



Mobil Vacuoline™ 100 Series  
Mobil Industrial, United States

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 Morgoil 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:

<b>Features</b>	<b>Advantages and Potential Benefits</b>
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 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 Morgoil 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

<b>Mobil Vacuoline 100 Series meets or exceeds the requirements of:</b>	<b>128</b>	<b>133</b>	<b>137</b>	<b>146</b>	<b>148</b>
SMS SIEMAGE - MORGOIL® Lubricant Specification Advanced Lubricant, SN 180 Part 4 : 2009-07	X	X	X	X	X
SMS SIEMAGE - MORGOIL® Lubricant Specification Advanced Lubricant, SN 180 Part 3 : 2009-07	X	X	X	X	X
DIN 51517-2 : 2009-06	X	X	X	X	

## Typical Properties

<b>Mobil Vacuoline 100 Series</b>	<b>128</b>	<b>133</b>	<b>137</b>	<b>146</b>	<b>148</b>
ISO Viscosity Grade	150	220	320	460	680
Viscosity, ASTM D 445					
cSt @ 40°C	150	220	320	460	680
cSt @ 100°C	14.8	18.8	23.9	30.1	36.7
Viscosity Index, ASTM D 2270	96	95	95	95	91

Pour Point, °C, ASTM D 97	-9	-6	-9	-6	-6
Flash Point, °C, ASTM D 92	280	288	286	296	318
Specific Gravity @ 15°C kg/l, ASTM D 4052	0.89	0.89	0.90	0.90	0.91
Demulsibility for non-EP oils, ASTM D2711, ml water	40	36	39	41	40
Demulsibility at 82°C, ASTM D 1401 Minutes to 3ml Emulsion	15	20	25	30	35
Rust Protection, ASTM D665 Distilled Water	Pass	Pass	Pass	Pass	Pass
Copper Corrosion, ASTM D130 3 hours @ 100°C	1B	1B	1B	1B	1B
Foam Test, ASTM D 892, Seq I Tendency / Stability, ml/ml	0/0	0/0	0/0	0/0	0/0

## Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

All trademarks used herein are trademarks or registered trademarks of Exxon Mobil Corporation or one of its subsidiaries unless indicated otherwise.

Exxon Mobil Corporation  
22777 Springwoods Village Parkway  
Spring TX 77389

1-800-ASK MOBIL (275-6624)

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](http://www.exxonmobil.com)

ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of

local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.