

# MAK HTF C-4 SAE 10W

High performance automatic transmission oil meeting Allison C-4 specification

MAK HTF C-4 SAE 10W is designed to meet the Allison C-4 specification for automatic power-shift transmissions of off-highway equipment used in mining and construction industries. It is formulated with superior quality base oils and additive technology developed to meet the requirements of severe duty cycles. In power-shift transmissions and wet multiple disc brake systems of off-highway equipment the internal clutches are actuated hydraulically and the power flows through gear sets to output shafts. Hence, the frictional properties of oil are very critical. The additive chemistry imparts excellent frictional characteristics for clutches and wet brakes and its retention over an extended period. It offers anti-wear capability and improved oxidation stability.

**Applications:**

MAK HTF C-4 SAE 10W is suitable for use in hydraulic systems, hydrostatic drives, automatic transmission and power-shift transmission of off-highway equipment, clutches and wet brakes where oil with Allison C-4 specification with SAE 10W viscometry is specified.

**Performance/ Benefits:**

**Resistance to Oxidation and Thermal Degradation** – resists the effects of oxidising agents and thermal stress. Extends life of transmission components due to minimal deposits formation tendencies.

**Wear Protection** – offers protection to gears against wear and pitting. Protects transmission components like bearings against wear. Helps prevent premature failures.

**Superior Frictional Characteristics** – offers a delicate balance of static and dynamic frictional characteristics. Helps eliminate chatter in wet brakes while maintaining braking efficiency.

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

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

**Excellent Seal Compatibility** – offers extended life of seal, minimum leakage and reduced contamination.

**Anti-foaming Characteristics** – exhibits low foaming tendency and ensures effective lubrication and functioning under all operating conditions.

**Performance Level/ Specification:**

- Allison C-4

**Typical Physico-Chemical Data: MAK HTF C-4 SAE 10W**

Characteristics	Method	Value
SAE Viscosity Grade	SAE J300	10W
Colour	Visual	Pale Yellow
Appearance	Visual	Clear and Bright
Density @15°C, g/cc	ASTM D1298	0.8814
Kinematic Viscosity @40°C, cSt	ASTM D445	37.5
Kinematic Viscosity @100°C, cSt	ASTM D445	6.27
Viscosity Index	ASTM D2270	116
Flash Point, °C	ASTM D92	232
Pour Point, °C	ASTM D97	-27
Foaming Tendency, ml/ml	ASTM D892	
a) Sequence I		0/0
b) Sequence II		10/0
c) Sequence III		0/0

**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.