 | -5.8 | 10.4 | 10.4 |
| Flash point | DIN ISO 2592 | °C | 190 | 194 | 190 | 201 | 204 | 206 | 210 | 218 |
| | | °F | 374 | 381.2 | 374 | 393.8 | 399.2 | 402.8 | 410 | 424.4 |
| Copper corrosion protection | ASTM D-130 | - | 1b | 1b | 1b | 1b | 1b | 1b | 1b | 1b |
| Steel corrosion protection | DIN 51355 | - | 0 - A | 0 - A | 0 - A | 0 - A | 0 - A | 0 - A | 0 - A | 0 - A |
| FZG test A/16.6/90 | DIN 51354 | - | >12 | | | | | | | |
| Damage load stage | intensified special test | - | >12 | | | | | | | |
| SRV™ test run - test mode 5ae: | | | | | | | | | | |
| Wear scar diameter | | mm | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| min. friction coefficient μ | DIN E 51834 | - | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.070 | 0.07 |
| max. friction coefficient μ | | - | 0.105 | 0.105 | 0.105 | 0.105 | 0.100 | 0.100 | 0.095 | 0.095 |
| Grey staining test: SK number | FVA information sheet No. 54/1 - IV | - | >10 | | | | | | | |

1 mm²/s ^ 1 cSt

Additional Information

- Miscible and compatible with unleaded gear oils based on mineral oil. However, maximum performance is only guaranteed if not mixed with any other product.
- Compatible with paints and conventional sealing materials.
- Mechanical cleaning with all known filtering installations and separators possible.
- Do not use for self-locking differential gears and synchronized gears due to the given coefficient of friction.

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