

## PRODUCT INFORMATION

### MCL HS AW

#### Description

MCL HS AW 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 running at optimized feed rates.

#### Application

MCL HS AW 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 of the fuel and it might be necessary to adjust feed rate accordingly. When running at low feed rate or in ultra-low steaming mode, it is essential that the liner and piston ring conditions are inspected on a regular basis. Please refer to the latest OEM recommendations on feed rates, which may vary depending on lubricator technology.

MCL HS AW is suitable for fuels with Sulphur contents above 0.5% weight.

#### Features/Advantages and Benefits

- Outstanding thermal and oxidation stability and excellent detergency
  - Excellent deposit control
  - Leads to clean engine parts
  - Allows operation at optimized feed rates
- Excellent anti-wear properties
  - Prevents scuffing
  - Reduces liner and ring wear
  - Allows extended time between overhauls
- Approved by major engine manufacturers

## Typical Characteristics

| Grade Name | Pour point<br>°C | Flash point (COC)<br>°C, min | Viscosity at 100°C<br>cSt | SAE | Base number<br>mgKOH/g |
|------------|------------------|------------------------------|---------------------------|-----|------------------------|
| MCL HS AW  | -6               | 240                          | 20                        | 50  | 70                     |

## Health and Safety

The Safety Data Sheet is available on request and describes the product in terms of safety in use, handling and transport. The product is not classified as dangerous according to the Regulation 1272/2008 or the Directives D67/548/EEC and 1999/45/EC. When used as intended, this product does not pose significant health risks. Repeated exposure may cause skin dryness or cracking. In case of skin contact, immediately wash the affected area with plenty of soap and water. Remove contaminated clothes. Wear protective gloves and eye protection.

## Handling and Packaging

The compatibility and miscibility with comparable products from other suppliers have been tested successfully by an independent institute. In order to benefit from full product performance the mixing of lubricants should be limited to a minimum.

The products are available in bulk and drums of approximately 205 litres.

## Further Information

For further information about LLK Marine Rus please contact any representative of LLK Marine Rus or visit our website [www.lukoilmarine.com](http://www.lukoilmarine.com).

### LLK Marine Rus

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This data sheet and the information given are considered to be accurate to the best of our knowledge. While the physical and chemical characteristics are typical of current production and compliant to specification of «LLK International», variations in these characteristics may occur. No warranty expressed or implied, is given as to the accuracy or completeness of the information or suitability of the products.

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