

ONYX 89000

Heavy Duty Diesel Engine Oil Additive

DESCRIPTION:

ONYX 89000 is an optimized and cost-effective additive system designed to help blenders to rationalize their production of CI-4 performance oils but also the production of lower API performance oils. It meets the stringent performance requirements of North American, European and Japanese OEMs including API CI-4, ACEA E7 & Global DHD-1 specifications in appropriate viscosity grades.

PERFORMANCE:

When blended with appropriate base oils and viscosity modifier, the lubricant meets the following performance profiles.

ONYX 89000	SAE	API CI-4/SL	API CH-4/SL	API CG-4/SL	ACEA A3/B3/B4-16	ACEA A3/B3-16	ACEA E2-96	ACEA E7-16	MB 229-1	MB 228-3	MB 228-1	JASO DH-1	Detroit Diesel 93K215	Deutz DQC III-18	VOLVO VDS-3	VOLVO VDS-2	Renault RD-2	Cummins CES 20076/7778	Caterpillar EFC-2	GLOBAL DHD-1	MTU TYPE-2	MACK EO-N	MACK EO-L	MACK EO/K2	ALLISON C4	MAN 270/271	MAN 3275-1
9% wt	SAE 15W-40	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
9% wt	SAE 10W-30	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
9% wt	SAE 10W-40	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
8.2% wt	SAE 15W-40		●	●	●	●			●	●	●					●								●			●
8.2% wt	SAE 10W-30		●	●	●	●			●	●	●					●									●		●
8.2% wt	SAE 10W-40		●	●	●	●			●	●	●					●									●		●
7% wt	SAE 15W-40			●		●	●				●																
7% wt	SAE 10W-30			●		●	●				●																
7% wt	SAE 10W-40			●		●	●				●																

For further information contact ONYX representative.

PHYSICAL / CHEMICAL CHARACTERISTICS

Parameters	Test Methods	Specifications	Typical Value
Viscosity@ 100°C, cSt	ASTM D445	Report	70
BN, mgKOH/g	ASTM D2896	min 115	123
Flash Point, °C	ASTM D92	>180	200
Density @ 15.6°C, g/ml	ASTM D1298	Report	1.01

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	3inch/8cm. min.

Heat Source:

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

NOTE

If you require further information, please contact your regional Onyx representative.