

**F.O.T.-LS**™

DESCRIPTION

F.O.T.-LS is a fuel additive which improves the lubricity of all low Sulfur Marine Fuels. It is a combination of specific solvents, lubricity additives, ashless dispersants, detergents and corrosion inhibitors.

Emission concerns have led to the application of new regulations in Marine Fuels.

According to the revised **IMO MARPOL Annex VI-2008** the Sulphur content globally shall not exceed a 3,5% content in all Marine Fuel Oils. However, European Union regulations stipulate Emission Control Areas (ECA's) where the Sulphur content in the fuel shall not exceed 1.0%

Reducing the level of Sulphur compounds in Marine Fuel Oils can reduce the ability of the oil to lubricate the injection system of the engine, causing the fuel injection pump of the engine to seize. Lower lubricity can significantly increase wear of fuel pumps, valves and injector nozzles over an extended period of use.

F.O.T.-LS provides superior lubricity properties to the Marine Fuel Oils in order to avoid these situations. Furthermore contains detergent and dispersant additives to prevent problems associated with the accumulations of injector deposits.

F.O.T.-LS reduces significantly the injector deposits and therefore has a positive effect on emissions (smoke, carbon monoxide, unburned hydrocarbons and particulates). Additionally, the fuel system is protected against corrosion.

ADVANTAGES AND CHARACTERISTICS

- ◆ Provides superior lubricity properties to the Ultra Low Sulphur Marine Fuel Oils.
- ◆ Prevents wear on contacting metal surfaces and their seizure.
- ◆ Reduces significantly injector deposits.
- ◆ Protects fuels systems against corrosion
- ◆ Will not separate in the fuel tank.
- ◆ Contains dispersants and detergents.
- ◆ Does not contain chlorinated solvents.
- ◆ Well dispersing product into the fuel.
- ◆ Easy to apply and use in the fuel oil with excellent results.

PHYSICAL PROPERTIES

Appearance/Color	: Clear, yellow liquid
Odor	: Aromatic solvent odor
Specific Gravity	: 0.87 - 0.91 gr/cm ³ at 20°C
Cloud Point	: -25°C (ASTM D 2500)
Pour Point	: -47°C (ASTM D 445)
Flash Point	: 54°C

PACKAGING

Order Number	: 562506 (25 ltrs)
Container	: Steel drum

APPLICATION AND USE

A. Dosing Procedure

For Marine Gas Oils (MGO), Marine Diesel Oils (MDO) and Ultra Low Sulphur Diesel (ULSD), the normal dosage of **F.O.T.-LS** is 1 lt per 5 cubic meters of fuel.

For Intermediate Fuel Oils (IFO) and Heavy Fuel Oils (HFO) the dosage of 1lt of **F.O.T.-LS** per 4 cubic meters of Fuel Oil, to deal with the problem of injector deposits and emissions.

B. Feeding Procedure

F.O.T.-LS should be dosed directly in the fuel storage tank, preferably prior to bunkering. This way the product is better dispersed in the fuel.

It is suggested, to dose firstly the requested quantity of **F.O.T.-LS** and then add the Low Sulphur Fuel Oil in the settling tank, in order to accomplish better homogenization.

**MARICHEM**®

! SAFETY AND HANDLING

HANDLING	Handle with care. Store in a dry, cool and well ventilated environment.
SAFETY	IMMEDIATE ACTIONS
Eye Contact	Avoid Eye contact. Otherwise, flush with plenty of water for a few minutes. Seek medical attention.
Skin Contact	Avoid Skin contact. Otherwise, wash contaminated area thoroughly with water. Seek medical attention.
Inhalation	Avoid inhalation of vapors. Otherwise, seek fresh air source at once. Seek medical attention.
If Swallowed	Avoid ingestion. Otherwise, consume a considerable quantity of water. Seek medical attention.
GENERAL INSTRUCTIONS	Avoid spillage, splashing and mishandling. Precautionary measures for body protection are strongly recommended before use.

 **Read the Material Safety Data Sheet before using this product.**

For detailed information on safety and health, please refer to Material Safety Data Sheet and/or Product Label.

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