GST® PREMIUM 32
ISOCLEAN® Certified Lubricant

PRODUCT DESCRIPTION

GST® Premium 32 ISOCLEAN® Certified Lubricant is formulated with premium base oil technology designed to meet the critical demands of:

- MHPS (Mitsubishi Hitachi Power Systems), formerly MHI (Mitsubishi Heavy Industries), non-geared gas and steam turbines requiring a MS04-MA-CL002 product.

Chevron ISOCLEAN Certified Lubricants have been certified to meet specified ISO Cleanliness standards at point of delivery using industry leading filtration and testing technology. ISOCLEAN Certified products are the first step for contamination control and maximizing component life.

CUSTOMER BENEFITS

GST Premium 32 ISOCLEAN Certified Lubricant delivers value through:

- **Ready to use** — Enables users to meet stringent original equipment manufacturers’ cleanliness standards for fill lubricants.
- **Flexibility** — ISO Cleanliness targets can be customized to fit your business application needs.
- **Peace of mind** — Each delivery of Chevron ISOCLEAN Certified Lubricant includes an ISOCLEAN Certificate of Analysis.
- **OE fluid cleanliness requirements** — Customized to meet specific equipment manufacturers’ fluid cleanliness requirements.
- **Exceptional Oxidation and Thermal Stability** for long service life at severe temperatures with Minimal Deposit Formation as dictated by the stringent MHPS MS04-MA-CL001 / CL002 specification. Formulated with premium base oil technology and an ashless, zinc-free formulation.
- **Outstanding Rust and Corrosion Protection**
- **High Viscosity Index** helps ensure minimum viscosity change when variations in temperature occur.
- **Minimum Foaming** helps prevent sump overflow or erratic governor operation.
- **Fast Air Release** minimizes possibility of pump cavitation in systems with high circulation rates and lesser residence time.
- **Rapid Water Separation** facilitates water removal.
- **Hydraulic Fluid Service** for systems requiring an ISO 32 viscosity oil and pressures not exceeding 1000 psi.
- **Air Compressor Lubricant** for systems requiring an ISO 32 viscosity R&O oil.

FEATURES

GST Premium 32 ISOCLEAN Certified Lubricant has exceptional thermal and oxidative stability and is approved for Mitsubishi Hitachi Power Systems MS04-MA-CL002. It is suitable for use in non-geared gas and steam turbines where extreme temperatures are experienced and require circulation systems with exceptional high temperature stability.

GST Premium 32 ISOCLEAN Certified Lubricant combines highly refined group II base stocks and a unique ashless, zinc-free formulation minimizing the formation of deposits in reservoirs, high temperature bearings and other hot areas of the turbine.
APPLICATIONS

GST® Premium 32 ISOCLEAN® Certified Lubricant is formulated to meet the critical demands of non-geared gas, steam and hydroelectric turbine bearing lubrication and R&O service in marine reduction gears. They are additionally suitable for industrial severe service requiring an R&O, ISO 32 circulating oil with extended service capability.

GST Premium 32 ISOCLEAN Certified Lubricant is approved for:

- **Alstom** HTGD 90117 (for non-geared turbines)
- **Mitsubishi Hitachi Power Systems** MS04-MA-CL002
- **Siemens** TLV 901304 and TLV 901305

GST Premium 32 ISOCLEAN Certified Lubricant meets requirements of the following specifications:

- **ANSI/AGMA** 9005-E02 R&O
- **ASTM** D4304 Type 1
- **British Standard** 489:1999
- **DIN** 51515/1 and 51515/2
- **General Electric** GEK-32568j, GEK-28143b and GEK-27070
- **ISO** 8068 L-TGA
- **MAN Diesel & Turbo** TQLT2
- **Solar Turbine** ES 9-224 Class II

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Do not use in breathing air apparatus or medical equipment.

TYPICAL TEST DATA

<table>
<thead>
<tr>
<th>ISO Grade</th>
<th>32</th>
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<tbody>
<tr>
<td>Product Number</td>
<td>278072</td>
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<tr>
<td>SDS Number</td>
<td>32230</td>
</tr>
<tr>
<td>API Gravity</td>
<td>32.5</td>
</tr>
<tr>
<td>Viscosity, Kinematic cSt at 40°C</td>
<td>31.5</td>
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<tr>
<td>Viscosity, Kinematic cSt at 100°C</td>
<td>5.4</td>
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<tr>
<td>Viscosity, Saybolt SUS at 100°F</td>
<td>162.3</td>
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<tr>
<td>Viscosity, Saybolt SUS at 210°F</td>
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<tr>
<td>Viscosity Index</td>
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</tr>
<tr>
<td>Flash Point, °C(°F)</td>
<td>224(435)</td>
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<tr>
<td>Pour Point, °C(°F)</td>
<td>-14(7)</td>
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<tr>
<td>Oxidation Stability ASTM D943a</td>
<td>10,000</td>
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<tr>
<td>Oxidation Stability ASTM D2272b</td>
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<tr>
<td>Oxidation Stability IP 280 (TOP), m %</td>
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<tr>
<td>Air Release D3427 at 50°C, minutes</td>
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</tr>
</tbody>
</table>

a  Hours to 2.0 mg KOH/g acid number D943.
b  Minutes to 25 psi pressure drop.

Minor variations in product typical test data are to be expected in normal manufacturing.