

TRANS-TECH Transmission Fluid TO-4 SAE 50

Product Description

TRANS-TECH TO-4 SAE50 is a premium monograde mineral oil designed to meet the high demands of Caterpillar TO-4 specifications for gear trains and heavily loaded drivetrain components. Its formulation balances friction characteristics, anti-wear protection, and oxidation resistance, ensuring:

- Reliable gear protection under high-load conditions
- Noise-free wet brake operation
- Long oil and component life in severe environments

Application

Suitable for:

- Final drives, axles, differentials, and transfer cases
- Manual transmissions in heavy-duty off-road equipment

Recommended for:

- Caterpillar, Komatsu, and other OEMs requiring SAE 50 TO-4 oils

Not to be used in engines or where multi-grade oils are specified

Approvals & Specifications

- Caterpillar TO-4
- Komatsu KES 07.868.1
- Allison C-4 (off-highway only)
- Compliant with legacy TO-2 applications where SAE 50 is suitable

Storage & Handling

- Store at or below 45°C in a dry, shaded location
- Keep containers sealed and avoid water or dust contamination
- Do not mix with other oils unless compatible and approved
- Refer to the SDS for safe handling procedures

Product Features & Benefits

- **Extreme Pressure Protection:** Reduces metal-to-metal contact in high-load gear systems and final drives.
- **High Viscosity Strength:** Maintains stable film in hot climates and severe torque conditions.
- **Frictional Stability:** Provides smooth clutch and brake engagement without chatter.
- **Oxidation & Sludge Resistance:** Maintains clean operation even under prolonged high-temperature use.
- **Seal & Material Compatibility:** Safe for use in systems with a wide range of seals and materials.

Typical Properties

Property	Method	Value
Appearance	Visual	Bright, clear amber
Density @ 15°C	ASTM D4052	0.899 g/cm ³
Kinematic Viscosity @ 40°C	ASTM D445	240-265 mm ² /s
Kinematic Viscosity @ 100°C	ASTM D445	21.5-23.5 mm ² /s
Viscosity Index	ASTM D2270	≥95
Flash Point (COC)	ASTM D92	≥245°C
Pour Point	ASTM D97	-15°C
Copper Corrosion	ASTM D130	1b
FZG Gear Test	DIN 51354	Pass (Stage ≥12)
Foam Test (Seq I/II/III)	ASTM D892	Pass

- Values above are typical and may vary slightly depending on production batch.

