

ONYX 44000

Powershift Transmission Fluid Additive Package

DESCRIPTION

ONYX 44000 is a multi-functional additive package designed to formulate Transmission and Drive Train Oil, meeting Caterpillar TO-4 and Caterpillar TO-4M requirements. It provides balanced frictional characteristics for power shift transmissions and wet brake applications. ONYX 44000 imparts good elastomer compatibility and oxidation stability performances to finished oil to meet the specifications for powershift transmissions, final drive and hydraulic systems.

RECOMMENDED DOSAGE & PERFORMANCE

At a recommended treat rate of 6.0 Wt.%, the finished lubricant meets following performance requirements,

Caterpillar TO-4 and TO-4M

Allison C4

Komatsu Micro-clutch test

API CF / CF-2

PHYSICAL / CHEMICAL CHARACTERISTICS

Parameters	Test Methods	Specifications	Typical Value
Viscosity@ 100°C, cSt	ASTM D445	-	Report
BN, mgKOH/g	ASTM D2896	Min 110	116
Calcium, % Wt	ASTM D4951	3.4 – 5	4.25
Zinc, % Wt	ASTM D4951	1.3 – 2.2	1.83
Phosphorus % Wt	ASTM D4951	1.2 – 1.9	1.56
Nitrogen % Wt	ASTM D5291	min 0.10	0.16
Flash Point (PMCC), °C	ASTM D93	>180	Report
Specific Gravity @15.6 °C	ASTM D1298	-	Report

GENERAL HANDLING INSTRUCTIONS:

Neoprene or nitrile rubber gloves and safety goggles should be worn for handling. Maximum handling temperature is 65°C. Material safety data sheet should be consulted for specific information and for information on health and safety.

Temperature Recommendations:

Unloading:	Temperature	
Pumping temperature	60°C	140°F
Maximum temperature	70°C	158°F
Storage:		
Maximum temperature for long term storage	45°C	113°F
Blending:		
Max. Base oil temperature for mechanical or in-line mixing	70°C	158°F

Equipment Recommendations:

Type of Pump	Positive Displacement
Type of transfer line	Ball lunched, Insulated, Steam Traced Using 107°C/225F Steam Max.
Transfer Line Size	2-3inch/5-8cm.

Heat Source:

Type	Steam 107°C/225°F max.
Storage Tank	Suction Heater Recommended