



MARINE CYLINDER OIL

BRAVOIL™

Technical Data Sheet

MARINE MCL 25, 40, 50, 70, 100

PRODUCT DESCRIPTION:

MARINE MCL is a range of alkaline marine cylinder lubricants for all low-speed, marine two-stroke diesel engines, including low-sulphur applications, highly rated large bore engines and engines at optimized feed rates.

APPLICATION:

MARINE MCL is a range of high-quality cylinder lubricants for low-speed marine diesel crosshead engines running on residual fuel. The total alkaline content of the cylinder lubricant has to match the sulphur content in the fuel and it might be necessary to adjust the feed rate accordingly. MARINE MCL 25 is used for slow-speed engines running on ECA fuels below 0.1% sulphur. MARINE MCL 40 & 50 is optimized for low-sulphur fuel with sulphur content up to <2% wt. MARINE MCL 70 & 100 are optimized for fuel with sulphur content >1.5%.

FEATURES & BENEFITS:

- Excellent thermal and oxidation stability and detergency
- Excellent deposit control
- Allows operation at optimized feed rates
- Excellent Anti-wear properties
- Reduced liner and ring wear
- Extended time between overhauls

MEETS OR EXCEEDS:

- MAN Diesel & Turbo
- MHI-MME and Wärtsilä
- Mitsubishi Heavy Industries

MEETS OEMs:

- MAN
- Wärtsilä
- MHI

TYPICAL PROPERTIES:

PARAMETERS	ASTM	UNIT	MCL 25	MCL 40	MCL 50	MCL 70	MCL 100
SAE Grade			50	50	50	50	50
Kinematic Viscosity @ 104°F/40°C	D445	cSt	TBR	TBR	TBR	TBR	TBR
Kinematic Viscosity @ 212°F/100°C	D445	cSt	19	19	19	19	19
Viscosity Index (min)	D2270	-	95	95	95	95	95
Density @ 60°F/15°C	D4052	g/cm ³	TBR	TBR	TBR	TBR	TBR
Flash Point (min)	D92	°C	220	220	220	220	220
Pour Point (max)	D97	°C	-9	-9	-9	-9	-9

DISCLAIMER:

The test data provided is not a final specification; rather, it serves as a guideline and may vary within acceptable production tolerances. Bravoil reserves the right to modify this test data. Any updates will supersede previous versions, so please refer to the most recent Technical Data Sheet (TDS).

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

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

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.