



# Marine Diesel Equipment



## PTFE METAL TREATMENT

with **PTFE POLYMER** ...  
"the most slippery substance known"

.... as wet ice on wet ice.

..... long lasting protection

Exceeds manufacturer's warranty requirements

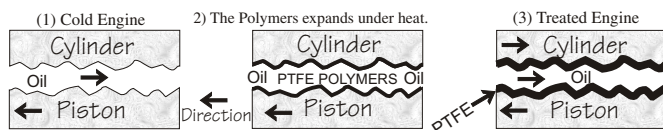
### Benefits:

- Reduced friction and wear
- Friendly to the environment
- Reduced maintenance
- Less vibration
- Increased engine life
- Reduced heat
- Reduced fuel consumption
- Protection against corrosives
- Longer oil life
- Easier starting
- Reduced oil consumption
- Improved performance

### Description:

ICE is not an oil additive, but an one time (repairable) metal treatment. The synthetic film of ICE PTFE protects and enhances the performance of the vital parts on your mechanical equipment. The PTFE (Polytetrafluoroethylene) film is only about 1 micron in thickness and follows the structure of the metal surface. Since this film is extremely slippery, is it impossible to overdo the treatment (no build-up) on a friction surface. Only when the metal surface appears, due to wear, a new treatment can be applied to repair the worn area. Only where there is metal to metal friction, will the friction surfaces get this super slick treatment. Apart from making a film on which the wear will occur, this film will make equipment less noisy, protect it against corrosives and keeping the surfaces clean of build-up of heavy residues from the oil. There is one other property of the ICE PTFE, which is exceptional, and which gives a lot of correlative benefits: The higher the pressure is between two surfaces of ICE PTFE, less is the friction. The coefficient of friction on two surfaces with ICE PTFE at 1 kg. pressure is 0,04, which is the lowest of any material. When the pressure is increased to 1,600 kg, the coefficient of friction drops to an amazing (0.01)! This extraordinary property gives a lot of benefits, since a roughness on the friction surface will appear as an increase of pressure, and thus giving a resulting decrease in the friction. This will give less damaging vibrations and heat, producing a longer lasting friction surface.

The ICE PTFE Metal Treatment will last in an engine from 5000 to 10.000 hours, dependable on the speed of the engine. On a medium speed engine it will last approximately 7000 hours. When retreating the engine you need only to apply 50% of the first dosage, since you are repairing the ICE PTFE Metal Treatment that is worn off, on the tops of the friction surfaces.



**ICE METAL TREATMENT IS LONG LASTING,**  
do not apply with each oil change.

CODE	SIZE
0011	5 liter 5 each/carton
0111	207 liter / 1 drum

### Applications:

**Internal combustion engines, including gasoline, diesel, heavy fuel, propane and natural-gas fueled engines.**

#### Treatment of the Main Engine:

Before the Main Engine is started, remove the oil filter and fill up the filter cups (this method works good when the oil filters are above the friction surfaces to be treated.) and let the ICE Metal Treatment drain into the oil channels. It might be an advantage to use the suction of the oil pump in order to have the ICE Metal Treatment being pumped directly into the friction surfaces of the engine, before the oil is entering the oil sump. After the Main Engine has been started, it should be working continually for at least 5 hours on regular speed, in order to get the ICE Metal Treatment in place. Use 3 litre of ICE Metal Treatment as a dosage for each 10 liter Engine Displacement

#### Engines with Cylinder Lubrication:

Apply a 20-50% dilution of ICE PTFE Metal Treatment to the cylinder oil. Adjust the lubrication apparatus to maximal output, during the application. After the treatment adjust the dosage to appropriate lubrication. Of the total ICE PTFE Metal Treatment dosage on the engine, use 2/3 on the cylinders and 1/3 through the oil pump into the crank bearings. If this is not possible, run the engine on least possible amount of oil in the oilsump, and pour the treatment in there, at let it work like that for at least 5 hours.

#### The Auxiliary Engines:

1. Drain out all of the crankcase oil if dirty, and add new oil to the oil reservoir, minus the amount of ICE Metal Treatment. Change or clean oil filters. ( If you want to clean the engine inside, use 20% of ICE Engine Cleaner to the old lubrication oil and let the engine idle for 20 minutes, before changing the oil and the filter. This is good treatment for problem engines)
2. Add 3 liter of ICE Metal Treatment for each 10 liter Engine Displacement or 20% of the oil capacity. ( When pouring the ICE Metal Treatment into the oil reservoir, let the engine run on the minimum allowable amount of lubrication oil.)
3. After adding the ICE Metal Treatment, start the engine and let it operate for at least 3 hours on regular speed. Do not let the engine just idle.

**Before applying ICE Metal Treatment always stir up the oil, since the PTFE polymers, after some time, tends to settle on the bottom of the container. After removing the top lid on the 55 gallon drum, use a broom stick or another type of a stirrer and stir the ICE Metal Treatment for approximately 5-10 minutes, making sure that nothing of the ICE PTFE is being left on the bottom of the drum. When well stirred, the ICE Metal Treatment will have a white yellow creamy color, instead of the light brown oily color. ICE Metal Treatment comes in an engine oil, do not let it separate out before the treatment.**

### Characteristics\*:

SAE No.	30
Pour Point	-18C
Flash Point (Open cup)	+218C
TBN	8,5
API SERVICE CLASSIFICATION	SF, SG, CE, CD-II
ARMY SPECIFICATION	MIL-L-2104 E, MIL-L-46152D

\*Characteristics apply to carrier oils, and may vary slightly.

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