



GST® Oils

Premium Performance Industrial Steam and Gas Turbine Oil

Product Data Sheet

Customer benefits

Resists degradation

Exceptional oxidation stability provided by the multi-component inhibitor system resists oil breakdown during exposure to high temperature conditions.

Potential maintenance and downtime savings

Premium base stocks and multi-component oxidation inhibitor system resist the formation of harmful sludge and varnish deposits. The rust inhibitor protects components against corrosion.

Smooth operation

The excellent water separability of premium base stocks and inhibitor system ensure rapid settling of harmful water accumulated from steam condensate. The non-silicone foam inhibitor allows rapid release of entrained air while minimizing foam formation, enabling reliable operation of sensitive hydraulic control devices.

Potential inventory savings

The rust and oxidation inhibited formulation has multipurpose capability in a wide range of industrial applications for which this type of product is recommended, helping to simplify oil inventories and reduce the possibility of using the wrong lubricant.

Applications

- Steam and hydraulic turbines operating under all service conditions
- Industrial gas turbines operating under severe conditions
- Rotating machinery in gas and steam combined cycle cogeneration units
- Hydraulic turbines
- Centrifugal, rotary and reciprocating compressors, turbo-blowers and centrifugal pumps (not recommended for use in breathing air compressors)
- Bath and circulating systems supplying rolling element bearings of all types, lightly loaded gear sets, vacuum pumps, machine tools, conveyors, electric motors, and low to moderate pressure hydraulic pumps where anti-wear properties are not required
- Reduction gear lubrication in marine operations requiring plain non-EP R&O type of oils

Product features:

• **GST® Oil** is a premium performance inhibited turbine oil formulated from premium base oil technology and rust, oxidation and foam inhibitors.

• **GST® Oil** is designed primarily for use in industrial Gas and Steam Turbines, it is also suited to many other industrial applications including air compressors where R&O type oils are recommended.

Typical key properties

GST® OIL					
ISO Grade Product Code		32 560808	46 560809	68 560841	100 560842
	Test Method ASTM				
Air Release @ 50°C, mins	D3427	2.5	2.9	3.6	5.0
Flash Point, COC, °C	D92	222	224	245	262
Oxidation Stability,					
TOST Life, hrs to 2.0 Acid No.	D943	10,000+	10,000+	10,000+	10,000+
RPVOT m mins to 25 psi drop,	D2272	1,700	1,400	1,400	1,400
Pour Point, °C	D97	-36	-36	-33	-30
Kinematic Viscosity,					
mm ² /s @ 40°C	D445	30.4	43.7	64.6	95.0
mm ² /s @ 100°C	D445	5.2	6.6	8.5	11.0
Viscosity Index	D2270	102	102	102	100

1603

Performance standards

Approvals

- Alstom HTGD 90117W for non-geared turbines (ISO 32, 46)
- Siemens TLV 9013 04 for turbosets without gearboxes (ISO 32, 46)
- Siemens TLV 9013 05 for turbosets without gearboxes (ISO 32, 46)
- MAN Diesel & Turbo 10000494596 rev 2, for use in MAN Diesel & Turbo equipment without increased requirements regarding load-carrying capacity (ISO 32, 46, 68)
- Ansaldo Energia Turbine Oil Specification TGO2-0171-E00000/B (ISO 46)
- Registered by NSF and are acceptable as lubricants where there is no possibility of food contact (H2) in and around food processing areas.

Meets Requirements of:

- British Standard BS 489
- German Standard DIN 51515 Part 1, DIN 51515 Part 2 (ISO 32, 46)
- ISO 8068 L-TSA & L-TGA (ISO 32, 46, 68)
- ISO 8068 L-TGB & L-TGSB (ISO 32, 46, 68)
- Chinese Specification GB1120-2011 L-TSA (Typ A) and L-TGA (ISO 32, 46, 68)
- Chinese Specification GB1120-2011 L-TSA (Typ B) (ISO 32, 46, 68, 100)
- Chinese Specification GB1120-2011 L-TGSB (ISO 32, 46, 68)
- Alstom HTGD 90117 (ISO 68)

ENVIRONMENT, HEALTH and SAFETY

Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal.

To obtain a MSDS for this product, visit:
www.chevronlubricants.com.



Performance standards (Cont.)

Meets Requirements of:

- General Electric GEK 28143B (ISO 32, 46), GEK 27070, 32568j, 46506d & e (ISO 32)
- Siemens MAT 812101 (ISO 32), 812102 (ISO 46), Siemens-Westinghouse M Spec 55125Z3 (ISO 32)
- Solar Turbines ES 9-224 Class II (ISO 32, 46)
- Machine (MAG) P-38 (ISO 32); P-55 (ISO 46); P-54 (ISO 68)
- JIS K2213 Type 2 (ISO 68)

Service Considerations

Premium quality turbine oils must be capable of lubricating and cooling bearings while protecting the system against rust, corrosion and harmful deposits. Since turbine equipment is normally used in key applications, the reliability of the rotating machinery and its lubricant is critical.

Periodic monitoring of the oil in service is recommended to assure satisfactory performance of the turbine. The principal reasons for monitoring are two-fold: firstly, to determine the condition of the used oil and secondly, to disclose environmental or operational problems within the equipment. The oil should be visually inspected by the operator at frequent intervals for contaminants and/or appearance changes. Refer to ASTM D4378 – “Standard Practice for In-Service Monitoring of Mineral Turbine Oils for Steam, Gas, and Combined Cycle Turbines” - for guidance on sampling and testing frequency. Samples should be taken from the discharge side of the oil pump while the system is circulating.

During service, effective purification of the lubricating oil is recommended for the removal of contaminants such as water and solids.

Care should be taken to ensure against top-up and/or contamination from other products, as this could reduce the performance characteristics of GST Oil.

The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements of appropriate use, ingredient review and labeling verification.

Not intended for use in aviation-derivative gas turbines

Must not be used in breathing air compressors.

ENVIRONMENT, HEALTH and SAFETY

Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal.

To obtain a MSDS for this product, visit:
www.chevronlubricants.com.