

SHELL MORLINA S2 BL

SPECIAL APPLICATION BEARING AND CIRCULATING OILS

*PREVIOUSLY SHELL MORLINA 5
RECOMMENDED REPLACEMENT FOR SHELL MORLINA 10*

DESIGNED TO MEET CHALLENGES

Shell Morlina S2 BL oils are special low viscosity, solvent refined mineral oils blended with zinc free additives, help to provide extended performance in the high speed spindles of machine tools.

PERFORMANCE FEATURES

LONG OIL LIFE – MAINTENANCE SAVING

- Shell Morlina S2 BL oils are formulated with a well proven rust and oxidation inhibitor package that provides high resistance to oxidation caused by heat in the presence of air, water and metal catalysts, such as copper, and helps to prolong oil life and lower maintenance costs.

RELIABLE WEAR AND CORROSION PROTECTION

- The special additives provide efficient anti-wear performance without reacting to the softer metals in bearings and enhance machine reliability.
- In addition the additive package enhances the oil's natural corrosion protective properties and helps to prolong bearing life.

MAINTAINING SYSTEM EFFICIENCY

- The low viscosity components of these oils have been chosen to help promote the smooth running of high speed machine elements and minimise heat build up through frictional energy losses.

APPLICATIONS

HIGH SPEED SPINDLES

- The low viscosity fluids (ISO grades 5 and 10) are particularly suitable for the lubrication of high speed spindles in machine tools.
- Pneumatic systems specifying an ISO 10.

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

Shell Morlina S2 BL oils are designed to meet specifications requiring a premium quality, light viscosity oil for applications running at high speeds such as those found in high speed frames and automated machine tools.

- Cincinnati Machine P-62 (ISO VG 5, 10).

PAINT COMPATIBILITY

- Shell Morlina S2 BL oils are compatible with seal materials and paints normally specified for use with mineral oils.

TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	10
Kinematic Viscosity (ASTM D 445) @ 40°C mm ² /s	10
@ 100°C mm ² /s	2.3
Density @ 15°C kg/m ³ (ISO 12185)	881
Flash Point °C (COC) (ASTM D 93)	150
Pour Point °C (ISO 3016)	-30
Rust, Salt, Water (ASTM D 665B)	Pass
Oxidation Control Tests	
a) TOST, hrs	2,000+
b) RPVOT, mins.	300

SHELL MORLINA S2 B

INDUSTRIAL BEARING AND CIRCULATING OILS

PREVIOUSLY SHELL MORLINA

DESIGNED TO MEET CHALLENGES

Shell Morlina S2 B oils are high performance oils designed to provide outstanding oxidation and water separation protection for most general industrial bearing and circulating oil system applications and certain other industrial applications which do not require oils with extreme pressure (EP) properties.

PERFORMANCE FEATURES

CONSISTENT PERFORMANCE

- Shell Morlina S2 B oils are formulated with a well proven rust and oxidation inhibitor additive package that helps provide consistent performance and protection throughout the maintenance interval.

RELIABLE WEAR AND CORROSION PROTECTION

SHELL MORLINA S2 B OILS HELP PROLONG THE LIFE OF BEARINGS AND CIRCULATING SYSTEMS THROUGH:

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

MAINTAINING SYSTEM EFFICIENCY

- Shell Morlina S2 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.

APPLICATIONS

MACHINE CIRCULATION SYSTEMS

OIL LUBRICATED BEARINGS

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

ROLL-NECK BEARINGS

ENCLOSED INDUSTRIAL GEAR SYSTEMS

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

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

MEETS THE REQUIREMENTS OF:

- Morgan Morgoil® Lubricant Specification New Oil (Rev. 1.1)
- Danieli Standard Oil 6.12424.9F
- DIN 51517-1 – type C, 51517-2 – type CL.

PAINT COMPATIBILITY

- Shell Morlina S2 B oils are compatible with seal materials and paints normally specified for use with mineral oils.

Morgoil® is a registered trademark of the Morgan Construction Company.

TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	100	150	220	320
Kinematic Viscosity (ASTM D 445)				
@ 40°C mm ² /s	100	150	220	320
@ 100°C mm ² /s	11.2	15	18.3	25
Density @ 15°C kg/m ³ (ISO 12185)	881	887	891	897
Viscosity Index (ISO 2909)	97	95	92	96
Flash Point °C (COC) (ISO 2592)	250	262	280	282
Pour Point °C (ISO 3016)	-18	-15	-15	-12

SHELL MORLINA S4 B

ADVANCED BEARING AND CIRCULATING OILS

PREVIOUSLY SHELL OMALA RL

DESIGNED TO MEET CHALLENGES



Shell Morlina S4 B oils are high performance synthetic bearing and circulation lubricants, based on high performance base fluids. It offers outstanding lubrication performance under severe operating conditions, including improved energy efficiency and long service life even in severe operating conditions.

PERFORMANCE FEATURES

LONG OIL LIFE-MAINTENANCE SAVING

- The use of highly stable synthetic base oils in conjunction with a robust rust and oxidation inhibitor package helps provide excellent oxidation and thermal stability. This provides Shell Morlina S4 B with extending maintenance capability compared to conventional oils.
- In addition it helps resist the formation of harmful products of oxidation at high operating temperatures, to help maintain system cleanliness and therefore reliability of the equipment.

EXCELLENT WEAR AND CORROSION PROTECTION

- Shell Morlina S4 B has been formulated to provide excellent anti-wear performance and provides high levels of wear protection for plain and rolling element bearings and moderately loaded gearboxes, compared to mineral oil-based products. This helps provide superior gear and bearing component life.
- In addition it also provides outstanding rust and corrosion protection of all metal surfaces.

ENHANCING SYSTEM EFFICIENCY

- Shell Morlina S4 B can help improve the efficiency of lubrication in bearing and circulating systems. The superior low temperature performance and reduced change in viscosity with increase in temperature in comparison to mineral oil-based. Products provide better lubrication at low start-up temperatures and the opportunity for energy.
- Savings through reduced pumping and flow losses during normal operating conditions.
- Rapid water shedding and air release properties further enhance the efficiency of the lubrication system by helping maintain critical oil films between loaded components.

APPLICATIONS

SEVERE OPERATING CONDITIONS

- Shell Morlina S4 B is recommended for systems including moderately loaded gearboxes, operating under severe conditions such as low or high temperatures or with wide temperature variations.

LUBRICATED FOR LIFE SYSTEMS

- The long oil life of Shell Morlina S4 B makes it suitable for use in certain 'lubricated-for-life' systems.

BEARING AND CIRCULATING OIL SYSTEMS

- Suitable for use in systems containing plain or rolling element bearings, including those highly loaded bearings found in cement or quarrying applications.

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

MEETS THE REQUIREMENTS OF:

- ISO 12925-1 Type CKS specification
- Alfa Laval Group D gearbox applications
- Aerzen Maschinenfabrik GmbH Blower applications
- Baltimore Aircoil Gear Boxes
- Cincinnati Machine Various P applications
- David Brown Table H applications
- Emerson Power Transmission
- GEA Westfalia Separator GmbH
- Renold Gears (various applications)
- Sharpe E-series worm gear reducers
- Winsmith (Peerless-Winsmith Inc) Worm gear reducer.

SEAL AND PAINT COMPATIBILITY

- Shell Morlina S4 B is compatible with all seal materials and paints normally specified for use with mineral oils.

CHANGE OVER PROCEDURE

- Shell Morlina S4 B is compatible with petroleum mineral oils and no special change-over procedure is necessary. However, to realise the full benefits, it should not be mixed with other oils.
- It is also advisable to ensure that oil systems are clean and free from contamination to optimise potential service life.

TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	150	220
Kinematic Viscosity (ISO 3104) @ 40°C mm ² /s	150	220
@ 100°C mm ² /s	19.8	25.9
Viscosity Index (ISO 2909)	149	149
Density @ 15°C kg/m ³ (ISO 12185)	846	848
Flash Point °C (COC) (ISO 2592)	236	240
Pour Point °C (ISO 3016)	-54	-48
Emulsion Test, mins. (ASTM D 1401)	15	15
Foam Test, Seq II (ml foam at 0/10 mins.) (ASTM D 892)	0/0	0/0
FZG Load Carrying Test DIN 51354-2 A/8.3/90 – Failure load stage	>12	>12