



# Makina Grease & Lubricants Manufacturing L.L.C.

## Super HD

### Description

Makinalube Super HD motor oils are high quality engine oils designed specifically for use in naturally aspirated and turbo-charged diesel engines.

Makinalube Super HD meets the requirements of API Engine Service Classification CD/SF and CCMC D2/G2 and are formulated to meet the requirements of MIL-L-2104D and MIL-L-46152B specifications. They also meet the requirements for Caterpillar TO-2 and Allison C-3 transmission oils.

### Application

Makinalube Super HD oils are formulated from high quality paraffinic base oils and detergent-dispersant, anti-oxidation, anti-corrosion, anti-wear and anti-foam additives. They are used extensively in diesel engine driving transports, earth-moving / quarrying and construction equipment as well as stationary diesel engines.

Makinalube Super HD motor oils offer the following benefits:

- Can be used in both gasoline and diesel engines, normally aspirated or turbo-charged.
- Reduces engine wear.
- Extends oil change periods.
- Keeps engine interior clean.

Due to its unique viscometrics, Makinalube Super can reduce oil consumption in old worn out engines. This leads to lowering of the operating costs of the equipment.

### Typical Characteristics

PROPERTIES	UNITS	TEST METHOD	VALUE				
SAE Grade		DIN 51 511	10W	30	40	50	60
Density @ 15 °C	kg/m <sup>3</sup>	ASTM D-4052	883	893	899	904	900
Viscosity @ - 25 °C	mPa.s	ASTM D-5293	5000	-----	-----	-----	-----
Viscosity @ - 20 °C	mPa.s	ASTM D-5293	-----	-----	-----	-----	-----
Viscosity @ 100 °C	mm <sup>2</sup> /s	ASTM D-445	6.60	11.3	15.6	21.0	25
Viscosity Index		ASTM D-2270	117	100	100	100	106
Flash Point, COC	°C	ASTM D-92	236	234	240	246	250
Pour Point	°C	ASTM D-97	- 27	- 18	- 12	- 9	-12
Sulphated Ash	% wt.	ASTM D-874	1.36	1.36	1.36	1.36	1.36
Base Number	mg KOH/g	ASTM D-2896	10	10	10	10	10