



UNITED ECO-ELITE (LSPI)

Product Description:

United Eco-Elite (LSPI) is a fully synthetic passenger car motor oil with technology designed to provide an upgrade in performance to meet the latest requirements for GM specifications. United Eco-Elite (LSPI) is formulated to meet the severe performance demands of the latest turbocharged gasoline direct injection (TGDI) engine technology including new test requirements to prevent turbocharger failure, control the potential issues associated with oil aeration and to reduce the potential for engine damage due to pre-ignition. This new specification is introduced by GM in advance of the new ILSAC GF-6 category and also includes more severe demands in terms of oil oxidation performance and oil volatility. Although the specifications are listed with difference viscosity grades, it has the provision for the future inclusion of SAE 0W-16 grades, the main viscosity grades recommended by GM will be SAE 5W-30 and 0W-20.

United Eco-Elite (LSPI) Engine Oil delivers the latest development in lubricating oil technology to maximize the protection for the newest engine fueled by gasoline. United Eco-Elite (LSPI) is blended with synthetic base and advanced additives to provide excellent low temperature soot dispersancy and outstanding high temperature deposit control. It exceeds the highest API SN Plus and ILSAC GF-5 performance level and meets most demanding requirements in relation to modern engine's emission control as well as oil consumption. The API SN Plus is a proposed supplemental standard to the API SN specification, which will introduce oils for LSPI (Low Speed Pre-ignition) mitigation. LSPI is a premature ignition of the air-fuel mixture in the combustion chamber. TGDI technology coupled with volumetric efficiency improvers, such as turbochargers and superchargers, results in improved engine efficiency and decreased fuel usage. However, these technologies have resulted in a condition known as low-speed pre-ignition (LSPI). The API SN Plus supplemental standard also help protect the turbocharger components in Turbocharged Gasoline Direct Injection (TGDI) engines. In the energy-conscious era of today, United Eco-Elite (LSPI) Engine Oil is designed to optimize fuel efficiency.

Applications / Benefits:

- ▣ Fully meets the requirements of the ILSAC GF-5 and API SN Plus specifications.
- ▣ Provides enhanced performance in terms of turbocharger deposit control, oil aeration, pre-ignition prevention (LSPI) and fuel economy in the latest TGDI engine designs, exceeding the capabilities of market GF-5 oils.
- ▣ Provides protection against the potential for pre-ignition in TGDI designs, fully meeting both the currently defined OEM requirements and the anticipated future industry performance targets.

Typical Characteristics:

Test Description	Method	0W-20	0W-30	5W-20	5W-30
SAE Viscosity Grade	SAE J 300	0W-20	0W-30	5W-20	5W-30
Specific Gravity @ 15 °C	ASTM D 4052	0.848	0.851	0.850	0.851
Flash Point, °C	ASTM D 92	212	212	212	212
Pour Point, °C	ASTM D 97	-42	-42	-39	-39
Kinematic Viscosity, cSt @ 40°C	ASTM D 445	41.3	60.2	43.5	67.8
cSt @ 100°C	ASTM D 445	8.05	11.1	8.26	11.9
Viscosity Index	ASTM D 2270	172	180	168	173
TBN, mgKOH/g	ASTM D 2896	8.0	8.0	8.0	8.0
Color	ASTM D 1500	<3.0	<3.0	<3.0	<3.0

Specifications, Approvals & Recommendations:

- API SN Plus
- ILSAC GF-5

Product Data Sheet