



# MARINE NAUTILUS HEAVY XT



## DESCRIPTION

NAUTILUS HEAVY XT is a premium quality, highly alkaline cylinder oil, designed for low-speed crosshead engines running on high sulfur heavy fuel oils (HSHFO). It is specifically blended with very high quality hydrotreated basestocks and advanced additive technology. It protects engines subject to "cold corrosion" by providing excellent ring wear protection, liner surface corrosion protection, elevated levels of engine cleanliness and, as a result, facilitates the prolongation of the engine's life cycle.

## APPLICATIONS

It is suitable for the cylinder lubrication of large, low-speed marine diesel engines running on residual heavy fuels and operating under conditions of slow steaming (i.e. high stress, long strokes, low loads), in particular. NAUTILUS HEAVY XT is intended to battle cold corrosion effects and is suitable for 2011 Tier II powertrains and/or for vessels fitted with exhaust gas after-treatment systems, so it should be used in accordance with OEM recommendations. NAUTILUS HEAVY XT meets the requirements of MAN Energy Solutions and WinGD.

## CHARACTERISTICS-BENEFITS

CHARACTERISTICS	BENEFITS
Outstanding neutralisation of acids resulting from fuel combustion.	Minimizing corrosive wear for prolongation of engine life, reduced maintenance costs.
Exceptional detergent properties, protects oil system from the case of accidental combustion of residue leakage.	Exceptionally engine cleanliness, minimal deposits on piston, piston rings, ring grooves and cylinder ports.
Enhanced boundary lubrication properties, protection against wear.	Prevents scuffing and reduces liner and ring wear; allows extended overhaul intervals.
Outstanding thermal and oxidation stability and detergency.	Excellent deposit control and allowing for operation at optimized feed rates.

## PHYSICAL-CHEMICAL CHARACTERISTICS

NAUTILUS HEAVY XT	METHOD	
SAE		50
Density at 15°C, g/cm <sup>3</sup>	ASTM D1298	0.935
Viscosity, Kinematic (cSt) 40 <sup>0</sup> C	ASTM D445	221.0
Viscosity, Kinematic (cSt) 100 <sup>0</sup> C	ASTM D445	20.0
Viscosity index	ASTM D2270	104
Pour point, °C	ASTM D97	-15
TBN, mgKOH/g	ASTM D2896	100
Flash point, COC, °C	ASTM D92	248

The abovementioned characteristics represent mean values.

## SPECIFICATIONS

MAN ES (NOL); WinGD (NOL)