



PRODUCT DATA SHEET

Macmillan Ring-Free™ XHD 15W-40 CJ-4 CODE 641

Macmillan Ring-Free™ (Macmillan) XHD 15W-40 CJ-4 uses premium quality Group II base stocks and advanced additive technology, and is formulated to provide the highest levels of equipment protection available. Macmillan XHD 15W-40 is recommended for heavy duty diesel engines that require API CJ-4 SN, Cummins CES 20081, Volvo VDS-4, Mack EO-O Premium Plus, Caterpillar ECF-3, and Detroit Engine Oil 93K218. Macmillan XHD 15W-40 is a premium quality, heavy-duty multi-grade oil for all-season use in diesel powered or a mix of gasoline and diesel powered equipment. It can be recommended for service requirements of all diesel and gasoline engine manufacturers. It can be recommended for both newer and older engines. Especially designed for today’s high-performance, low emissions diesel engine equipped with Exhaust Gas Recirculation (EGR) and Diesel Particulate Filter to EPA 07 compliant engines.

APPLICATIONS

Macmillan Ring-Free™ XHD 15W-40 may be recommended for the following applications:

When CJ CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF-4 CF, CF-2 oils are required.	When SN, SM, SL, SJ, SH, SG, SF oils are required.
When MIL-L-210E/F oils performance level is required.	When a US Military CID A-A-52306 performance level is required.
ACEA E7, E5-02, JASO DHD-1, Global DHD-1	When GM4718M/6094M and Ford M2C153-Eand WSS-W2C171-E oils are required.
In all diesel and gasoline engines, including turbo-charged models.	Mack Engines EO-O, EO-N, EO-M, Premium Plus, EO-M, EO-L Plus, EO-L, EO-K/2.
Detroit Engine Oil, DDC 93K218	In Caterpillar engines ECF-3
In Cummins engines CES 20071, 20076, 20077, 20078, 20081.	In Volvo VDS-4, VDS-3, VDS-2, and VDS engines
Caterpillar Engines ECF-1-a & Drive Trains TO-2	When Allison C-3/C-4 fluids are required
Mercedes Benz MB 228.3	Renault, RLD-3

SELECTION

Listed below are the physical and chemical characteristics of Macmillan XHD 15W-40 CJ-4 Oil. Follow equipment manufacturer recommendations and conventional guides to determine the best oil for specific applications.

SAE GRADE	15W-40 CJ-4
Product Code	641
Gravity, API	30.0
Viscosity @ 40°C, cSt	111.0
Viscosity @ 100°C. cSt	15.5
Viscosity Index	146
Pour Point: °C	-32
Flash Point: °C	231
Borderline Pumping: °C	20
Sulfated Ash wt%	>1.0
Total Base Number	10
API Licensed Service:	CJ-4, CI-4 PLUS, CI-4, CH-4, CF-4, CF, CF-2, CE, CD-II/SL SM