TOTACHI®

PRODUCT DESCRIPTION

Hyper Ecodrive OW-20 is an innovative fuel efficiency fully synthetic, Resource Conserving, engine oil formulated for use in next-generation gasoline engines – turbocharged gasoline direct injections (TGDI), hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV), range extended electric vehicles (REEV), battery-assisted hybrid vehicles (BAHV), Extended Range Electric Vehicle (EREV) and all other vehicles operating under severe urban conditions where "Stop-Start" modes are typical. Provides excellent lubrication and wear performance protection in the most severe driving conditions. Advanced formulation to increase engine's efficiency and enhance fuel economy while giving a lasting protection to the engine. Guaranteed protection against Low Speed Pre-Ignition (LSPI) and timing chain wear.



Hyper Ecodrive OW-20 is enhanced with unique anti-friction technology, ZFM^{TM} (Zero Friction Molecular), to considerably reduce friction and wear of highly loaded engine parts that are exposed to intensive duty cycles and high operating temperatures.

Outstanding cold weather temperature performance to ensure perfect lubrication from engine start up until full speed revolution.

APPLICATION

Recommended for all types of gasoline fueled engines requiring a viscosity grade of SAE OW-20 API SP, ILSAC GF-6A, Resource Conserving engine oil. For passenger cars, vans, CUVs, SUVs, light duty trucks and other vehicles fitted with recent gasoline engines. Helps protect engines operating on E85 fuels.

Backward compatible to API SN PLUS, API SN, ILSAC GF-5.

WARRANTY

Hyper Ecodrive 0W-20 meets or exceeds the OEM's warranty requirements of gasoline vehicles where API SP and ILSAC GF-6A oil is required. TOTACHI[®] guarantees full compliance on the written specifications indicated on product labels.

CUSTOMER BENEFITS

• Enhanced Fuel Efficiency

Helps to improve fuel economy (up to 2.3%) compared with higher viscosity grades oils. The outstanding low temperature performance ensures quick engine start up and supports fuel savings.

• Superior Engine Durability

Robust engine oil designed for downsized engines with higher horsepower and torque. With carefully selected components to ensure protection against premature combustion, known as LSPI which can cause catastrophic engine failure. Additional timing chain wear protection for a maximized engine durability.

• Optimum Driving Performance

With carefully selected components to ensure excellent lubrication and fast protection for powerful engine response in many driving conditions.

• Hybrid Vehicles

Provides optimum lubrication and wear protection on engines running less during low speed and stop-and-go driving.

Compatibility with ECS (Emission Control System)

The low content of phosphorus and ash contributes to the long life of the three-component catalytic converters (TWC).



MEETS SPECIFICATIONS & REQUIREMENTS OF:

- API SP
- ILSAC GF-6A
- Resource Conserving
- FORD WSS-M2C947-B1 / 947-A
- CHRYSLER MS-6395
- FIAT 9.55535-CR1
- GM Dexos 1

Suitable for use in various OEMs such as TOYOTA, LEXUS, DAIHATSU, NISSAN, HONDA, MITSUBISHI, MAZDA, SUBARU, SUZUKI, ISUZU, FORD, DODGE, JEEP, RAM, CHRYSLER, HYUNDAI, KIA, ACURA, CHEVROLET, INFINITI, FIAT, Hybrid gasoline engines and other OEMs requiring a SAE 0W-20, API SP, Resource Conserving and ILSAC GF-6A.

Before using this product, ensure it is consistent with OEM's recommendations for the equipment operating conditions and customer's maintenance practices.

TOTACHI INDUSTRIAL CO. LTD., Japan, web: www.totachi.com

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TYPICAL TEST DATA

| CHARACTERISTICS | UNITS | VALUES | STANDARDS |
|-----------------------------|----------|--------|------------|
| SAE Grade | - | 0W-20 | SAE J300 |
| Kinematic viscosity at: | | | |
| 40 °C | cSt | 43.41 | ASTM D445 |
| 100 °C | cSt | 8.20 | ASTM D445 |
| Viscosity index | - | 166 | ASTM D2270 |
| Cranking viscosity at -35°C | mPa-s | 5785 | ASTM D5293 |
| Color | - | 2.0 | ASTM D1500 |
| Flash point | °C | 224 | ASTM D92 |
| Pour point | °C | -42 | ASTM D6892 |
| Density at 30 °C | kg/L | 0.8367 | ASTM D4052 |
| Total Base Number | mg KOH/g | 7.2 | ASTM D2896 |

STORAGE AND HANDLING GUIDELINES

- Avoid exposing products to direct sunlight. •
- Store in cool and dry places. Avoid exposing products to moisture.
- It is highly recommended to store drums indoors or under cover on pallets and racks.

HEALTH, SAFETY & ENVIRONMENT PROTECTION

Information on health, safety and environment protection is described in the product Safety Data Sheet (SDS). The SDS file contains details on potential hazards, precautions and first aid measures, as well as information on environmental impact and disposal of used products.

TOTACHI INDUSTRIAL CO. LTD. disclaims any liability in case the product is used with violation of these instructions and warnings or it is not used for its intended purpose. Before using product other than intended, consult your local TOTACHI[®] distributor.

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