

# Q8 van Gogh 46

High performance turbine oil

#### Description

Q8 van Gogh 46 is a high performance turbine oil based on selected premium base fluids. This product is developed for use in steam and gas turbine circulation systems. Q8 van Gogh 46 meets the challenges of the latest generation turbines making it suitable to operate under mild to severe conditions. Designed as part of the Q80ils clean technology program to ensure superior varnish/deposit control in combination with long oil life.

### Applications

Industrial steam- and gas turbines Hydroelectric turbines Circulation systems where R&O type turbine oil is required Centrifugal- and axial pumps, and turbo-compressors, where R&O type turbine oil is recommended

| <i>Features</i><br>Turbine performance | <b>Benefits</b><br>Long trouble free service life, excellent turbine protection and outstanding resistance against ageing                        |
|--|--|
| Enhanced technology                    | Outstanding formulation in order to protect the turbine against corrosion and to minimize the build-up of<br>deposits and lacquer in the turbine |
| Lower operational costs                | Specifically developed with excellent protection against the formation of varnish  |

#### Specifications & Approvals

| ASTM             | D 4304, Type I | ISO     | 6743-5 L-TSA  |
|------------------|----------------|---------|---------------|
| British Standard | 489            | ISO     | 8068          |
| DIN              | 51515-1 L-TD   | JIS     | K 2213 Type 2 |
| DIN              | 51515-2 L-TG   | Siemens | TLV 9013 04   |
| ISO              | 6743-5 L-TGA   | Siemens | TLV 9013 05   |

## Properties

|   | Method             | Unit       | Typical          |
|---|--------------------|------------|------------------|
| Appearance                                  | Visual             | -          | Bright and Clear |
| Density, 15 °C                              | D 4052             | g/ml       | 0,868            |
| ISO Viscosity Grade                         | -                  | -          | 46               |
| Kinematic Viscosity, 0 °C                   | D 445              | mm²/s      | 597              |
| Kinematic Viscosity, 40 °C                  | D 445              | mm²/s      | 46               |
| Kinematic Viscosity, 100 °C                 | D 445              | mm²/s      | 6.9              |
| Viscosity Index                             | D 2270             | -          | 105              |
| Total Acid Number                           | D 974              | mg KOH/g   | 0.05             |
| Pour Point                                  | D 97               | °C         | -12              |
| Flash Point, COC                            | D 92               | °C         | 222              |
| Colour                                      | D 1500             | -          | L 0.5            |
| Air Release, 50 °C                          | D 3427             | min        | 3                |
| Emulsion, Distilled Water, 54.4 °C          | D 1401             | -          | 40-40-0(10)      |
| Steam Demulsibility                         | DIN 51589-1        | SEC.       | 60               |
| Foam, 10 min settling, seq. 1-2-3           | D 892              | ml         | 0/0/0            |
| Foam, 5 min blowing, seq. 1-2-3             | D 892              | ml         | 10/20/10         |
| Rust Test, Proc. A and B, 24 h              | D 665              | -          | pass             |
| Q panel rust preventive test, 24 hr @ 27 °C | KPI 31             | Rating     | 0                |
| Copper Strip, 3 h, 100 °C                   | D 130              | -          | 1                |
| Oxidation Characteristics (TOST)            | D 943              | hrs        | >10.000          |
| Oxidation Stability (RPVOT)                 | D 2272             | min        | >1.000           |
| Modified Oxidation Stability (RPVOT)        | D 2272             | %          | 95               |
| Zinc content                                | D 4951             | mg-kg      | absent (<5)      |
| Oxide Ash                                   | D 482              | % mass     | <0.01            |
| Solid Foreign Particles                     | Millipore, 0.45 µm | -          | absent           |
| FZG Test, A/8.3/90                          | DIN 51354          | load stage | ≥ 6              |

The figures above are not a specification. They are typical figures obtained within production tolerances.