



Previous Name: Shell Morlina SD

# Shell Morlina S3 BA 100

- Extra Protection
- Industrial Application
- Super Demulsification

## Special Application Bearing & Circulating Oils

Shell Morlina S3 BA oils are premium quality rust & oxidation inhibited lubricating oils providing excellent lubrication in MORGOIL® bearing & steel mill circulating systems. They are designed to have appropriate viscosity/ temperature characteristics, low foaming tendencies and excellent water separation properties. In addition, they protect equipment against corrosion and oil oxidation resulting in long service life. Meets the requirements of the Morgan and Danieli for super demulsibility applications.

### Performance, Features & Benefits

#### ▪ Long oil life – Maintenance saving

Shell Morlina S3 BA oils are designed to give superior oxidation resistance under high operating temperatures to give extended oil drain capability compared to basic bearing and circulating oils.

The excellent thermal and oxidative stability helps reduce the formation of sludge and other harmful oxidation products. The result is extended oil life, less maintenance and less downtime.

#### ▪ Excellent rust & corrosion protection

Shell Morlina S3 BA oils are formulated with an effective additive package to help prolong the life of bearings and circulating systems through:

Enhanced water separation characteristics that help ensure that critical oil films are retained between highly loaded parts in heavily contaminated environments.

Good air release characteristics to minimize cavitation and associated damage to circulating pumps.

Helps protect against corrosion, even in the presence of water.

#### ▪ Enhancing system efficiency

Shell Morlina S3 BA oils have outstanding demulsibility and allow water to be shed rapidly from the oil. The water then may be removed by drainage or centrifuge from the lubrication system, thus protecting the installation against corrosion, premature wear & failure.

- The excellent demulsibility also helps minimize the formation of emulsions which reduce filtration effectiveness, restrict circulation & promote bacterial growth. The use of fine filter filtration helps ensure effective contaminant free lubrication to critical machine parts.

### Main Applications



#### ▪ MORGOIL® type bearing systems

Approved for use in Morgoil® type bearing commonly found in steel mill applications. (MORGOIL is a registered trademark of the Morgan Construction Company)

#### ▪ Heavily contaminated lubrication systems

Shell Morlina S3 BA oils are recommended for circulating oil systems where water separation is a key issue.

#### ▪ Plain and rolling element bearings

#### ▪ Industrial gear boxes

Enclosed spur, helical, bevel and worm gearboxes where the use of a non-EP rust & oxidation inhibited oil is approved by the equipment manufacturer.

### Specifications, Approvals & Recommendations

- Morgan MORGOIL® Lubricant Specification New Oil (Rev. 1.1)
- Morgan MORGOIL® Advanced Lubricant New Oil (Rev. 2.4)
- DIN 51517-1 - Type C
- DIN 51517-2 - Type CL
- AGMA 9005 for inhibited (R&O) Oils
- Danieli Standard Oil 6.124249F
- Danieli Super Demulsibility Oil 6.124249F

For additional questions regarding equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

## Compatibility & Miscibility

### ▪ Paint Compatibility

Shell Morlina S3 BA Oils are compatible with seal materials and paints normally specified for use with mineral oils.

## Typical Physical Characteristics

| Properties   |        | Method                | Shell Morlina S3 BA |       |
|--|--------|-----------------------|---------------------|-------|
| Viscosity Grade  |        | ISO 3448              | 100                 |       |
| Gravity °API   |        | ASTM D1298            | 30.5                |       |
| Kinematic Viscosity  | @40°C  | cSt                   | ASTM D445           | 100   |
| Kinematic Viscosity  | @100°C | cSt                   | ASTM D445           | 11.4  |
| Kinematic Viscosity  | @100°F | SUS                   | Calculated          | 464   |
| Kinematic Viscosity  | @210°F | SUS                   | Calculated          | 64.2  |
| Viscosity Index  |        | ASTM D2270            | 95                  |       |
| Color  |        | ASTM D1500            | 2                   |       |
| Pour Point   |        | °C                    | ASTM D5950          | -12   |
| Flash Point (COC)  |        | °C                    | ASTM D92            | 230   |
| Acid Number  |        | mg KOH/ g             | ASTM D974           | 0.05  |
| Cu Corrosion, 3 hrs  | @100°C |                       | ASTM D130           | 1b    |
| Rust, Synthetic Sea Water                                  |        |                       | ASTM D665B          | Pass  |
| Water Demulsibility  | @82°C  | mins                  | ASTM D1401          | 10    |
| Water Demulsibility (ml of free water before centrifuging) | @52°C  |                       | ASTM D2711          | 36    |
| Foam Test, Seq II ml                                       |        | ml foam at 0/ 10 mins | ASTM D892           | 30/ 0 |
| Oxidation Control Test : TOST                              |        | hrs                   | ASTM D943           | 6000+ |
| Oxidation Control Test : RPVOT                             |        | mins                  | ASTM D2272          | 800+  |
| ANSI/ AGMA Lubricant NO. 9005-D94                          |        |                       |                     | 3     |

These characteristics are typical of current production. While future production will conform to Shell's specification, variations in these characteristics may occur.

## Health, Safety & Environment

- Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.Shell.com/>

### ▪ Protect the Environment

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

## Additional Information

### ▪ Advice

Product recommendations for applications and specifications not covered here may be obtained from your Shell representative.

### Viscosity - Temperature Diagram for Shell Morlina S3 BA



