

ONYX 89700

Heavy Duty Diesel Engine Oil Additive

DESCRIPTION

ONYX 89700 is a versatile additive package designed for formulating heavy-duty diesel and gasoline engine oils. It provides a higher level of protection against soot-related viscosity increase and extends oil drain intervals. ONYX 89700 contains multiple dispersant chemistries and synergistic antioxidants for effective handling of soot and sludge in diesel engines and gasoline engines as well. ONYX 89700 meets the stringent performance requirements of North American, European and Japanese OEMs including API CI-4 Plus, ACEA E7 & JASO DH-1 specifications in relevant viscosity grades.

PERFORMANCE

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

Weight Treat 11 Wt.%

API CI-4 Plus/ SL
ACEA E7, ACEA A3/B3/B4
MAN M3275-1
MTU Type 2
VOLVO VDS-3
RENAULT TRUCKS RLD-2
MACK EO-N
CUMMINS CES 20076/77/78
DEUTZ DQC III-10
CATERPILLAR ECF 1a. ECF-2
DETROIT DIESEL DDC 93K215
TATA Motors TSS 6576
MB 229.1, MB 228.3
JASO DH-1
GLOBAL DHD-1

PHYSICAL / CHEMICAL CHARACTERISTICS

Parameters	Test Methods	Specifications	Typical Value
Viscosity@ 100°C, cSt	ASTM D445	60 - 160	Report
BN, mgKOH/g	ASTM D2896	min 100	102
Calcium, %Wt.	ASTM D4951	2.25 – 2.50	2.39
Zinc, %Wt.	ASTM D4951	1.10 – 1.4	1.27
Phosphorus, %Wt.	ASTM D4951	0.91 – 1.2	1.08
Molybdenum, %Wt.	ASTM D5185	min 0.04	0.05
Nitrogen, %Wt.	ASTM D5291	0.80 – 1.12	1.0
Sulphated Ash, %Wt	ASTM D874	max 12	11.7

GENERAL HANDLING INSTRUCTIONS

Neoprene or nitrile rubber gloves and safety goggles should be worn for handling. 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