

PANOLIN[®]+
Swiss Oil Technology

PANOLIN **ATLANTIS**

Operating and Application Information



Part of the PANOLIN concept



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PANOLIN ATLANTIS

Operating and Application Information

PANOLIN ATLANTIS incorporate the PANOLIN ECL (Environmentally Considerate Lubricants) technology successfully applied for more than 25 years in heavy-duty field applications.

PANOLIN ATLANTIS fluids are saturated esters which are registered for use offshore and formulated in accordance with OSPAR regulations recommendation 2010/3 on a Harmonised Chemical Notification Format (HOCNF).

Although PANOLIN ATLANTIS fluids and hydraulic oils do not contain any hydrocarbons they fulfill the mineral oil performance requirements set out in ISO 6743-4/L-HL and DIN 51524 part 1/HL.

1 TECHNICAL DETAILS

1.1 Please ensure that the viscosity and following specifications of PANOLIN ATLANTIS comply with the recommendations of the machine and component manufacturers.

1.2 Specifications

PANOLIN ATLANTIS 15 (production control line fluid)

- In accordance with ISO 13628 Annex C3
- Secant and Tangent Bulk Modulus by ASTM D-6793 (More and detailed info on request.)

PANOLIN ATLANTIS 15

| Property | Units | 4 °C | 25 °C | 40 °C | 80 °C |
|---------------------|--------------------------|-------|-------|-------|-------|
| Density | g/cm ³ | 0.929 | 0.914 | 0.904 | 0.888 |
| Viscosity | cSt (mm ² /s) | 73.4 | 28.0 | 16.4 | 5.8 |
| Secant Bulk Modulus | kPa (10 ⁶) | 1.801 | 1.726 | 1.650 | 1.433 |

PANOLIN ATLANTIS 22, N 32 (hydraulic fluids for offshore applications)

- FZG Test A/8.3/90 failure load stage 10
- ISO 6743-4/L-HL
- DIN 51524 part 1/HL

1.3 Do not mix PANOLIN ATLANTIS fluids with any other synthetic fluids or lubricants. Mineral oil contamination should not exceed 5 %.

Please take note that OEM recommendations or environmental regulations may ask for a lower percentage or no residues of mineral oils or other restricted fluids.

These regulations take precedence over PANOLIN guidelines and must be strictly complied with.

1.4 Elastomer Compatibility

| Change after 7 days/80 °C | PANOLIN ATLANTIS 15 | | ATLANTIS 22 | | ATLANTIS N 32 | |
|------------------------------|---------------------|-------------|-------------|-------------|---------------|-------------|
| | Weight in % | Volume in % | Weight in % | Volume in % | Weight in % | Volume in % |
| SRE-NBR 28 | 22.3 | 30.3 | 15.5 | 21.2 | 11.1 | 15.1 |
| SRE-HNBR | 8.6 | 11.6 | 5.4 | 7.5 | 3.2 | 4.6 |
| SRE-FKM | 1.1 | 2.5 | 0.6 | 1.4 | 0.3 | 0.7 |

2 MONITORING IN-USE

2.1 Unless otherwise agreed, fluid condition should be checked regularly by PANOLIN. Recommendations given in PANOLIN analysis reports help to ensure optimal fluid quality and system functionality.

2.2 Inspection intervals

| | |
|--------------------------|---|
| First inspection after: | 50 operating hours |
| Second inspection after: | 500 operating hours |
| Third inspection after: | 1'000 operating hours |
| Subsequent inspection: | every 1'000 operating hours or at least once per year |

2.3 Oil samples (at least 500 ml) must be taken at operating temperature and filled into clean unused bottles. To avoid confusion it is essential to label the bottles clearly.

Please send the samples to PANOLIN AG, Laboratory, CH-8322 Madetswil, Switzerland.

2.4 Inspection parameters for PANOLIN ATLANTIS fluids

- Cleanliness according to ISO 4406 must comply with cleanliness class 21/17/13 or better.
- Water content must not exceed the maximum limit of 0.1 % (1'000 ppm). This corresponds to the general recommendation for conventional mineral oils.
- PANOLIN ATLANTIS lubricants are used in aqueous environments. However, water should be separated out to avoid fluid deterioration, filter blockage, cavitation and corrosion in the hydraulic system. Any water entering the system must be filtered out, or the oil filling must be changed. PANOLIN recommends the use of CARDEV subsea filtration equipment to minimise water contamination.

Please note that OEM recommendations take precedence over PANOLIN guidelines and must be strictly complied with.

3 ENVIRONMENTAL COMPATIBILITY

In case of unintentional release due to leakage, PANOLIN ATLANTIS fluids rapidly biodegrade and therefore have minimal impact on the environment.

OSPAR Recommendation 2010/3 on HOCNF (Harmonised Offshore Chemical Notification Format)



- CEFAS – United Kingdom: OCNS Group E
- Klif (former SFT) – Norway: Environmental Category Yellow
- Miljøstyrelsen – Danish Environmental Protection Agency: PR-No. 2318929 (PANOLIN ATLANTIS 15)
- SODM – Netherlands: OCNS Group E (HCMS Category R)

4 DISCLAIMER

4.1 The manufacturer's regulations take precedence over PANOLIN recommendations.

4.2 If the PANOLIN recommendations (e.g. not mixing PANOLIN ATLANTIS fluids with synthetic lubricants, etc.) cannot be followed due to system set-up or other reasons, please contact PANOLIN before filling with PANOLIN ATLANTIS lubricants.

4.3 This information is given to the best of our knowledge. No liability can be derived therefrom.



Technical Support

We offer a regular oil analysis service to all of our customers. In addition to the usual tests (wear metal analysis, water and particle contamination etc.), we also check for foreign oil content – alerting you to any contamination which may compromise the performance or biodegradability of the fluid in your machinery. Trend analysis is used, and we will happily advise on ways to rectify any problems highlighted by the regular laboratory reports. Full laboratory facilities available (seal compatibility etc).

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