

## Motor oil

### MARINOL RG 3030, MARINOL RG 3040

Motor marine oils Marinol RG 3030 and 3040 are formulated on the base of deeply refined, solvent dewaxed and hydrotreated oil distillates received from crude oil. They contain a properly selected package of washing and dispersing additives as well as anti-oxidising, anticorrosion, antirust and anti-wear attributes.

Marinol RG3030; 3040 oils are designed for circulating and cylindrical lubrication of marine anhydride heavy fuel main drive engines and heavy fuel current-generating aggregates.

They are designed for lubrication of marine anhydride light fuel engines. Marinol RG 3030 and 3040 are TPEO (Trunk Piston Engine Oil) oils that meet the API CD requirements.

#### Characteristics

Marinol RG 3030 and 3040 oils:

- guarantee effective lubrication of an engine cylindrical system and an assembly of crankshaft, pistons and connecting rods,
- provide excellent engine cleanness and protection against corrosion,
- prevent deposits and carbon deposits formation reducing engine wear,
- guarantee well heat retraction,
- minimise the amount of low-temperature and high-temperature deposits formed during engine operation,
- neutralise the acid products of fuel combustion,
- guarantee excellent anti-wear protection of the lubricated surfaces, protecting particularly against scuffing,
- reduce refills.

№	Requirements	Research methods by	Unit	Value	
				RG 3030	RG 3040
1.	Kinematic viscosity at 100 <sup>0</sup> C	ASTM D-445	mm <sup>2</sup> /s	11,5	14,3
2.	Pour point	ASTM D-5950	<sup>0</sup> C	-27	-24
3.	Flash point	PN-EN ISO 2592	<sup>0</sup> C	240	250
4.	Base number	ASTM D-2896	mgKOH/g	30,5	30,5
5.	Viscosity index	ASTM D-2270		98	98
6.	Corrosion effect at 100 <sup>0</sup> C, 3h,Cu	PN-EN ISO 2160 ASTM D-130	degree	1	1

The above given data are typical values for a production batch, they are not included in the technical specification, and they are subject to change due to continual product research and development

**Classification, specification:**

RG 3030 – SAE 30; RG 3040 – SAE 40

API: CD

Meet the requirements of the engine manufacturers: Pielstick (30PA6-280); MAN-B&W; MAN Augsburg; New Sulzer Diesel; Wartsila

**Packaging:**

180kg, 1 tona

**Storage:**

The products should be stored under a roof. If they are stored in the open air where they can be exposed to atmospheric conditions – rains, they should be placed in a horizontal position in order to avoid inrush of water to a container and to prevent label damaging; they should be covered with tarpaulin.

The products should not be stored at the temperature above 60°C and in the places where solar radiation is very strong or – temperatures very low. The expiry date is 3 years if the storage conditions are satisfied.

**Health, industrial safety and the Environment:**

Information concerning safety is included in the product Safety Sheet. It contains detailed information on possible threats, warnings, first aid as well as the impact on the environment and ways of utilization of the used products. LOTOS Oil SA and the cooperating companies do not take responsibility for misuse of the product or – the use with the violation of the precautions given. Before using the product for other than recommended purposes, seek advice in the local LOTOS Oil SA office.

*The information provided in this data sheet is not intended to constitute an offer within the meaning of the Act of 23<sup>rd</sup> April 1964 - Civil Code. LOTOS Oil S.A. bears no responsibility for whatever effects of use (particularly in trade and investment decision-making) of information contained herein. Any data contained in the MSDS are typical process tolerance values and they are subject to change due to continual product research and development. Information provided in this document may undergo changes. LOTOS Oil S.A. is not responsible for the product availability.*

**Prepared: 18.03.2008**

**Edition №: 3**

**Updating: 13.05.2013**