

MAK SPIROL EP 90

Superior quality API GL-4 oil for automotive manual transmission and gear box

MAK Spirol EP 90 is a superior quality extreme pressure automotive gear lubricant. It is formulated from select base stocks and advanced additive system. This oil is developed for use in spur, helical, hypoid and bevel gears where mild extreme pressure is expected. Multifunctional additives impart good antiwear, antirust characteristics along with high resistance to oxidative and thermal degradation. It has a high film strength even at an elevated bulk oil temperature and offers protection to the gear. This oil facilitates easy gear shifting even at a very low ambient temperature. MAK Spirol EP 90 is compatible with seal materials normally specified for use in automotive gear systems with mineral oils.

Applications:

MAK Spirol EP 90 provides excellent lubrication of manual gear boxes of bus, passenger cars and trucks operating under high speed-low torque and low speed-high torque conditions. It is suitable for synchromesh gear box and hypoid, spiral bevel and steering worm gear box. It can also be used in rear axles operating under medium severity like light commercial vehicles etc. where OEM recommends API GL-4 type of oils with similar viscometry.

Performance/ Benefits:

Resistance to Oxidation and Thermal Degradation – extends gear and bearing life due to minimal deposits and longer seal life.

Antiwear Capability – offers excellent protection against low speed-high torque wear and high speed scoring. Provides increased load carrying capability thereby reducing operating cost.

High Resistance to Foaming – exhibits low foaming characteristics and maintains oil film for reduced wear.

Excellent Rust and Corrosion Protection – enhances transmission system life, reduces wear and maintenance cost.

Low Temperature Lubrication – reduces wear and facilitates easy start-up and gear shifting at low ambient temperatures.

Performance Level/ Specification:

- API GL-4
- US MIL-L-2105

Typical Physico-Chemical Data: MAK Spirol EP 90

Characteristics	Method	Value
SAE Viscosity Grade	SAE J306	90
Colour	Visual	Brown
Appearance	Visual	Clear and Bright
Density @15°C, g/cc	ASTM D1298	0.8992
Kinematic Viscosity @40°C, cSt	ASTM D445	176.6
Kinematic Viscosity @100°C, cSt	ASTM D445	16.6
Viscosity Index	ASTM D2270	98
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1b
Flash Point, °C	ASTM D92	206
Pour Point, °C	ASTM D97	-9
Foaming Tendency	ASTM D892	
a) Sequence I		NIL/ NIL
b) Sequence II		10/ NIL
c) Sequence III		NIL/ NIL

Storage & Handling:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 5 yrs. under protected storage conditions.

Health & Safety:

It is unlikely to be hazardous when properly used in recommended applications. Contamination of the coolant from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.