



Product Data Sheet

MS-X Plus Synthetic Blend 15W-40 Heavy Duty Diesel Engine Oil

Description

Nemco MS-X Plus Synthetic Blend 15W-40 is an API CK-4 approved engine oil formulated with an advanced blend of high VI mineral and synthetic PAO (polyalphaolefin) base oils and a select mixture of high-performance additives. It was developed for use in four-stroke cycle diesel engines that meet 2017 model year on-highway and Tier 4 non-road exhaust emission standards, as well as for previous model year engines. This oil is especially formulated to protect and sustain engine exhaust after-treatment devices such as diesel particulate filters (DPFs), diesel oxidation catalysts (DOCs) and selective catalytic reduction (SCR) systems.

MS-X Plus Synthetic Blend 15W-40 is backward serviceable for use in pre-2017 diesel engines, and may be used in older equipment that called for earlier API oil categories such as CJ-4, CI-4 with CI-4 Plus, CI-4 and CH-4. This oil offers the end user improved performance and longer equipment life in fleet, construction, and agriculture equipment under the most extreme conditions and provides optimum fuel economy, oil consumption control, low temperature pour point and start up.

Advantages

- Improved oxidative stability for longer service life
- Excellent resistance to viscosity loss due to shear and oil aeration
- Protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits
- Protection for newer low-emission diesel engines and older diesel engines
- Specially formulated to protect exhaust after-treatment devices
- Excellent soot control for protection against abrasive wear and soot-induced oil thickening
- Protection against sludge, varnish formation, rust, bearing corrosion and wear
- Good resistance to foaming and aeration

Applications

On-highway diesel trucks equipped with EGR and exhaust after-treatment devices to meet 2017 emissions standards, older diesel equipment with conventional, non-EGR engines or ACERT engines, and off-highway construction, earth moving and mining equipment.

Meets and/or exceeds

- Approved and licensed for API Service CK-4, CJ-4, CI-4 with CI-4 PLUS, CI-4, CH-4/SN
- ACEA E7-08*/E9-08
- Allison C-4/3*
- Caterpillar ECF-3, ECF-2
- Cummins CES 20086, 81, 71, 72*, 76*, 77*, 78
- Daimler Mercedes-Benz 228.3*
- Detroit Diesel 93K222, 93K218, 7SE270
- Global DHD-1*
- International (Navistar) diesel engines
- JASO DH-2
- MIL-L-2104E/F
- Mack EOS-4.5, EO-O Premium Plus, EO-N Premium Plus, EO-N Plus
- MTU Type 2.1
- Volvo VDS-4.5, VDS-4/3
- Diesel engines manufactured by OEMs not listed above, where OEM specifies API CK-4 engine oil

*SAE 15W-40 Viscosity Grade



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Typical physical characteristics

Properties	Method	MS-X Plus Synthetic Blend 15W-40
SAE Viscosity Grade		15W-40
Kinematic Viscosity @40°C mm ² /s	ASTM D445	120
Kinematic Viscosity @100°C mm ² /s	ASTM D445	15.5
Viscosity Index	ASTM D2270	135
CCS Viscosity @ -25°C	ASTM D5293	6,500
Density @20°C kg/l		.871
Sulphated Ash %	ASTM D874	.99
Total Base Number mg KOH/g	ASTM D2896	10
Flash Point (CC) °C	ASTM D92	>205
Pour Point °C	ASTM D97	-39
MRV-TP1, Viscosity, cP@ -30°C	ASTM D4684	23,100

These characteristics are typical of current production, variations in these characteristics may occur.

Health, Safety, & Environment

GHS compliant Safety Data Sheets are available at nemco.ca under the MSDS Library. For SDS in French, please contact info@nemco.ca. While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the SDS contains valuable information critical to the safe handling and proper use of the product.

Always take used oil to an authorized collection point. Do not discharge into drains, soil, or water.