

## Motor oil

### MARINOL MW 50

Motor marine oil Marinol MW 50 is formulated on the base of deeply refined, solvent dewaxed and hydrorefined oil distillates received from crude oil. It contains a properly selected package of washing and dispersing additives as well as anti-oxidising, anticorrosion, antirust and anti-wear attributes.

Marinol MW 50 oil is designed for lubrication of diesel high-speed marine light fuel engines working in accordance to recommendations and instructions of the OEMs.

#### Characteristics:

Marinol MW 50 oil:

- guarantees effective lubrication of an engine cylindrical system and an assembly of crankshaft, pistons and connecting rods,
- provides excellent engine cleanness and protection against corrosion,
- guarantees well heat retraction,
- neutralises the acid products of fuel combustion,
- guarantees excellent anti-wear protection of the lubricated surfaces, protecting particularly against scuffing; it can be used for lubrication of gears,
- can reduce refills.

№	Requirements	Research methods by	Unit	Value
				MW 50
1.	Kinematic viscosity at 100 <sup>0</sup> C	ASTM D-445	mm <sup>2</sup> /s	20,0
2.	Pour point	ASTM D-5950	<sup>0</sup> C	-12
3.	Flash point	PN-EN ISO 2592	<sup>0</sup> C	250
4.	Base number	ASTM D-2896	mgKOH/g	3,5
5.	Viscosity index	ASTM D-2270		95
6.	Corrosion effect at 100 <sup>0</sup> C, 3h,Cu	PN-EN ISO 2160 ASTM D-130	degree	1
7.	Sulphated ash content	ASTM D874	%	0,5

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 :

SAE 50

API: CB

#### Packaging:

180kg, 1 tonna

**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**