

MAK SPIROL LS 80W-90

Superior quality API GL-5 oil for limited slip differentials

MAK Spirol LS 80W-90 is a superior quality heavy duty extreme pressure lubricant blended for use in a wide variety of automobile units with limited slip differentials. Limited slip differential allows normal differential action while taking turns but transfers more torque to the non-slipping wheel when the other wheel is slipping. The oil formulated from select base stocks and advanced additive system. Multifunctional additives impart good antiwear, antirust characteristics, high resistance to oxidative and thermal degradation as well as the required coefficient of friction to meet requirements of limited slip differentials. It maintains low temperature flow in the designed temperature range and offers protection to the gear. MAK Spirol LS 80W-90 is compatible with seal materials normally specified for use in automotive gear systems with mineral oils.

Applications:

MAK Spirol LS 80W-90 provides excellent lubrication of heavy duty vehicles including construction machines or bus, passenger cars and trucks fitted with limited slip differentials. The most common limited slip differentials are of cone and clutch variety. MAK Spirol LS 80W-90 prevents cones or clutches from chattering or grabbing as they apply.

Other MAK Spirol grades can cause noise and rough operation of the limited slip differential and damage the parts.

Performance/ Benefits:

Optimum Coefficient of Friction – maintains optimum friction through friction modifier in order to offer smooth and noise free operation.

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. 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 – reduces wear and maintenance cost. Improves system reliability.

Low Temperature Lubrication – maintains low temperature flow and strong film between gears. Reduces wear and maintenance cost.

Performance Level/ Specification:

- API GL-5

Approvals:

- Wheel loader and wheel dozer models BL30, BL06, BL1420/14th, BD14W, BL54, BL40, BL3035, BD30W-1, BLO3, BL8H and BL9H of M/s. BEML

Typical Physico-Chemical Data: MAK Spirol LS 80W-90

Characteristics	Method	Value
SAE Viscosity Grade	SAE J306	80W-90
Colour	Visual	Dark Brown
Appearance	Visual	Clear and Bright
Density @15°C, g/cc	ASTM D1298	0.8988
Kinematic Viscosity @40°C, cSt	ASTM D445	137.5
Kinematic Viscosity @100°C, cSt	ASTM D445	15.4
Viscosity Index	ASTM D2270	115
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1b
Flash Point, °C	ASTM D92	222
Pour Point, °C	ASTM D97	-27
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.