

### Product Description

Mobil Vacuoline 500 Series are a range of premium quality heavy duty circulating oils, especially formulated to meet requirements for Morgoil bearings in No-Twist Rod Mills made by Morgan Construction Company of Worcester, Mass, USA.

They are made from solvent refined paraffinic base oils, enhanced with rust inhibitors for both bulk oil and thin-film rust protection, as well as selected additives to improve film strength, anti-wear and anti-scuff properties. These oils have good "wetability" characteristics which provide extra oil retention and rust protection on gears, shafts, bearings, adjusting screws and all housing sections. The high film strength additives provide extra protection against gear wear through the formation of protective films on gear tooth surfaces.

### Benefits

Mobil Vacuoline 500 Series products offer the following benefits:

- Outstanding protection against rust and corrosion
- Excellent anti-wear performance
- Resistant to oxidation degradation
- Excellent water separation characteristics
- Good resistance to foaming
- Suitable for both ferrous and non ferrous metals
- Cleaner system and filters due to reduced emulsions and sludges and keep clean performance of additive system
- Reduced maintenance and repair costs giving improved operating profit
- Extended oil life producing cost savings
- World-wide availability

### Application

Mobil Vacuoline 500 Series Oils are primarily recommended for use in all types of Morgan No-Twist Rod Mill circulating systems for bearings, gears, adjusting screws, and circulating systems for back-up roll bearings of rolling mills. Based on proven field performance, they have a high level of builder support from the Morgan Construction Company.

Mobil Vacuoline 525 is recommended for service in the single circulating oil system of high speed steel rod mills which currently operate at speeds up to 100m/sec (20,000 ft/min). These mills perform under severe loads with heavy contamination and require the unique properties of the Mobil Vacuoline 500 Series oils to extend periods of trouble-free rod production.

Mobil Vacuoline 528 and 546 are recommended for aluminium and copper rod mills. These mills generally have two oil lubrication systems. The heavier the viscosity oil, Mobil Vacuoline 546, is used in the roughing stands while the lighter grade, Mobil Vacuoline 528, is used in the higher speed finishing stands.

## Health and Safety

Based on available toxicological information, it has been determined that these products pose no significant health risk when used and handled properly.

Details on handling, as well as health and safety information, can be found in the Material Safety Data Bulletin which can be obtained through Mobil Oil Company Ltd., by telephoning 01372 22 2000.

Typical physical characteristics are given in the table. These are intended as a guide to industry and are not necessarily manufacturing or marketing specifications.

## Typical Characteristics

| <b>Mobil Vacuoline</b>                |                    | <b>525</b> | <b>528</b> | <b>537</b> | <b>546</b> |
|---------------------------------------|--------------------|------------|------------|------------|------------|
|                                       | <b>Test Method</b> |            |            |            |            |
| Relative Density                      |                    | 0.884      | 0.889      | 0.899      | 0.902      |
| ISO Viscosity Grade                   |                    | -          | 150        | 320        | 460        |
| Viscosity, cSt at 40°C                |                    | 93.0       | 148        | 320        | 468        |
| Viscosity, cSt at 100°C               |                    | 10.7       | 14.6       | 24         | 30.7       |
| Viscosity Index, min.                 |                    | 95         | 95         | 95         | 95         |
| Flash Point, °C                       |                    | 230        | 240        | 234        | 290        |
| Pour Point, °C                        |                    | -15        | -15        | -12        | -15        |
| FZG Gear Test Failure Stages, typical | DIN 51354          | 12         | 12         | 12         | 12         |
| 4-Ball Weld Load, kg, min.            |                    | 150        | 150        | 150        | 150        |
| Demulsibility Free Water, ml, min.    | ASTM D2711         | 36         | 36         | 30         | 36         |
| Copper Corrosion,                     | ASTM D130          | 1B         | 1B         | 1B         | 1B         |
| Rust Test                             | ASTM D665          | Pass       | Pass       | Pass       | Pass       |
| Colour                                | ASTM               | 3.5        | 3.5        | 5.0        | 6.5        |

Due to continual product research and development, the information contained herein is subject to change without notice.

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