



# Super S® R&O Turbine Oil

**Super S® R&O Turbine Oils** are premium rust and oxidation inhibited oils with excellent water demulsibility, oxidation stability, and air release. Formulated with paraffinic base oils and a carefully balanced additive system specifically for use are designed for long service life in gas, steam, and hydroelectric turbines. The robust ashless additive system also makes them an excellent recommendation for many other industrial applications including air compressors where R&O type oils are recommended.

**Super S® R&O Turbine Oils** are formulated with premium base oil technology and an ashless, zinc-free formulation that provides exceptional oxidation stability, water separability, and protection against rust and corrosion.

Higher temperatures in advanced gas and steam turbines require circulating system oil with exceptional high temperature stability. **R&O Turbine Oils** have outstanding thermal and oxidation stability.

Nonvolatile **oxidation inhibition** minimizes the evaporative loss of the inhibitors, a common problem with turbine oils where bearing temperatures are high and system capacities are limited. With retained oxidation resistance for long periods under high temperature conditions, **R&O Turbine Oils** will promote long oil service life and help minimize turbine down time.

**Corrosion inhibition** protects costly turbine shafts and gears from corrosion and rusting. R&O Turbine oils have excellent demulsibility characteristics which allow these oils to maintain a high film strength coating on critical wear points of bearings and gear reducers and assure fast removal of water contamination. Foam inhibition helps prevent sump overflow and erratic governor operation.

## RECOMMENDATIONS/SPECIFICATIONS

**R&O Turbine Oils** meet the performance requirements of:  
 AGMA R&O Gear Oils EP2(ISO 68) and EP3 (ISO 100)  
 ASTM D4304 Type I, British Standard 489, and DIN 51515 (32, 68, 100)  
 MAG Cincinnati, Cincinnati Machine P-38 (32), P-54 (68)  
 Denison HF-1  
 MIL-H17672D (32, 68, 100)  
 GEK-32568j, GEK- 28143A, GEK-46506D (ISO 32)  
 Alstom Power HTGD 90117 (32)  
 Siemens TLV 901305 (32)

## FEATURES/ BENEFITS

- **Super S® R&O Turbine Oils** are available in 7 viscosity grades to match application
- **Ashless, zinc free** formulation that provides outstanding long-life stability
- **Excellent oxidation resistance** for long service life at elevated temperatures.
- **Excellent thermal stability** provides sludge and deposit control
- **Rust and corrosion protection** for all system components
- **Excellent water separation** keeps water in oil to a minimum
- **Excellent anti-foam** helps prevent sump over-flow
- **Fast air release** minimizes possibility of pump cavitation in systems with high circulation rates
- **Hydraulic fluid service** — R&O Turbine Oils 32, 68, and 100 are excellent hydraulic fluids in low pressure systems up to 1000 psi.
- **Air compressor lubricant** when OEM recommends R&O type oil.

## APPLICATIONS

**Super S® R&O Turbine Oils** are recommended for applications calling for rust and oxidation inhibited oils

- Gas, steam and hydraulic turbines
- Steam turbines except GE Frame 7000
- Hydraulic systems
- Air compressors
- Industrial bearings
- Circulating systems
- A myriad of assorted industrial applications: hoists, electric motor bearings, machine tools, etc.
- Gear sets calling for AGMA R&O oil
- Bath, splash, circulating or mist systems

**TYPICAL CHARACTERISTICS**

Super S® R&O Turbine Oil								
Property	Test Method ASTM -D	ISO Viscosity Grade						
		22	32	46	68	100	150	220
AGMA Grade				EP1	EP2	EP3	EP4	EP5
Flash Point, COC °C/°F	92	188/370	196/385	204/400	207/405	213/415	218/425	221/430
Pour Point, °C/°F	97	-26/-15	-26/-15	-26/-15	-23/-10	-20/-4	-15/5	-9/16
Viscosity								
cSt @ 40°C	445	22	32	46	68	100	150	220
cSt @ 100°C	445	4.3	5.3	6.8	8.7	11.4	15.1	19.5
Viscosity Index	2270	100	100	100	100	100	100	100
Color	1500	1.0	1.5	1.5	2.0	3.0	3.0	3.5
Oxidation Life Hrs to 2.0 Acid No.	943	3200	3200	3200	3400	3500	3500	3500
Foam Tendency/Stability ml @ 75 °F	892	60/0	60/0	60/0	60/0	60/0	60/0	60/0

Typical test data are average values only.  
 Minor variations which do not affect product performance are to be expected during normal manufacturing.