

# ONYX 52000

## Automotive Engine Oil Additive Package

### DESCRIPTION:

ONYX 52000 is a high performance PCMO package designed for mid to low tier API categories from API CF/SF down to API SB/CB. It contains ashless dispersant, zinc dithiophosphate, metallic detergents and oxidation inhibitors. ONYX 52000 provides excellent deposit control, oil oxidation resistance, wear and rust control in gasoline and diesel engines.

### PERFORMANCE:

When blended with appropriate base stock(s) and viscosity modifier, the formulated lubricant meets the following performance levels.

API Performance	Mass%	BN
CF/SF	2.8	5.2
SF/CD	2.4	4.5
SE/CC	2.3	4.3
SD/CD	2.3	4.3
SD/CC	2.2	4.1
SC/CC	1.1	2.0
SB/CB	1.0	1.9

### PHYSICAL / CHEMICAL CHARACTERISTICS

Parameters	Test Methods	Specifications	Typical Value
Viscosity@ 100°C, cSt	ASTM D445	Report	70
BN, mgKOH/g	ASTM D2896	min 175	185
Calcium, % Wt	ASTM D4951	5.25 – 7.50	6.57
Zinc, % Wt	ASTM D4951	2.0 – 3.0	2.60
Phosphorus, % Wt	ASTM D4951	1.76 – 2.54	2.21
Nitrogen, % Wt	ASTM D5291	min 0.3	0.40
Sulfated Ash, % Wt	ASTM D874	Report	25.5
Flash Point (PMCC), °C	ASTM D93	>180	Report
Density @15.6 °C, g/ml	ASTM D1298	Report	1.09

The above characteristics are provided to indicate the typical values measured on the product.

**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:**

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