



# MARINE TRUNK PISTON ENGINE OIL

# BRAVOIL™

## Technical Data Sheet

### MARINE 1230 & 1240

#### PRODUCT DESCRIPTION:

MARINE 1230 and 1240 are high-performance trunk piston engine oils specifically designed for medium-speed marine and industrial trunk piston engines that operate on low sulfur distillate fuel with a sulfur content of up to 1.0%. These oils are blended with solvent-refined high viscosity index paraffin mineral base oils and include chemical additives that provide effective alkalinity, wear resistance, detergency, and dispersancy properties.

#### APPLICATION:

MARINE 1230 oil is recommended specifically for crankcase lubrication in medium-speed marine-type diesel engines. Additionally, it is suitable for use in large crosshead type engines where it can perform the functions of separating bearing lubrication and piston cooling under severe service conditions, provided it is used at the appropriate viscosity grades.

#### FEATURES & BENEFITS:

- Improved anti wear properties, reduces ring & liner wear
- Reduces port and under crown deposits
- Cleaner engine operation
- Increased protection against cylinder and bearing wear
- Outstanding thermal & oxidation stability extend periods between inspection & overhauling
- Controls black sludge therefore increases oil filter life and reduces cleaning frequencies
- Excellent TBN retention with low oil consumption

#### PERFORMANCE STANDARDS: Meets or Exceeds:

- API CF

#### MEETS OEMs

- MAN
- Mak / Caterpillar
- Wartsila
- Yanmar
- Daihatsu

#### TYPICAL PROPERTIES:

PARAMETERS	TEST METHOD	UNIT	MARINE 1230	MARINE1240
SAE Grade			30	40
Kinematic Viscosity @ 104°F/40°C	ASTM D445	cSt	TBR	TBR
Kinematic Viscosity @ 212°F/100°C	ASTM D445	cSt	11.0	14.5
Viscosity Index (min)	ASTM D2270	-	95	95
SP. Gravity @ 60°F	ASTM D4052	g/cm <sup>3</sup>	TBR	TBR
Flash Point (min)	ASTM D92	°C	220	220
Pour Point (max)	ASTM D97	°C	-9	-9
TBN	ASTM D2896	mg KOH/g	12	12

#### HEALTH & SAFETY, ENVIRONMENT:

Prolonged and repeated contact with oil may cause skin disorders. Avoid contact. Wash immediately with soap and water. Do not discharge used oil in to drains or the environment. Dispose to an authorized used oil collection point. For further Information on Safety Guidelines please refer to MSDS available on our website [www.bravoil.ae](http://www.bravoil.ae)

#### HEALTH & SAFETY:

This product is not likely to present any significant health or safety hazards when properly used in the recommended application and good standards of personal hygiene are maintained. Reference is made to the Safety Data Sheet (SDS) which is available on request via your local sales office or via the internet [www.bravoil.ae](http://www.bravoil.ae)

#### PROTECT THE ENVIRONMENT:

Take used oil to an authorized collection point. Comply with local regulation. Do not discharge into drains, soil or water.

#### STORAGE:

We recommend to store all packages under cover. In case outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should never be stored above 60°C, exposed to hot sun or freezing conditions.