PRODUCT & TECHNICAL DATA

CASTROL BIOTRANS RANGE
Environmentally responsible synthetic gear oils

DESCRIPTION

BioTrans synthetic gear oils are formulated from a synthetic ester. Anti-wear and corrosion protection additives improve the natural characteristics of the synthetic base oil.

BioTrans gear oils are available in the viscosity grades ISO VG 150 to ISO 220.

Quality Standard: BioTrans gear oils are CLP E gear oils according to DIN 51502 and surpass requirements of gear oils according to DIN 51517-3 and AGMA 250.04.

APPLICATIONS

BioTrans gear oils are suited for the application in spur, helical and planetary gear units, couplings, rolling and sliding bearings.

BioTrans 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.

FEATURES/BENEFITS

- Reduced environmental impact when compared to conventional lubricants - demonstrable benefits in the following key environmental performance criteria:-
    - Superior biodegradation.
    - Significantly reduced bioaccumulation* and toxicity.
    - Enhanced renewability.

  *Using OSPAR criteria for assessing bioaccumulation potential.
- Load stage >12 is passed in the FZG test.
- BioTrans 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.
- BioTrans synthetic gear oils are compatible with commonly used seals and paints.

CARE AND HANDLING

Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

PACKAGING AND STORAGE

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings.

Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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ADDITIONAL INFORMATION

Castrol BioTrans 220

- Exceeds readily biodegradable standards*.
  * In extended OECD 306 seawater biodegradation product testing.
- Significantly reduced bioaccumulation in the marine environment*.
  *Compared with conventional lubricants.
- Significantly reduced toxicity to marine organisms*.
  *compared with conventional lubricants.
- Exceeds stringent OSPAR* and US EPA** toxicity requirements by at least 4 times.
  *As specified in the OSPAR Harmonised Pre-Screening Scheme.
  **As specified in NPDES permit GMG29000 for subsea production control fluids.
- >85% of the raw materials used in Castrol BioTrans 220 are derived from renewable sources.

TECHNICAL DATA

TYPICAL CHARACTERISTICS	UNIT	TEST METHOD	VALUE	VALUE
BioTrans			150	220
ISO Grade			150	220
Density @ 15°C	g/ml	ASTM D4052	0.960	0.960
Viscosity @ 40°C	cSt	ASTM D445	150	220
Viscosity @ 100°C	cSt	ASTM D445	21.6	29.3
Viscosity index	-	ASTM D2270	170	170
Flash point, PMC	°C	ASTM D93	>230	>230
Pour Point	°C	ASTM D97	-27	-24
Copper corrosion test (100 A 3)			1	1
Corrosion test			0	0
Foaming properties @ 25°C	ml		<50/0	<50/0
@ 95°C	ml		<50/0	<50/0
@ 25°C after 95°C	ml		<50/0	<50/0
Flender foam test			Passed	Passed
SRV test		IP 135B	0.08	0.08
FZG Gear Test (A8.3/90) Load Stage		DIN 51354	>12	>12
FZG Gear Test (A16.6/90) Load Stage		DIN 51354	12	12
Micropitting Load Carrying Capacity: high		FVA No. 54	>10	>10

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

GENERAL ADVICE

Further information on all Castrol Marine lubricants is available from any Castrol Marine office or from:

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Reading RG8 7QR
United Kingdom

www.castrolmarine.com

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BioTrans Range

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