Keeping the engine in optimal condition, therefore increasing vehicle uptime, is the core task of this low SAPS oil. It achieves this by offering high wear resistance and complete engine cleanliness, optimising vehicle uptime compared to previous engine oil formulations. The engine oil's high viscosity grade enables this engine oil to maintain its excellent protective properties, even in hot climates and rough conditions.

## **APPLICATIONS**

This versatile product meets the requirements of challenging specifications like the Mack EO-S 4.5, Renault RLD-4 or Volvo VDS-4.5. It is backward compatible with preceding oil categories like CJ-4, suiting the needs of both recent and older engines. It is compatible with emission control technology EURO IV, V and VI for trucks; as well as stage IIIB, IV and Tier 4i, 4f for heavy-duty off-road.

#### **FEATURES**

Improved engine cleanliness: increased operating hours

High wear protection: increased engine lifespan

Increased oxidative stability: extended optimal oil performance

### **SPECIFICATIONS**

ACEA	E11	MACK	EO-N
	FO 10		

**ACEA** F9-16 MACK EO-N Premium Plus API approval CK-4/SN MACK EO-0 Premium Plus API CI-4 MAN approval M3775 CI-4 Plus M3575 API MAN API

 API
 CJ-4
 MB
 228.31

 JASO
 DH-2
 MTU
 approval Oil Category 2.1

 ALLISON
 C4
 RENAULT
 approval RLD-3

MAT 3571 CASE RENAULT RGD CASE MAT 3572 RENAULT RLD **CATERPILLAR** ECF-1a RENAULT RLD-2 **CATERPILLAR** ECF-2 RENAULT RLD-4 CATERPILLAR ECF-3 **RENAULT** RXD

 CATERPILLAR
 TO-2
 VOLVO
 approval VDS-4.5

 CUMMINS
 CES 20076
 VOLVO
 VDS-3

 CUMMINS
 CES 20077
 VOLVO
 VDS-4

CUMMINS CES 20078
CUMMINS CES 20081

**DAIMLER TRUCK** approval DTFR 15C100

CES 20086

**DETROIT DIESEL** DFS 93K222

**DEUTZ** approval DQC-III-18 LA

 DEUTZ
 DQC-III-10 LA

 FORD
 WSS-M2C171-F1

JD JDQ-78X

MACK approval EO-S 4.5
MACK EO-M PLUS

#### CHAMPION CHEMICALS NV

CUMMINS

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# **TYPICAL CHARACTERISTICS**

Method	Unit	Average results
ASTM D4052	g/ml	0.860
ASTM D445	mm²/s	92.5
ASTM D445	mm²/s	13.7
ASTM D2270		150
ASTM D2896	mg KOH/g	8.2
ASTM D6892	°C	-36
ASTM D874	Mass %	1.0
ASTM D92	°C	226
	ASTM D4052 ASTM D445 ASTM D445 ASTM D2270 ASTM D2896 ASTM D6892 ASTM D874	ASTM D4052 g/ml  ASTM D445 mm²/s  ASTM D445 mm²/s  ASTM D2270  ASTM D2896 mg KOH/g  ASTM D6892 °C  ASTM D874 Mass %

We reserve the right to alter the general characteristics of our products in order to let our customers benefit of the latest technical evolutions.



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