

LUKOIL LUBRICANTS COMPANY

LUKOIL AVANTGARDE ULTRA M3 15W-40

Multigrade semi-synthetic engine oil for mining and construction machinery

APPROVALS

VOLVO VDS-3 Mack EO-N Renault VI RLD-2 MB-Approval 228.3 MTU Oil Category 3 Cummins CES 20078

PRODUCT DESCRIPTION

LUKOIL AVANTGARDE ULTRA M3 15W-40

is a multigrade semi-synthetic engine oil meeting requirements of modern engine manufacturers of mining and construction machinery (Cummins, MTU, etc.) which requires extended oil drain intervals.

LUKOIL AVANTGARDE ULTRA M3 15W-40

is based on synthetic base stocks and modern advanced additives package.

APPLICATION

LUKOIL AVANTGARDE ULTRA M3 15W-40

is recommended for diesel engines of heavy duty mining, construction, off-road and specialized machines, as well as machinery which require extended oil drain intervals. The oil is also recommended for diesel engines according to API CI-4 and 15W-40 grade, what is essential for mixed fleets of equipment.

MEETS REQUIREMENTS

API CI-4 Cummins CES 20077 Global DHD-1 MB 228.1 MAN M 3275 JASO DH-1

BENEFITS

- High anti-oxidation and thermal stability provides extended drain interval in comparison with ordinary API CI-4 oils
- Excellent low-temperature properties ensure reliable engine cold-start in winter period
- High level of anti-wear and detergent dispersant properties reduces deposit formation and provides engine cleanliness
- The oil allows to increase equipment operation efficiency due to reducing downtime for maintenance and oil change

<u>The product name In an order:</u> Motor oil LUKOIL AVANTGARDE ULTRA M3 SAE 15W-40, API CI-4 STO 00044434-026-2013

TYPICAL TEST DATA

PROPERTY	Test methods	LUKOIL AVANTGARDE ULTRA M3 15W-40
Density at 20 °C, kg/m ³	ASTM D4052	878.6
Kinematic viscosity at 40 °C, mm ² /s	ASTM D445	104.1
Kinematic viscosity at 100 °C, mm ² /s	ASTM D445	14.5
Viscosity index	ASTM D2270	145
Cold Cranking Viscosity at -20°C, CCS, mPa·s	ASTM D5293 / GOST R 52559	5,300
Pumping Viscosity at -25°C (MRV), mPa·s	ASTM D4684 / GOST R 52257	14,950
Total Base Number, mg KOH/1 g oil	ASTM D2896	14.2
Noack evaporation loss, %	ASTM D5800 / DIN 51581-1	10.4
Sulphated ash, %	ASTM D874	1.8
Flash Point, COC, °C	ASTM D92	231
Pour Point, °C	GOST 20287 B	-39

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved by OOO "LLK-International"

