# Mobil Vacuoline™ 100 Series

Mobil Industrial , Croatia

Circulating Oils

## Product Description

The Mobil Vacuoline™ 100 range is a series of extra high quality circulating system oils primarily intended for the lubrication of plain bearings in systems designed for full fluid lubrication, particularly those subjected to heavy water contamination, such as may be used for back-up roll bearings in metal rolling mills. Specifically, they meet the requirements for rolling mill bearings including the Morgan "super demulsibility" advanced lubricant specification. The Mobil Vacuoline 100 Series oils are formulated from high quality base stocks and additives to provide outstanding water separation ability, good resistance to thermal degradation and oxidation, and protection against rust and corrosion.

The Mobil Vacuoline 100 Series oils are resistant to the formation of emulsion and sludge. Consequently the oils can contribute to cleaner systems and filters. Also solid contaminants separate readily for easy cleaning by centrifuge, filtration or settling. The Mobil Vacuoline 100 Series possess a high viscosity index and good demulsibility that is retained under conditions of severe water contamination and are recommended for both single and dual tank circulation systems.

Mobil Vacuoline 100 Series oils are the choice of rolling mill operators worldwide. They enjoy strong support of key equipment builders including Morgan Construction Company, Worcester, MA, USA.

## Features and Benefits

The Mobil Vacuoline family of products is well known and highly regarded worldwide based on their outstanding performance and the global technical support which stand behind the brand. The exceptional performance of Mobil Vacuoline 100 Series oils, has made it the choice of rolling mill users around the world. Experience gained in close contact with key rolling mill builders, including Morgan Construction in the United States has been applied to ensure that Vacuoline oils meet the needs of evolving rolling mill designs and applications.

For Mobil Vacuoline 100 Series oils, this work has resulted in a formulation based on a high quality base stocks, along with specially chosen additives, to provide rust and corrosion protection and excellent demulsibility which results in superb equipment protection, highly reliable operation and long oil charge life. A review of the features, advantages and potential benefits of the product are shown below:

| Features | Advantages and Potential Benefits |
|---|---|
| Outstanding demulsibility | Ready separation from water and contaminants throughout the life of the oil for trouble-free operation and reduced downtime |
| Good resistance to oxidative degradation | Extended oil charge life and reduced oil replacement costs<br>Cleaner system and filters and reduced maintenance costs |
| Excellent rust and corrosion protection | Enhanced equipment protection and equipment life |

## Applications

Mobil Vacuoline 100 Series oils are primarily recommended and used almost exclusively for rolling mill applications. The oils are suitable for:

- Back-up roll bearings of rolling mills, particularly bearing systems, where either a single or dual tank is employed
- Other full fluid bearing systems and similar type applications in other industries, particularly where the bearings are subjected to heavy water contamination

## Specifications and Approvals

| This product meets or exceeds the requirements of: | 128 | 133 | 137 | 146 | 148 |
|---|---|---|---|---|---|
| DIN 51517-2:2018-09 | X | X | X | X | |
| Primetals Technologies Morgoil® Advanced Lubricant Specification Rev 2.5a | X | X | X | X | X |
| Primetals Technologies Morgoil® Standard Lubricant Specification Rev 1.1 | X | X | X | X | X |
| SMS Group X-Roll® Oil Bearing- Advanced Lubricant Specification (SN 180-4) | X | X | X | X | X |
| SMS Group X-Roll® Oil Bearing- Standard Lubricant Specification (SN 180-3) | X | X | X | X | X |

## Properties and Specifications

| Property | 128 | 133 | 137 | 146 | 148 |
|---|---|---|---|---|---|
| Grade | ISO VG 150 | ISO VG 220 | ISO VG 320 | ISO VG 460 | ISO VG 680 |
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130 | 1B | 1B | 1B | 1B | 1B |
| Demulsibility, Emulsion, 52 C, Non-EP Oils, ml, ASTM D2711(mod) | | | | | 40 |
| Demulsibility, Free Water, 52 C (125 F), Non-EP Oils, ml, ASTM D2711(mod) | 40 | 36 | 39 | 41 | |
| Density @ 15 C, kg/l, ASTM D4052 | 0.89 | 0.89 | 0.9 | 0.9 | 0.91 |
| Emulsion, Time to 40/37/3, 82 C, min, ASTM D1401 | 15 | 20 | 25 | 30 | 35 |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 280 | 288 | 286 | 296 | 318 |
| Foam, Sequence I, Stability, ml, ASTM D892 | 0 | 0 | 0 | 0 | 0 |
| Foam, Sequence I, Tendency, ml, ASTM D892 | 0 | 0 | 0 | 0 | 0 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 14.8 | 18.8 | 23.9 | 30.1 | 36.7 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 150 | 220 | 320 | 460 | 680 |
| Pour Point, °C, ASTM D97 | -9 | -6 | -9 | -6 | -6 |
| Rust Characteristics, Procedure A, ASTM D665 | PASS | PASS | PASS | PASS | PASS |
| Viscosity Index, ASTM D2270 | 96 | 95 | 95 | 95 | 91 |

## Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect

product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com

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