From eni’s research department comes the eni i-Sea line of lubricants, designed for all types of pleasure craft, from yachts to dinghies right through to personal watercraft equipped with inboard and outboard 2 and 4-stroke engines.
There are plenty of reasons to choose marina SECA lubricants

**HIGH BIODEGRADABILITY**

The special synthetic esters used offer a high degree of biodegradability (67% on the OECD 301F test), allowing you to significantly reduce impact on aquatic life.

**ANTI-SALINE CORROSION**

The special additives developed protect against wear and saline corrosion, which are typical of the marine environment, ensuring that the internal components of the engine are fully protected.

**PROLONGED INTERVALS BETWEEN CHANGES**

Synthetic bases and antioxidant additives ensure a prolonged interval between changes.

**CLEAN ENGINES**

The special "ashless" formulation, designed to reduce the formation of carbon deposits in the motor, ensures optimal operation and better performance.

**ENGINE LONGEVITY**

The good cleansing and dispersing properties keep all engine parts in perfect working order, which helps to give it greater longevity.
Lubricants developed specifically for 2 and 4-stroke outboard engines, tested to meet the most demanding international technical reference standards.
Lubricants for 2 and 4 stroke outboard engines specifically fine-tuned to maximize the watercraft’s performance. They effectively contrast saline corrosion, which is particularly critical in these applications. Can conveniently also be used on other outboard propulsion units.

**watercraft**

Lubricant suitable for 2-stroke direct or indirect injection engines - suitable for personal watercraft.

**watercraft**

Synthetic Lubricant - catalyst 4-stroke engines - suitable for water engines.

**performance**

- Anti-saline corrosion
- Clean engines
- Engine longevity
- Prolonged intervals between changes
- Synthetic technology

**NMMA**

CAT (Certificate)

10W-40

NMMA FC-W (US)
inboard

Lubricants specifically designed for inboard 4-stroke petrol or diesel engines, tested and approved by major international manufacturers. Ensure highly reliable operation and long-lasting protection of the engine, even in the event of prolonged inactivity.
The oil must be fluid when cold, to immediately prevent them from coming into contact. Load conditions, the formation of a layer of oil lubrication suitable for all temperature and a performance index of a lubricant. For smoothness, but it is not viscosity. Viscosity is a fluid’s resistance to flow • compliance with a performance specification. Lubricants are classified based on: • Protect surfaces from atmospheric agents or • Act as a coolant, removing the heat produced • Keep moving surfaces separate under all load, • Assure the correct performance of the engine: “S” stands for Service, petrol engine, “C” stands for Commercial, diesel engine. The latest classifications are API SN for petrol engines and ACEA. The manufacturers who have chosen to maintain their own system of original specifications may have one or more differentiated specifications for the type of engine and use Category “A” is for petrol engines, “B” is for diesel engines and both are specifically for light vehicles.

What are the main functions of a lubricant? Lubricants are classified based on:

- the degree of viscosity,
- compliance with performance specification

Viscosity is a fluid’s resistance to flow and indicates its smoothness, but it is not a performance index of a lubricant. For lubrication suitable for all temperature and load conditions, the formation of a layer of oil is needed between the frictional parts to prevent them from coming into contact. The oil must be fluid when cold, to immediately reach the parts that need lubrication, and viscous when hot to remain in contact with surfaces and withstand loads. Oil that is too viscous increases energy losses, due to viscous friction, resulting in increased fuel consumption, it particularly increases the power absorbed by the oil pump, especially in the engine start-up phase. The performance specifications, meanwhile, are used to classify,一批 根据他们的 performance and smoothness. What does compliance with a performance specification mean? It means that the minimum quality levels set by the specification are guaranteed. Compliance with a specification can only be claimed if a product has passed all the tests required by the specification. Each specification includes a list of tests and limit values. Tests include laboratory tests, bench tests, and road tests.

What do the letters SAE XW-Y on the packaging mean? The current oils are multigrade oils, meaning they can be used in a very broad range of ambient temperatures. This is possible thanks to the additives that allow oil to switch from a low to a high temperature without losing the correct viscosity characteristics. The thickness of the layer of oil depends on the viscosity of the lubricant, but this varies with the temperature. There is an international table, issued by SAE (Society of Automotive Engineers), which classifies lubricants according to the viscosity values measured in two conditions: at 37°C, and at a low temperature (from -29°C to -23°C depending on the winter grade). The label indicates SAE XW-Y. The SAE “W” viscosity (“W” stands for “winter”) is the viscosity at low temperature which has values that are classified from 0W to 25W; the “W” classes of viscosity provide an indication regarding the minimum temperature at which the engine can start and the oil can be pumped. The other value represents the viscosity measured at 100°C. SAE grades between 20 and 60, which correspond to increasing viscosity values.

Test conditions and perfectly efficient. The latest classifications are API SN for petrol engines, and API CF-4 for diesel engines (the 4 indicates a 4-stroke diesel engine) ACEA is the European Automobile Manufacturers Association, and has 4 different standards depending on the type of engine and use Category “A” is for petrol engines, “B” is for diesel engines and both are specifically for light vehicles.

What are API and ACEA? API is the American Petroleum Institute which defines two categories for engine oils, identified with a two-letter acronym. The first letter distinguishes the type of engine: “C” stands for Service, petrol engine, “C” stands for Commercial, diesel engine. The second letter indicates the performance level (the higher the letter is in alphabetic order, the higher and more current the performance will be; a letter is assigned progressively to each new revision). A more recent API specification is therefore generally more stringent than an older specification. The latest classifications are API SN for petrol engines, and API CF-4 for diesel engines (the 4 indicates a 4-stroke diesel engine) ACEA is the European Automobile Manufacturers Association, and has 4 different standards depending on the type of engine and use Category “A” is for petrol engines, “B” is for diesel engines and both are specifically for light vehicles.

What are vehicle manufacturer performance levels? The manufacturers who have chosen to maintain their own system of original specifications may have one or more differentiated specifications for the type of vehicles in the range. These specifications are based on a starting point made up of the minimum levels of API and/or ACEA. Engine tests or original performance can be included in the specifications. Some manufacturers release formal approvals.
Are there oils which increase fuel economy?

Of course. eni has developed a series of lubricants which, thanks to the latest generation technology and their special fluidity characteristics, greatly reduce the friction between the moving parts of an engine, resulting in reduced dissipation of energy and therefore lower fuel consumption. These products also rapidly lubricate all parts of the engine at start up and at very low temperatures, thus reducing energy dissipation, which is higher in this stage, and contributing further to reduced consumption.

It is worthwhile remembering that reduced fuel consumption also reduces greenhouse gases, including CO2 (carbon dioxide). The products in question are specifically:

- outboard 10W-30
- inboard 10W-40

How should waste oil be disposed of?

The oil used for internal combustion engines is hazardous waste. If disposed of incorrectly or used improperly, it can be highly polluting. For example, if it is poured on the ground, it can reach the water table and even wells for drinking water. In addition, if it is dispersed in water, it creates a thin and impermeable layer that prevents the underlying flora and fauna from breathing. To get an idea of just how harmful it is, consider that 8 pounds of waste oil, the equivalent of a normal oil change, if poured into the sea, will pollute an area as large as a football pitch.

Disposal is arranged, at no cost to the customer, by the Consorzio Obbligatorio degli Oli Usati (COOU) which for 28 years has collected over 4.72 million tons of waste lubricating oil.