

Emulsifying oil for metalworking

EMULSIN SEMI S1

EMULSIN SEMI S1 emulsifying oil is a semisynthetic concentrate that consists of highly molecular ester polymers, high refined mineral oils, emulsifiers and additives.

The product does not contain chlorides, nitrites and sulphur.

Characteristics:

The emulsifying oil Emulsin SEMI S1 for metalworking is designed for making water microemulsions, which are applied as cooling and lubricating liquids.

Emulsin SEMI S1 is particularly recommended for grinding as well as for machining of ferrous metals (turning, milling, and boring).

Not recommended for metalworking of aluminum and its alloys.

The oil is characterized by:

- good protection against corrosion
- slight tendency towards foaming
- excellent ability to reduce wear of the surfaces sliding against each other
- the oil's formula guarantees its excellent biostability.

For making the microemulsion it is recommended to use water of hardness up to 15 °n.

No	Requirements	Research methods by	Unit	Value
1.	Appearance	visually		Clear, light-brown liquid
2.	Pour point	ASTM D-5950	°C	-6
				5% emulsion
3.	Test of anti-corrosion protection, protection degree	PN-92/M-55789		H1
4.	pH	PN-89/C-04963		9.5
5.	Emulsion stability after 24h/20°C, 10°N water	CBA/LB/9		stable

The above given data are values received at normal tolerance of production batch, they are not included in technical specification and they can undergo changes for constant development of the product.

Application Recommendations:

Refractive index – 1,0

Machining Type	Emulsion Concentration %
Steel and other metals working	5-10
Cast iron working	8-10
Cast iron grinding	4-5
Steel and other metals grinding	3-5

For appropriate application of the cooling and lubricating emulsion formulated upon Emulsin Semi S1 it is recommended to:

- always add oil to water, and not the reverse, for proper mixing of the oil concentrate and water,
- check the concentrations periodically and verify their value,
- control the quality of water being used for making and diluting the emulsion,
- clean the system periodically at the emulsion change.

Specifications, classifications:

ISO L-MAF

Packaging:

26kg, 180 kg, 1 ton

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, below 0°C. The expiry date is not less than 1 year 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 23rd 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.

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