

# SPECIALITY LUBRICANTS



Technical Data Sheet

## **OPTIMUS TURBINE AW**

#### PRODUCT DESCRIPTION:

Optimus Turbine AW range of turbine oils are premium quality antiwear type oils formulated from severely hydro treated base stocks. These oils are blended by using a complex additive system to provide required anti wear performance and oxidative stability against high local temperatures during operation. Optimus Turbine AW oils demonstrate excellent air release, foaming and water separation properties for steam turbines making them suitable and compliant for gas and steam turbines in single train sharing a common oil reservoir.

#### APPLICATION:

Optimus Turbine AW range is recommended for the lubrication of highly loaded industrial gas turbines, aero derivative power turbines and driven machinery as well as turbo machinery.

### FEATURES & BENEFITS:

- Meets a wide range of steam and gas turbine oil requirements.
- Excellent thermal stability.

#### PERFORMANCE LEVELS:

- BS 489: 1999
- DIN 51515 Part 1 (L-TD)
- DIN 51515 Part 2 (L-TG)
- GEK 28143B, GEK 32568K, GEK 46506E, GEK 101941A, GEK 107395A
- ITN 52220.02
- ITN 52220.03

- Excellent oxidation resistance.
- Good demulsification properties
- · Excellent corrosion inhibition performance
- Alstom HTGD 90117
- TLV 9013 04
- TLV 9013 05
- MAT812108, MAT812109
- Solar ES 9-224 AA Class II

## TYPICAL PROPERTIES:

| PARAMETERS                              | TEST METHOD | UNIT               | OPTIMUS TURBINE AW |      |      |
|---|-------------|--------------------|--------------------|------|------|
| ISO Viscosity Grade                     | -           | -                  | 32                 | 46   | 68   |
| Density @ 15°C                          | ASTM D4052  | kg/m <sup>3</sup>  | TBR                | TBR  | TBR  |
| Kinematic Viscosity @ 40°C / 104°F      | ASTM D445   | mm²/s              | 32                 | 46   | 68   |
| Kinematic Viscosity @ 100°C / 212°F     | ASTM D445   | mm²/s              | 5.5                | 7.0  | 8.9  |
| Viscosity Index                         | ASTM D2270  | -                  | 112                | 110  | 105  |
| Foam Sequence I - tendency / stability  | ASTM D892   | ml/ml              | 10/0               | 10/0 | 10/0 |
| Air Release @ 50°C                      | ASTM D3427  | minutes            | 3                  | 3    | 6    |
| Demulsification - Steam method          | IP 19       | seconds            | 80                 | 100  | 110  |
| Water Separation @ 54°C (40/37/3)       | IASTM D1401 | minutes            | 10                 | 10   | 10   |
| Pour Point                              | ASTM D97    | °C                 | -18                | -18  | -15  |
| Flash Point (COC)                       | ASTM D92    | °C                 | 220                | 230  | 240  |
| Acid Number                             | ASTM D664   | mgKOH/g            | 0.1                | 0.1  | 0.1  |
| Rust test - synthetic seawater (24 hrs) | ASTM D665B  | rating             | Pass               | Pass | Pass |
| Copper corrosion (3 hrs@100°C)          | ASTM D130   | rating             | 1b                 | 1b   | 1b   |
| Oxidation Stability (RPVOT)             | ASTM D2272  | minutes            | 1300               | 1300 | 1400 |
| FZG Gear Scuffing ( A/8.3/ 90)          | ASTM D5182  | Failure Load Stage | 10                 | 10   | 10   |

#### HEALTH & SAFETY, ENVIRONMENT:

Prolonged and repeated contact with oil may cause skin disorders. Avoid contact. Wash immediately with soap and water. Do not discharge used oil in to drains or the environment. Dispose to an authorized used oil collection point. For further Information on Safety Guidelines please refer to MSDS available on our website www.lubrex.net

#### HEALTH & SAFETY:

This product is not likely to present any significant health or safety hazards when properly used in the recommended application and good standards of personal hygiene are maintained. Reference is made to the Safety Data Sheet (SDS) which is available on request via your local sales office or via the internet www.lubrex.net

## PROTECT THE ENVIRONMENT:

Take used oil to an authorized collection point. Comply with local regulation. Do not discharge into drains, soil or water.

#### STORAGE:

We recommend to store all packages under cover. In case outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should never be stored above 60°C, exposed to hot sun or freezing conditions.

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