



TECHNICAL DATA SHEET



KATANA MAKURI E4 5W-30

Fullysyntheticmotoroil



DESCRIPTION

KATANA Makuri E4 5W-30 – full synthetic UHPD (Ultra High Performance Diesel)engine oil, specially designed for use in modern diesel engines (turbocharged or not) meeting Euro-3 and belowrequirements, as well as part of Euro-4 and Euro-5 engines equipped byengine gas recirculation systems (EGR) or Selective Catalytic Reduction (SCR) exhaust systems. It is not recommended for engines equipped byDiesel ParticularFilters (DPF). It is used in heavy duty diesel engines of trucks, buses, agriculture, road-building and other special equipment. Improves fuel economy.

KATANA Makuri E4 5W-30 is produced according to the latest Japanese technology in accordance with the latest European (ACEA E4) and OEM specifications. Oil has outstanding oxidation stability, anti-wear and detergent-dispersant properties. Thanks to Shimo technology in KATANA Makuri E4 5W-30 engine oil, it has excellent low-temperature characteristics.



TECHNICALADVANTAGES

50%

Higher life-time of lubricant

50%

Lower toppings of fresh oil

7%

Better fuel economy

KATANA Makuri E4 5W-30 has the increased total base number (TBN), which is on 40-60% higher than the standard ACEA E7 (API CI-4) motor oil has. It makes it possible to increase the oil changing intervals and to improve resistance to high sulfur fuel in regions with unstable quality (less than 5000 ppm).

Thanks to the use of synthetic base oils with low volatility (test NOACK at 250°C) KATANA Makuri E4 5W-30 is characterized by low evaporation at high temperatures, which reduces the amount of toppings of new portions of fresh oil from 3 to 7 liters, depending on the operating conditions, and changing intervals. Itincreasestheeconomic efficiencyon 7-15%.

Due to low viscosity synthetic basis oil has a low internal friction which helps to reduce fuel consumption (Fuel Economy).



SPECIFICATIONS

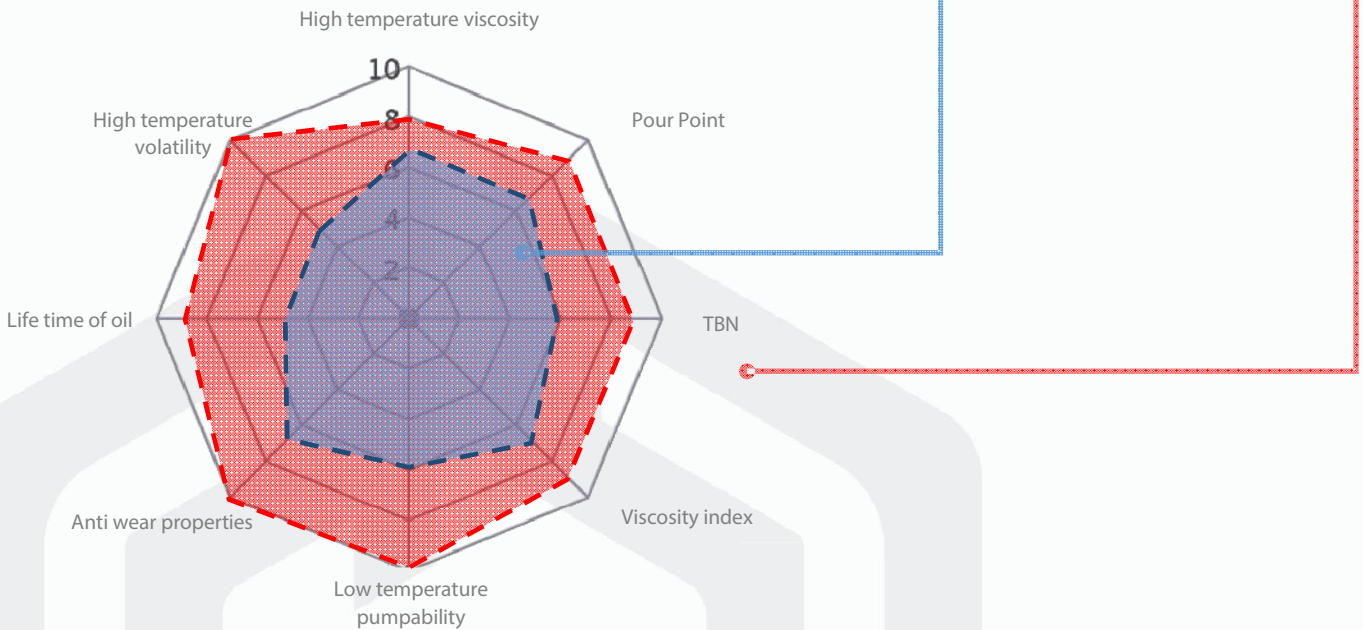


KATANAMakuriE4 5W-30 fully satisfies and is recommended to replace following types of motor oils: ACEAE7-12/E4-12; APICF; MB 228.5/235.28; CumminsCES 20077; DAFExtendedDrain; DeutzDQCIV-10; MANM 3277; MTUOilCategory 3; RVIRLD/RLD-2/RXD; ScaniaLDF-3; VolvoVDS-3; MackEO-N; FordWSS-M2C212-A1



TECHNICAL PARAMETERS

Parameter	Test method	Typical APICI-4 5W-30 motor oil	KATANAMakuri E4 5W-30
Kinematic viscosity at 40°C, cSt	ASTM D445	68	72
Kinematic viscosity at 100°C, cSt	ASTM D445	11.6	12.3
Viscosity index	ASTM D2270	166	170
MRV viscosity at -35°C, cP	ASTM D4684	60 000	25 000
TBN, mg KOH/g	ASTM D2896	10	15.9
Flash point in open cup, °C	ASTM D92	210	232
Noack evaporation loss, %	ASTM D5800	15	10.5
Pour point, °C	ASTM D97	-39	-45



Physical and chemical characteristics are typical for this product. These parameters are subject to change without notification, however, full compliance with the product specifications is guaranteed.

Shelf life: 5 years from date of manufacture. Store unopened in a cool, dry, well-ventilated and away from children. Avoid direct sunlight, heat sources and strong oxidizing agents. Material Safety Data Sheet (MSDS) for professional users available on request.

Developed in Osaka, Japan. The quality management system in the production of oils KATANA corresponds to the requirements of ISO 9001. The system of environmental safety in the production of oils KATANA corresponds to the requirements of ISO 14001.