



E-FORCE

SEMI SYNTHETIC

PRODUCT DESCRIPTION:

E-FORCE Semi Synthetic is a heavy-duty engine oil designed to deliver superior lubrication for modern diesel and gasoline engines operating under severe conditions. Formulated with high-performance base oils, it ensures excellent low-temperature fluidity, high-temperature viscosity retention, and effective volatility control. E-FORCE is engineered for robust oxidation resistance, effective soot management, and exceptional wear protection. It also provides outstanding piston deposit protection and minimizes sludge formation, contributing to extended engine life and reliable performance.

APPLICATION:

E-FORCE Semi Synthetic provides demonstrated protection and performance in the latest high-power heavy-duty diesel engines from Europe, US, and Japanese manufacturers in both on-highway and off-highway applications. It is suitable for modern low emission engines meeting Euro 2, 3 and US 2002 emission requirements.

FEATURES & BENEFITS:

- Increased thermal and oxidation stability
- Reduced sludge build-up, deposits and extended engine life
- Improved corrosion protection and advanced piston deposit control
- Advanced soot handling to control viscosity increase and sludge build up
- Enhanced low temperature pumpability

PERFORMANCE MEET OR EXCEEDS:

- API CI-4/SL
- ACEA E7, A3/B3/B4
- DTFR 15B110 / 229.1
- MAN M3275-1
- Volvo VDS-3
- Deutz QOC III-10
- JASO DH1
- MACK EO-N
- Cummins CES 20076/20077/78
- Global DHD1
- Renault RLD2
- MTU Type 2
- Allison C4
- Caterpillar ECF 1a, ECF 2
- DDC 93K215

TYPICAL PROPERTIES:

PARAMETERS	ASTM	UNIT	E-FORCE	
			10W-30	10W-40
Grade			10W-30	10W-40
Kinematic Viscosity @ 104°F /40°C	D7042	cSt	TBR	TBR
Kinematic Viscosity @ 212°F /100°C	D7042	cSt	11.7	15.1
Viscosity Index (min)	D2270	-	145	145
Density@15°C/ 60°F	D4052	g/cm ³	TBR	TBR
Flash Point (min)	D92	°C	220	220
Pour Point (max)	D97	°C	-36	-36
TBN	D2896	mg KOH/g	11	11
CCS	D5293	m.Pa.S	<7000 (-25°C)	<7000 (-25°C)

DISCLAIMER: The test data presented above is indicative and not a strict specification, as it may vary within acceptable production tolerances. Internal reserves the right to update or modify this test data. For the most accurate and current information, please refer to the latest version of this Technical Data Sheet (TDS).

HEALTH & SAFETY, ENVIRONMENT:

Continuous or repeated exposure to oil may lead to skin problems. Avoid contact with the oil. In case of contact, wash thoroughly with soap and water. Do not dispose of used oil in drains or the environment. Dispose of it at an authorized used oil collection point. For additional safety information, please refer to the MSDS available on our website at www.internal.net.

PROTECT THE ENVIRONMENT:

Take used oil to an authorized collection point. Comply with local regulation. Do not discharge into drains, soil or water.