



Product Data

Performance Bio GE ESS Range

Biodegradable synthetic gear oils

Description

CASTROL PERFORMANCE BIO GE™ ESS synthetic gear oils are formulated from a synthetic ester and are readily biodegradable (more than 80%) according to CEC L-33-A-93. Anti-wear and corrosion protection additives improve the natural characteristics of the synthetic base oil. CASTROL PERFORMANCE BIO GE ESS gear oils are available in the viscosity grades ISO VG 220 to ISO VG 320.

Application

- CASTROL PERFORMANCE BIO GE ESS gear oils are suited for the application in spur, helical and planetary gear units, couplings, rolling and sliding bearings in farm and construction machinery, wind turbines, sewage plants, cranes etc.
- CASTROL PERFORMANCE BIO GE ESS synthetic gear oils may be used where for environmental reasons a biodegradable gear oil is required.
- Temperature application range: from - 25°C to + 90°C

Advantages

- More than 80% readily biodegradable according CEC L-33-A-93
- Load stage >12 is passed in the FZG test at double peripheral speed
- CASTROL Performance Bio GE ESS passes the FZG micropitting test with the result: high micropitting load carrying capacity
- Excellent oxidation stability allows extended oil change cycles
- Reduced consumption and smaller amounts of lubricants disposed protect the environment
- High viscosity index allows start-ups at low temperatures and provides for a thicker lubricating film at high temperatures for additional anti-wear protection

Typical Characteristics

Name	Test Method	Units	220 ESS	320 ESS
ISO Viscosity Grade	-	-	220	320
Density @ 15°C / 59°F	ASTM D4052 / ISO 12185	kg/m ³	960	970
Kinematic Viscosity @ 40°C / 104°F	ASTM D445 / ISO 3104	mm ² /s	220	320
Kinematic Viscosity @ 100°C / 212°F	ASTM D445 / ISO 3104	mm ² /s	29.3	38.2
Viscosity Index	ASTM D2270 / ISO 2909	-	170	170
Pour Point	ASTM D97 / ISO 3016	°C/°F	-24 / -11	-21 / -6
Flash Point - open cup method	ASTM D92 / ISO 2592	°C/°F	>230 / 446	>230 / 446

Additional Information

CASTROL PERFORMANCE BIO GE ESS synthetic gear oils are compatible with commonly used seals and paints. Due to the high number of different seal substances and paints appropriate compatibility tests are recommended.

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