

GOLDENSTONE® TO-4 SAE 10W/30/50

Technical Data Sheet (TDS) POWERSHIFT TRANSMISSION OILS

Description and Application

Powershift transmissions oils **Goldenstone® TO-4** are formulated with a special selection of high quality solvent refined and hydrotreated base stocks and highly efficient additive package, which contains special antiwear additives ensuring enhanced bearing protection against micro-pitting and metal fatigue.

These oils are designated for the lubrication of powershift transmissions, drive trains, wet disk brakes and final drives of the off-highway machines and equipment. They are also suitable for use in all automatic transmissions as well as unsynchronized manual transmissions of off-highway equipment.

Goldenstone® TO-4 oils are recommended for use in utility vehicles and caterpillar tractors used in the construction and mining industries.

Benefits

- Provide excellent friction control
- Less brake noise
- Reduced gear wear
- Good elastomer compatibility
- Oxidation stability
- Prolong brakes and transmissions life

Specifications

	SAE 10W	SAE 30	SAE 50
Caterpillar	TO-4		
API	CF		
API	MT-1		
Allison	C4*		
ZF	TE-ML 03C/07F**		
Komatsu	KES 07.868.1 (2002), Microclutch Test		

* SAE 10W: Allison C4-31352005; SAE 30: Allison C4-31372005

** SAE 10W: ZF TE-ML 03C- ZF000883; SAE 30: ZF TE-ML 03C/07F-ZF000884

Typical Characteristics

Parameter	Test Method	Typical Value		
		SAE 10W	SAE 30	SAE 50
Density at 20°C, g/ml	EN ISO 3675	0.879	0.890	0.901
Kinematic Viscosity at 100°C, mm ² /s	EN ISO 3104	5.9	10.5	18.8
Viscosity Index	ISO 2909	107	98	95
Flash point COC, °C	EN ISO 2592	230	248	256
Pour point, °C	ISO 3016	-39	-29	-21
Brookfield viscosity, - at minus 35°C, cP		35 000	-	-
- at minus 25°C, cP		-	70 000	-
- at minus 15°C, cP		-	-	90 000
Copper Strip Corrosion, rating	EN ISO 2160	1a		

Important note: typical data values do not constitute a specification but are an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved.

Health, Safety and Handling

Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application.

For more information about product MSDS, terms and conditions for storage and shelf life please visit:

www.goldenstoneoils.com