

TEC-GUARD

DEFEND

TEC-GUARD DEFEND R&O TURBINE OIL

Tec-Guard Defend R&O Turbine Oils are premium extreme pressure gear lubricants which provide rust protection, oxidation inhibition, and foam suppression in steam and hydroelectric turbines. They pass the Fresh Water Corrosion Test (ASTM D665, Procedure A), and the severe Synthetic Sea Water Rust Test (ASTM D665, Procedure B). The thermal and oxidation stability of these lubricants, due to their high level of refinement, has been further enhanced by their unique formulation. The high thermal and oxidation stability help protect against oxidation deposit formation or the generation of acidic material. R&O oils have very good demulsibility characteristics allowing quick release of moisture. **Tec-Guard Defend R&O Turbine Oils** minimize entrained air which otherwise could result in low lubricant film strength between moving parts and pump cavitation.

FEATURES

Tec-Guard Defend R&O Turbine Oils are available in viscosity grades from ISO VG 22 to ISO VG 460

- Excellent oxidation resistance
- Provides sludge and deposit control
- Rust and corrosion protection for all system components
- Excellent water separation and demulsibility
- Excellent anti-foam and rapid air release

APPLICATIONS

Tec-Guard Defend 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

RECOMMENDATIONS

Tec-Guard Defend R&O Turbine Oils meet the performance requirements of:

- AGMA R&O Gear Oils 1, 2, 3, 4, 5, 6EP, 7EP
- MAG Cincinnati, Cincinnati Machine P-38 (ISO 32), P-54 (ISO 68), P-57 (ISO 150)
- Denison HF-1
- MIL-H17672D (ISO VG 32, 46, 68)
- U.S. Steel 224
- DIN 51517 Part 3 (CLP)
- ISO 12925-1 Type CKD
- ISO 12925-1 Type CKT

Tec-Guard 400 S 14 Ave • Eldridge, IA 52748 • 800-522-1150 • www.tec-guard.com

The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Tec-Guard believes that the information presented in this specification is accurate at the time it was written and is based upon internally generated information and information presented by its vendors. No representation, warranty, or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.

TEC-GUARD

DEFEND

TEC-GUARD DEFEND R&O TURBINE OIL

CHARACTERISTICS

ISO Viscosity Grade	Test Method	22	32	46	68	100	150	220	320	460
AGMA Grade				1	2	3	4	5	6EP	7EP
Viscosity @ 40°C, cSt	ASTM D 445	18-26	28-35	42-50	61-74	92-108	140-160	210-230	308-332	414-504
Viscosity Index	ASTM D 2270	>90	>90	>90	>90	>90	>90	>90	>90	>90
Pour Point, °C (°F)	ASTM 5949	-32 (-25)	-32 (-25)	-29 (-20)	-29 (-20)	-23 (-10)	-22 (-9)	-22 (-9)	-22 (-9)	-18 (0)
Flash Point, (°C)	ASTM D-92	220	220	226	235	240	240	240	240	243
Color	ASTM D-1500	2.0 max	2.0 max	2.0 max	2.5 max	2.5 max	3.0 max	4.5 max	4.5 max	4.5 max
Oxidation Life Hrs to 2.0 Acid No	ASTM 943	3200	3200	3200	3200	3200	3200	3200	3200	3200
Foam Tendency / Stability ml @ 75 °F	ASTM 892	60/0	60/0	60/0	60/0	60/0	60/0	60/0	60/0	60/0

Special Handling, Notices, or Warnings

- Avoid contact with skin. Rinse with soap and water immediately after skin contact.
- This product is unlikely to present and significant health hazards.
- Dispose of used oil properly.

Tec-Guard 400 S 14 Ave • Eldridge, IA 52748 • 800-522-1150 • www.tec-guard.com

The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Tec-Guard believes that the information presented in this specification is accurate at the time it was written and is based upon internally generated information and information presented by its vendors. No representation, warranty, or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.