

**DESCRIPTION**

**Longlife R&O Oils** are premium ashless rust and oxidation (R&O) inhibited lubricants engineered for superior performance in hydraulic systems, compressors, hydroelectric turbines, steam turbines, marine turbines, and other applications requiring exceptional thermal stability and extended lubricant service life. These high-quality oils deliver outstanding oxidation resistance, minimizing varnish, carbon deposits, and sludge formation on internal components, while providing excellent wear protection and filtration characteristics. Recommended for electric motor bearings, air compressors, gears, and non-heavy-duty hydraulic systems where R&O-type oils are specified, they also serve as versatile general-purpose machine oils for shop use. The multifunctional properties of **Longlife R&O Oils** enable replacement of specialized lubricants, reducing inventory and operational costs.

**APPLICATIONS**

**Longlife R&O Oils** are formulated for use in:

- Land-based steam turbines and hydroelectric turbines requiring robust rust, oxidation control, and reliable lubrication
- Continuous service roller bearings and parallel shaft gearing needing effective wear protection under moderate to high loads

**SPECIFICATIONS & RECOMMENDATIONS**

- ASTM D4304 Type I and III
- DIN 51515 Parts I & II
- ISO 8068 L-TSA and L-TGA
- Chinese Natl. Oil Std GB 11120-2011, L-T SA and TGA
- ALSTOM HTGD 90 117 V0001Y (non-EP)
- British Standard BS 489
- GEK 107395A, 32568K, 27070, 28143B and 46506E
- Siemens TLV 9013 04 (non-EP), TLV 9013 05 (non-EP)
- Solar ES9-224W

**ADVANTAGES & BENEFITS**

- **High Oxidative Stability:** Combines stable base oils with advanced inhibitors to resist oxidative degradation, extending oil life and minimizing corrosive acids, sludge, and deposits.
- **Thermal Resilience:** Offers excellent thermal stability, reducing carbon formation in air compressors and maintaining performance under high temperatures to lower maintenance costs.
- **Rust and Corrosion Resistance:** Zinc-free additives provide robust protection against rust and corrosion, ensuring equipment reliability during operation and shutdowns.
- **Effective Water Separation:** Strong demulsibility and water-release properties enable efficient water drainage in steam turbines, reducing corrosion and wear.
- **Foam and Air Release Control:** Anti-foam additives and rapid air-release minimize foam, cavitation, and oil oxidation, enhancing system reliability and reducing maintenance.

**HEALTH & SAFETY**

This product is not anticipated to pose any adverse health risks when used as intended.

For additional details, refer to separate Safety Data Sheets, available upon request.


**TECHNICAL DATA/TECHNICAL PROPERTIES**

PROPERTIES	ISO Viscosity Grade		
	32	46	68
Viscosity @ 40 °C, cSt	32	46	68
Viscosity Index	119	115	111
Pour Point, °C(°F)	-42 (-44)	-33 (-27)	-24 (-11)
Flash Point, °C(°F)	>220 (428)	>220 (428)	>220 (428)
Copper Corrosion, 3 hr at 100 C	1A	1A	1A
Steel Corrosion, ASTM 665 A & B	Pass	Pass	Pass
Oxidation (TOST), Hours	>12,000	>12,000	>12,000
Product Code	LLRO32	LLRO46	LLRO68

\*All properties are typical and may vary.

Always adhere to the manufacturer's guidelines for the correct equipment fluid. Lubchem Specialties is not liable for any misuse of the product or improper application.