



Gulf Security PMA

Premium quality ashless oils for circulating systems of paper machines

Product Description

Gulf Security PMA series are premium quality ashless oils specially developed to meet the lubrication requirements of both dry and wet ends of paper machines. The state-of-the-art additive technology used in this oil resists oxidation, rust, corrosion, wear, emulsification and foam while providing excellent filterability and water separation. The oil has demonstrated improved performance in several key areas including corrosion protection in the SKF Emcor test with process water, EP performance in 4-ball weld load test and provides protection against sludge and corrosion in dry as well as wet conditions.

Gulf Security PMA series are especially suitable for applications where there are environmental concerns or restrictions on the presence of metals such as zinc or barium. These oils are available in three ISO viscosity grades (150, 220 and 320) and meet the requirements of several OEM paper machine oil specifications including those of Voith, Metso, FAG and SKF.

Features & Benefits

- Exceptional thermal and oxidative stability resists deposits and sludge formation and keeps systems clean
- Excellent water separation characteristics
- Excellent load-carrying capacity and wear resistance
- Special rust and corrosion inhibitors protect multi-metallurgy components even in wet conditions
- Excellent filterability enables use with fine filters
- Provides resistance to degradation by process chemicals
- Superior foam control and air release properties provide trouble-free performance
- State-of-the-art ashless additive technology reduces environmental impact in case of accidental spillage

Applications

- Circulating systems of paper machines for both dry and wet sections
- Paper machines using fine filters, super-heated steam or susceptible to severe water contamination
- Circulating systems requiring oils with anti-wear/mild EP protection and good thermal and oxidative stability
- Reduction gears and gear-head motors
- Vacuum pumps, water pumps and suction box pumps
- Crown Controlled Rolls (CC Rolls) and Extended Nip Presses (ENP)

Specifications, Approvals & Typical Properties

Refer next page

Properties mentioned are typical only and minor variations, which do not affect product performance, are expected to arise in normal manufacturing processes. Please follow equipment manufacturer's recommendations for performance level and viscosity grade. The Safety Data Sheet for this product is available from your nearest Gulf Distributor. Please consult our local representative if any further information is required.

The information contained herein is believed to be correct at the time of publication and may be subject to modification from time to time. It is the user's responsibility to verify that this data sheet is current prior to using the product. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of products. Gulf Oil International reserves the right to modify and change its products and specifications without prior notice.

This data sheet has been issued by us in English language only. In the event of any discrepancy between the English language version and any other language version, the English language version shall prevail.
www.gulfoilltd.com



| ISO Viscosity grades | 150 | 220 | 320 | |
|--|-------------|--------------------|-------|-------|
| Meets the following Specifications | | | | |
| Voith specification VN 108, October 2004 | X | X | X | |
| SKF specification for dryer section of paper machines | X | X | X | |
| Metso paper specification RAU4L00659.04, November 2001 | X | X | X | |
| FAG FE8 | X | X | X | |
| DIN 51517 Part 3, January 2004 | X | X | X | |
| Typical Properties | | | | |
| Test Parameters | ASTM Method | Test Values | | |
| Viscosity @ 40 °C, cSt | D 445 | 155 | 216.9 | 311.6 |
| Viscosity Index | D 2270 | 95 | 94 | 95 |
| Flash Point, °C | D 92 | 246 | 256 | 266 |
| Pour Point, °C | D 97 | -6 | -6 | -6 |
| Density @ 15°C, Kg/l | D 1298 | 0.893 | 0.896 | 0.898 |
| Rust Test | D 665A/B | Pass | Pass | Pass |
| Emulsion Test 30 minutes max @ 82 oC | D 1401 | Pass | Pass | Pass |
| Foam Test, foam after 10 minutes of settling for all sequences | D 892 | Nil | Nil | Nil |
| RBOT, minutes | D 2272 | 375 | 400 | 350 |
| SKF EMCOR, process water | | 0-1 | 0-0 | 0-0 |
| Four-ball Weld, kg | DIN 51350/2 | 250 | 260 | 270 |
| Four-ball Wear, mm | DIN 51350/3 | 0.32 | 0.30 | 0.31 |
| FZG EP Gear, pass stage | D 5182 | 12 | 12 | 12 |
| Timken EP OK load, lb | D 2782 | 50 | 60 | 70 |

Properties mentioned are typical only and minor variations, which do not affect product performance, are expected to arise in normal manufacturing processes. Please follow equipment manufacturer's recommendations for performance level and viscosity grade. The Safety Data Sheet for this product is available from your nearest Gulf Distributor. Please consult our local representative if any further information is required.

The information contained herein is believed to be correct at the time of publication and may be subject to modification from time to time. It is the user's responsibility to verify that this data sheet is current prior to using the product. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of products. Gulf Oil International reserves the right to modify and change its products and specifications without prior notice.

This data sheet has been issued by us in English language only. In the event of any discrepancy between the English language version and any other language version, the English language version shall prevail.
www.gulfoilltd.com