



## Technical Data Sheet

Previous Name: Shell Vitrea M

# Shell Morlina S1 B 220

- *Reliable Protection*
- *Industrial Application*
- *Water Shedding*

## Industrial Bearing & Circulating Oils

Shell Morlina S1 B oils are high performance oils designed to provide excellent protection for most industrial bearing and circulating oil system applications, particularly those processes where water shedding (demulsification) is important for the life of the equipment. Meets the most basic requirements of the Morgan and Danieli standards for common bearing oils.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

#### ▪ Good oil life – Maintenance saving

Shell Morlina S1 B oils use carefully chosen components to help provide consistent performance and protection throughout the maintenance interval.

#### ▪ Reliable wear & corrosion protection

Shell Morlina S1 B oils help prolong the life of bearings and circulating systems through:

- Good water separation characteristics that help ensure that critical oil films are retained between highly loaded parts.
- Good air release characteristics to minimize cavitation and associated damage to circulating pumps.
- Helps protect against corrosion, even in the presence of water.

#### ▪ Maintaining system efficiency

Shell Morlina S1 B oils are blended with high quality, solvent refined base oils that promote good water separation and air release to ensure the efficient lubrication of the machines and systems.

#### ▪ Roll-neck bearings

#### ▪ Enclosed industrial gear systems

Low or moderately loaded enclosed gears where EP performance is not required.

### Specifications, Approvals & Recommendations

- Morgan MORGOIL® Lubricant Specification (New Oil Rev. 1.1) (MORGOIL is a registered trademark of the Morgan Construction Company)

- Danieli Standard Oil 6.124249.F

- DIN 51517-1 – Oil Type C

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

### Compatibility & Miscibility

#### ▪ Paint Compatibility

Shell Morlina S1 B oils are compatible with seal materials and paints normally specified for use with mineral oils.

### Main Applications



#### ▪ Machine circulation systems

#### ▪ Oil lubricated bearings

Suitable for most plain and rolling element bearings in general industrial applications.

## Typical Physical Characteristics

| Properties             |                           | Method     | Shell Morlina S1 B |
|------------------------|---------------------------|------------|--------------------|
| ISO Viscosity Grade    |                           | ISO 3448   | 220                |
| ISO Viscosity Grade    |                           | ISO 3448   | 220                |
| Kinematic Viscosity    | @40°C mm <sup>2</sup> /s  | ASTM D445  | 220                |
| Kinematic Viscosity    | @40°C mm <sup>2</sup> /s  | ASTM D445  | 220                |
| Kinematic Viscosity    | @100°C mm <sup>2</sup> /s | ASTM D445  | 19.2               |
| Kinematic Viscosity    | @100°C mm <sup>2</sup> /s | ASTM D445  | 19.2               |
| Density                | @15°C kg/m <sup>3</sup>   | ISO 12185  | 887                |
| Density                | @15°C kg/m <sup>3</sup>   | ISO 12185  | 887                |
| Viscosity Index        |                           | ISO 2909   | 95                 |
| Viscosity Index        |                           | ISO 2909   | 95                 |
| Flash Point (COC)      | °C                        | ISO 2592   | 249                |
| Flash Point (COC)      | °C                        | ISO 2592   | 249                |
| Pour Point             | °C                        | ISO 3016   | -6                 |
| Pour Point             | °C                        | ISO 3016   | -6                 |
| Rust, Distilled Water  |                           | ASTM D665A | Pass               |
| Rust, Distilled Water  |                           | ASTM D665A | Pass               |
| Emulsion Test, Minutes | @82°C                     | ASTM D1401 | 20                 |
| Emulsion Test, Minutes | @82°C                     | ASTM D1401 | 20                 |

