

# eni i-Sigma plus 4ID



**eni i-Sigma plus 4ID** is high performance lubricants for high output naturally aspirated and super-charged Diesel engines operating under very severe duty or which are subject to deposit formation or excessive wear due to design characteristics or to the fuel employed.

It is formulated using large percentage of additives to impart superior detergency together with high dispersant, antioxidant, anticorrosion, and anti-wear properties.

The SAE grade 10W is also suitable to be employed in hydraulic circuits of various equipment (earthmovers, loaders, etc) where an engine oil of such a viscosity grade is prescribed.

## CHARACTERISTICS (TYPICAL FIGURES)

### eni i-Sigma plus 4ID

SAE Grade		10W	30	40	50
Appearance	-	B & C	B & C	B & C	B & C
Density at 15°C	kg/L	0.867	0.878	0.883	0.893
Viscosity at 100°C	cSt	6.6	11.9	14.3	19.3
Viscosity at 40°C	cSt	40.0	97.5	125.1	213.4
Viscosity Index	-	117	113	114	102
Flash Point COC	°C	222	234	242	244
Pour Point	°C	-28	-21	-21	-9
Total Base Number	mgKOH/g	8.5	11.1	11.1	11.1

## PROPERTIES AND PERFORMANCE

- **eni i-Sigma plus 4ID** has superior detergency and dispersant properties that is particularly suitable for supercharged diesel engines. The lubricant thus minimizes the formation of lacquer and varnish, as well as sludge and other engine deposits; helps prevent ring sticking, and keep pistons clean while maintaining potential deposits in suspension.
- Its anticorrosion properties effectively protect the engine from corrosion by combustion moisture and acids.
- Its good antioxidant can avoid oxidation reaction to get long life of oil in service.
- Its anti-wear properties ensure long life of moving parts and greatly reduce the need for engine servicing and overhauls.
- It has marked resistance to deterioration, especially that caused by oxidation due to prolonged high-temperature operation in the presence of air and other agents.
- Its antifoam properties prevent the formation of air bubbles that could adversely affect lubricant film continuity.

## APPLICATIONS

**eni i-Sigma plus 4ID** is specifically designed and formulated for:

- 4 stroke diesel engines, includes supercharged, turbocharged and heavy equipment engines such as bulldozer, wheel loader, motor grader, tractors etc.
- Static and marine diesel engines.

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- Hydraulic system for heavy equipment, dump truck, forklift etc. (SAE 10W).
- Transmission and Gear to fulfill Allison C-4, Caterpillar TO-2 and OEM requirements.

## SPECIFICATIONS

**eni i-Sigma plus 4ID** meets the requirements of the following specifications:

- API CF/ CF-2
- Cat TO-2
- Allison C-4
- MB 228.0
- ACEA E2-96
- MAN 270
- MTU type 1