



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ PREMIUM R&O TURBINE OILS

Premium General Purpose turbine quality R&O oils

PRODUCT DESCRIPTION

NATIONAL™ Premium R&O turbine oils are formulated to provide superior oxidation stability, rust & corrosion protection, minimum foam, fast air release, rapid water separation and excellent thermal stability. These oils are designed to meet the demands of gas, steam, and hydroelectric turbine bearing lubrication, and lubrication of reduction gears in marine operations. These oils meet the following requirements:

INDUSTRY AND OEM SPECIFICATIONS

- ◆ General Electric GEK 32568E
- ◆ Denison HF-O, HF-1
- ◆ Cincinnati Machine (appropriate viscosity grades) P38, P54 and P57
- ◆ Solar Turbines ES 9-224U

APPLICATIONS

NATIONAL™ Premium R&O turbine oils provide dependable turbine lubrication with trouble free performance. These oils meet the requirements of major turbine builders including GE, Siemens, Westinghouse, ABB Alsthom, Elliot and Demag Delaval steam turbines. General recommendations for the various kinds of turbine are:

Type	Viscosity (cSt)@40C	ISO Grade
Steam Turbines		
Direct Drive-ring oiled w/water cooling	54-75	68
Direct Drive – forced feed	30-38	32
Gear Drive – forced feed	54-75	68
Hydraulic Turbines		
Large Vertical Machines	54-75	68
Small Vertical Machines	30-38	32
Horizontal Machines	30-38	32

TYPICAL PROPERTIES

ISO GRADE	TEST	32	46	68	100	150	220	320	460	
Viscosity @100°C	D445	5.55	6.75	8.72	12.0	14.5	18.5	22.8	29.3	
Viscosity @40°C	D445	32	46	68	100	150	220	320	460	
Viscosity Index	D2770	108	100	100	100	95	93	93	93	
Oxidation Stability,hrs	D943	4000+	4000+	3000+	3000+	NA	NA	NA	NA	
Color	D1500	0.5	0.5	1.0	1.5	2.5	3.5	4.0	4.5	PN2009MAR