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

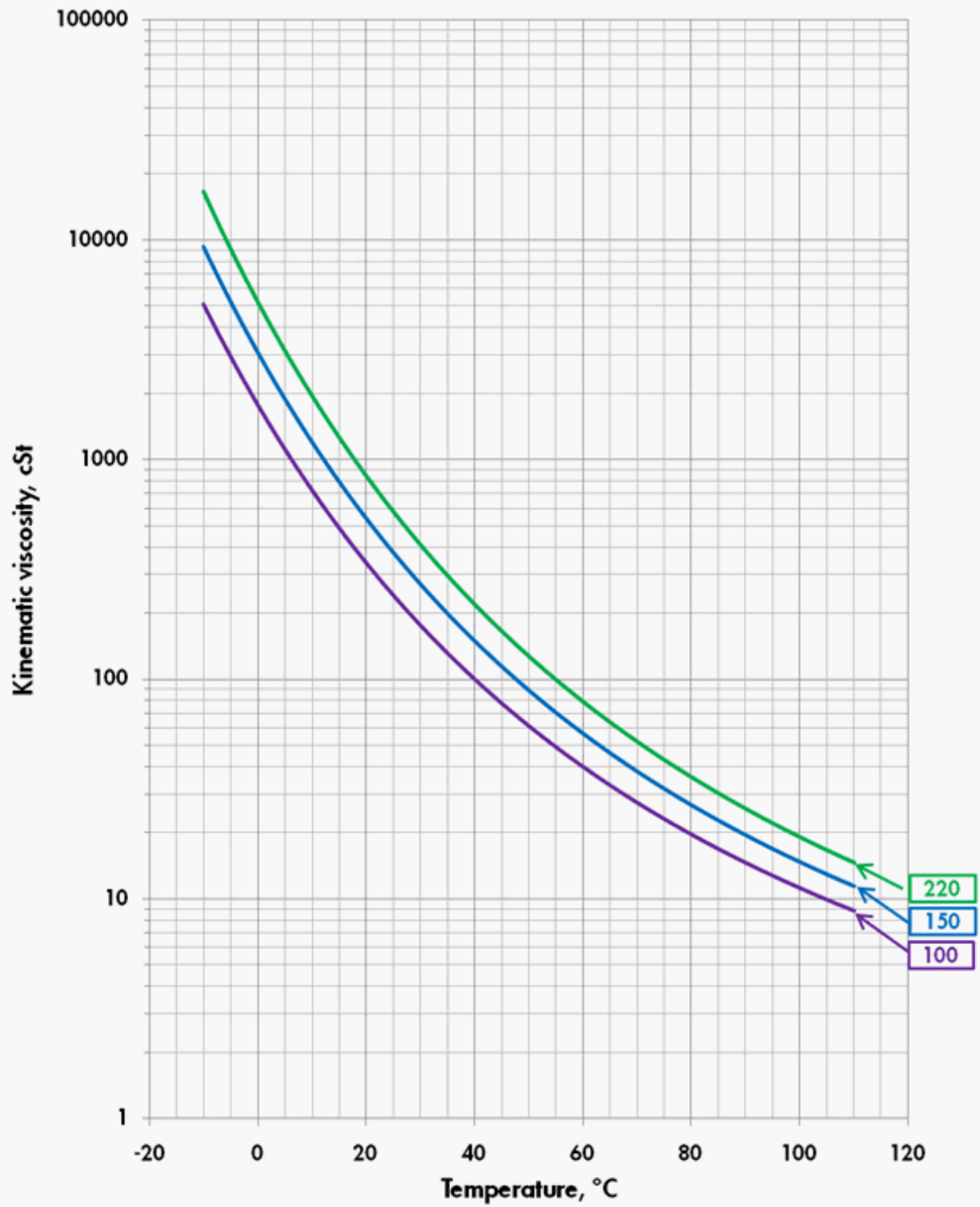
## Health, Safety & Environment

- 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 authorised collection point. Do not discharge into drains, soil or water.

## Additional Information

- **Advice**  
Advice on applications not covered here may be obtained from your Shell representative.

Viscosity - Temperature Diagram for Shell Morlina S1 B



Viscosity - Temperature Diagram for Shell Morlina S1 B

