

DIESEL CK-4 / VDS

API CK-4 / VOLVO VDS-4.5

DIESEL CK-4 / VDS is a diesel engine oil that meets the stringent engine test and performance requirements of the API commercial classification "API CK-4" standard and Volvo's proprietary "VDS-4.5" standard.

By using this oil, customers with vehicles from various manufacturers can unify oil types, thus reducing the burden of inventory management.

● **Special Features**

1. Meets the Latest Diesel Engine Oil Standards

The "API CK-4" standard was established in December 2016 as the latest standard of the API commercial classification for 2017 model vehicles. It offers performance that exceeds API CH-4, CI-4, CI-4 PLUS, and CJ-4.

The "VOLVO VDS-4.5" standard was established in October 2017 as Volvo's latest proprietary standard, succeeding the "VOLVO VDS-4" standard. It is also compatible with Volvo's new engines.

DIESEL CK-4 / VDS is a multi-grade diesel engine oil suitable for use in heavy-duty trucks and buses with the latest engines, as well as construction and agricultural machines. It is also compatible with vehicles that recommend the existing API standards (CH-4 to CJ-4) and the VOLVO VDS-4 standard.

2. Suitable for Exhaust Gas After-Treatment Equipment, Such as DPF

DIESEL CK-4 / VDS is compatible with the latest emissions-regulated vehicles equipped with exhaust gas after-treatment devices, such as DPFs, and with construction and agricultural machines complying with Tier 4 exhaust gas regulations. API CK-4 standard suppresses DPF clogging by reducing sulfated ash content (metal content in oil) to 1% by mass or less.

Additionally, the compatibility with exhaust gas catalysts is improved by limiting phosphorus content in the oil to 0.12% by mass or less, sulfur content to 0.4% by mass or less, and further reducing evaporation to 13% by mass or less.

3. Extension of Engine Life

API CK-4 standard requires excellence in 11 types of engine tests, demonstrating outstanding viscosity increase suppression (soot dispersancy) and anti-wear performance in components like the valve train, liner, piston rings, and bearings. **DIESEL CK-4 / VDS** excels in anti-wear performance, shear stability, detergency, and oxidation stability, thanks to the optimal blend of high-performance additives. This formulation prevents wear on various engine parts and reduces the adhesion of carbon and sludge, ultimately extending engine life.

● **Applications**

For diesel engines in heavy-duty trucks and buses, as well as construction and agricultural machines, especially for vehicles equipped with DPFs.

● **Containers**

200-liter drum and 20-liter can

● Typical Properties of DIESEL CK-4 / VDS

Approved Specifications			API CK-4 VOLVO VDS-4.5	
SAE Grade			10W-30	15W-40
Color (ASTM)			L4.0	L4.0
Density (15°C)	g/cm ³		0.868	0.872
Kinematic Viscosity (40°C)	mm ² /s		82.29	115.3
Kinematic Viscosity (100°C)	mm ² /s		11.89	15.01
Viscosity Index			138	135
Flash Point (COC)	°C		226	242
Pour Point	°C		-47.5	-45.0
Evaporation Loss (NOACK:250°C,1h)	mass%		12.2	10.4
Acid Number	mgKOH/g		2.40	2.40
Base Number (ASTM D664)	mgKOH/g		6.37	6.09
Sulfated Ash	mass%		1.00	1.00
Elements Phosphorus	mass%		0.10	0.10
Sulfur	mass%		0.34	0.34

Note: The typical properties may be changed without notice. (May 2026)

● Handling Precautions

- **For the handling of this product:** Please read the Safety Data Sheet (SDS) for this oil and the handling precautions listed on the product container carefully before use.
- **Regarding obtaining the SDS:** Please note that Safety Data Sheets (SDS) should be obtained via commercial channels and cannot be provided by the ENEOS Customer Center.
- The properties and performance listed are based on measurements and insights from our testing methods and do not guarantee accuracy or completeness. The typical properties may be changed without notice.