



PANOLIN
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PANOLIN MARGEAR

Industrial gear oil – readily biodegradable, saturated synthetic esters

Environmentally Considerate Lubricant (ECL)/Environmentally Acceptable Lubricant (EAL)

Features and benefits

- Fully synthetic and environmentally friendly gear oil, based on renewable saturated synthetic esters
- Minimally toxic
- CO₂ reduction due to extended oil-change and service intervals
- Reduces micro-wear of surface roughness on friction surfaces in aggregates
- Outstanding extreme-pressure characteristics
- Excellent oxidation resistance at high temperatures
- Prevents gumming even under high thermal load
- Better adhesion to metal surfaces than mineral-oil based gear oils
- Outstanding anti-wear and anti-corrosion properties
- Extreme shear-resistant multigrade gear oil with a wider thermal operating range than mineral oil

Applications (follow manufacturer's instructions)

- For gear boxes in marine propulsion systems
- Gear boxes, roller bearings and slide bearings

Environmental compatibility

It is decomposed by micro-organisms in water and/or soil almost without any residues.

- Biodegradability acc. to OECD 301 B: > 60%
- EN 16807
- EU Ecolabel – DE/027/289
- US EPA VIDA (Vessel Incidental Discharge Act), VGP 2013 (Vessel General Permit)



Specifications

DIN 51 502/CLP E, 51 517/CLP E

FZG A/8.3/90: > 12, FZG A/10/16.6/140: 12 (28520, 28522, 28524, 28526)

ISO 12925-1/CKES

Approvals (valid manufacturer approval for the specific lubricant)

Brunvoll (28518, 28520)

Gürdesan

Hwaseung – HHI, KTE (28518, 28520)

James Walker – Bi-O-Lion (28520)

Kawasaki – Side Thruster (28518, 28520)

Kemel (28518, 28520)

KTE – Thruster (28520)

Kumera – Gears (28524)

Lagersmit – FKM-EAL (28518, 28520, 28524)

Nakashima Propeller Co., Ltd. (28520)

Ortlinghaus – ON 9.2.10 (28520)

RM Propulsion B.V.

SKF Marine GmbH – Simplex compact seals with VitonBio (FKM) (28520)

Tenute – NBR-MN002, HNBR-MH007 (28518, 28520, 28522)

Wärtsilä – Seal ring material: BIO (28518, 28520, 28522)

ZF TE-ML 04M

Technical data (mean values, subject to normal tolerances)

PANOLIN MARGEAR	Product No.	Density g/cm ³ 15 °C	Viscosity in mm ² /s		Flashpoint COC in °C	Pour point in °C	Viscosity index
			40 °C	100 °C			
68	28518	0.912	70.4	11.2	254	-30	151
100	28520	0.919	100.9	14.6	252	-30	150
150	28522	0.925	149.9	19.7	249	-33	151
220	28524	0.939	214.4	25.7	244	-30	152
320	28526	0.940	324.0	36.4	246	-27	152

Instructions

Please refer to the drum label, or for detailed information, to the safety data sheet – available from PANOLIN. Before changing over to PANOLIN EALs/ECLs, please ask for our instructions.