# **KOYOTO MARINE GUARD 40 series**

**High Performance Monograde Marine Diesel Engine Oils** 



## **Product Data Sheet**

### **Product Description**

KOYOTO MARINE GUARD 40 series is a range of high performance 40 TBN marine diesel engine oils formulated with premium quality base stocks and high performance additive detergent technology to ensure optimum performance and protection for highly rated trunk piston engines. They are designed to operate efficiently in severe residual-fuelled medium-speed diesel applications found in marine and stationary power industries. These TPEOs provide outstanding residual fuel compatibility and excellent engine cleanliness, especially in crankcase, camshaft areas, ring belt and piston under crowns operating under severe conditions.

#### **Features & Benefits**

- Excellent oxidation & thermal stability reduces deposits formation in piston under crown and ring belt areas.
- Outstanding protection against ring and liner wear.
- Excellent protection from rust and corrosion even in presence of water.
- Excellent oil filtration and centrifuging capabilities.
- High detergency & low dispersancy capabilities, ensures engine cleanliness and releases contaminants & water readily in centrifugal separators.
- High TBN reserves & retention, gives rapid neutralization of acidic combustion products and provides
- long term protection against corrosive wear of ferrous & non-ferrous metals.

#### **Specifications**

## KOYOTO MARINE GUARD 40 series meets or exceeds following International and Builder specifications:

APICF

## **Application**

- Suitable for lubricating Medium-speed Trunk piston engines in industrial or marine propulsion and auxiliary engines on deep sea vessels, burning on residual fuel oils with >3% sulfur.
- Marine engine reduction gears, stern tubes & bearings and certain other ship-board applications.

## **Typical Characteristics**

<b>KOYOTO Marine Guar</b>	d Test Method	Units	10W	30	50	60
Density @ 15 °C	ASTM D 4052	gm/cc	0.880	0.892	0.904	0.910
Viscosity @ 100 °C	ASTM D 445	cSt	5.6	11.6	20.5	25.6
Viscosity @ 40 °C	ASTM D 445	cSt	35	108	254	356
Viscosity Index	ASTM D 2270	-	96	95	95	95
Pour Point	ASTM D 97	°C	-33	-18	-12	-12
Flash Point (COC)	ASTM D 92	°C	214	230	242	242

The above figures are typical of blends with normal production tolerance and do not constitute a specification.