



Cirro XS Turbine Oil

Premium R&O Turbine Oil Extended Service

Cirro XS Turbine Oil is superior quality rust and oxidation inhibited turbine oil designed for use in both steam and gas turbines. The ASTM D-943 TOST result of more than 10,000 hours enables it to be used in applications which require very long life where other turbine oils fail. It is recommended for use in steam and gas turbines, including the General Electric Frame 7 units, as well as many pumps, compressors, oil circulating systems, centralized oil mist systems and other applications requiring a top quality, long life turbine oil.

Product Features:

- Versatile - Can be used in multiple applications requiring a superior quality non-EP (zinc free) oil with excellent oxidation resistance
- Durable – Cirro XS is able to be used constantly and will be able to protect machinery longer than typical turbine oils

Customer Benefits:

- Extended Drain - Outstanding oxidation resistance enables extended oil drain intervals, with significantly reduced sludge, varnish and carbon deposits on exhaust valves and other compressor components, considerably reducing the necessity for valve cleaning and other maintenance

Applications:

- **Cirro XS Turbine Oil** meets or exceeds most pump manufacturer's specifications and may be used as a premium hydraulic fluid, compressor oil, and other applications as recommended where superior performance of an R&O type fluid may be needed. These high performance circulating lubricants are designed for applications where long lubricant service life is required. Specific applications include:
- Land-based and marine steam turbine, hydro turbine and some gas turbine circulation systems, including pumps, valves and other ancillary equipment
- Continuous service in plain and roller bearings and parallel shaft gearing
- Turbines with oil supplied by splash, bath, ring oiling or other mechanical means
- Moderate severity hydraulic pumps
- Compressors and vacuum pumps handling air, natural gas, and inert gases, and with discharge temperatures not exceeding 150 °C
- Most equipment not requiring motor oils or EP additives w/o exhausting to the environment.

Approvals	Cirro XS Turbine Oil
Siemens TLV 9013 04 & TLV 9013 05	✓ (ISO 32 & 46)





Typical Properties

Cirro XS Turbine Oil					
Product Number	302X	303X	304X	305X	Test Method
ISO Grade	32	46	68	100	-
API	33.29	32.29	31.32	30.44	-
Specific Gravity	0.859	0.864	0.869	0.874	-
Lbs/Gal	7.153	7.195	7.238	7.277	-
Flash Point, °C	241	235	244	260	ASTM D92
Pour Point, °C	-24	-21	-24	-27	ASTM D97
Color	<1.0	<1.0	<1.0	<1.0	ASTM D1500
Viscosity@100°C, cSt	5.44	6.88	8.98	11.67	ASTM D7042
Viscosity@40°C, cSt	31.80	45.73	67.41	99.15	ASTM D445
Viscosity Index (VI)	106	106	108	106	-
Foaming (Seq I)	0/0	0/0	0/0	0/0	ASTM D892
Emulsion Characteristics (40/37/3 at 54°C), mins	15	15	15	15	ASTM D1401
Water Content, ppm	< 50	< 50	< 50	< 50	ASTM D1533
RPVOT, mins	>750	>750	>750	>750	ASTM D2272
Neutralization Value (mgKOH/g)	0.07	0.07	0.07	0.07	ASTM D974
FZG	10	10	10	10	ASTM D5182
Rust part B	pass	pass	pass	pass	ASTM D665
TOST (to TAN of 2mgKOH/g), hrs	10,000	10,000	10,000	10,000	ASTM D943

Meets or exceeds Specifications (ISO 32 & 46)

GEK - 32568, 107395, 46506
Solar Turbines ES9-224
DIN 51524-1, 51515-1
AGMA 9005 E02-RO
AIST 125
Alstom HTGD 90 117
Fives Cincinnati P-38, P-55, P54, P-57
Parker Denison HF-0 Bench Tests
ISO 8068

These properties are typical of the current production. Variations that do not affect product performance are to be expected depending on blending and manufacturing locations. The information above is subject to change without notice.

Health and Safety:

This product is unlikely to have any adverse health implications or safety hazards when used for its intended application. Avoid contact with skin, use resistant gloves when handling used oil. If skin comes in contact wash immediately with soap and water. For complete information on safe handling and product characteristics please refer to the Safety Data Sheet (SDS) found on our website. www.royalmfg.com or call (918)-584-2671.

Packaging Options:



5 Gal Pails



55 Gal. Drums



275/330 Gal. Totes



>2,000 Gal. Bulk

