



Shell Omala S3 WX 320

- Long Service Life
- Worm Drive Applications

Advanced Synthetic Industrial Gear Oil

Shell Omala S3 WX is an advanced synthetic industrial worm drive gear oil formulated using specially selected polyalkylene glycol base fluids and additives. It offers outstanding lubrication performance under severe operating conditions.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long oil life - maintenance saving**

Shell Omala S3 WX is formulated to provide good oxidation and thermal stability, help extend lubricant life and resist the formation of harmful oxidation products at high operating temperatures. This helps maintain system cleanliness over extended maintenance intervals.

- Shell Omala S3 WX offers the potential to extend service intervals significantly compared to conventional industrial gear oils.

- **Resistance against wear**

Shell Omala S3 WX is formulated to have high load carrying capacity providing long component life even under shock loading conditions. The product also has a low coefficient of friction relative to mineral and synthetic PAO based gear oils. These features provide benefits over mineral oil-based products in terms of gear and bearing component life.

Main Applications



- **Extended life systems**

Shell Omala S3 WX is particularly recommended for certain systems where maintenance is infrequent, or systems are inaccessible (e.g. yaw gears in wind turbine installations).

- **Enclosed industrial worm gear systems**

Recommended for industrial worm gear reduction systems operating under severe operating conditions, such as high load, very low or elevated temperatures and wide temperature variations.

- **Other applications**

Shell Omala S3 WX oils are suitable for lubrication of bearings and other components in circulating and splash-lubricated systems.

- Shell Omala S3 WX is not recommended for the lubrication of components manufactured from aluminium or aluminium alloys.

Specifications, Approvals & Recommendations

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Compatibility & Miscibility

- **Seal & Paint Compatibility**

High quality epoxy paints are recommended, as polyalkylene glycols will tend to attack certain conventional paints. Shell Omala S3 WX has been found to be satisfactory with nitrile and Viton seal materials, although Viton seals are preferred.

- **Change-over Procedure**

Shell Omala S3 WX contains polyalkylene glycols and is not compatible with mineral oils or most other synthetic lubricant types. Care should be taken when changing from such products to Shell Omala S3 WX.

- The system should be flushed with the minimum quality of Shell Omala S3 WX, operating under no load and draining whilst warm. Ideally, seals exposed to mineral oils should also be replaced. Inspect the lubricant after a few days use. Ensure that oil systems are clean and free from concentration.
- Shell Omala S3 WX is also not miscible with some other polyalkylene glycols, so caution is needed when topping up. Generally, the preference is to avoid mixtures by draining and refilling.

Typical Physical Characteristics

Properties			Method	Shell Omala S3 WX 320
Viscosity Grade			ISO 3448	320
Kinematic Viscosity	@40°C	mm ² /s	ISO 3104	321
Kinematic Viscosity	@100°C	mm ² /s	ISO 3104	52.7
Viscosity Index			ISO 2909	230
Flash Point (COC)		°C	ISO 2592	250
Pour Point		°C	ISO 3016	-39
Density	@15°C	kg/m ³	ISO 12185	1 056
FZG Load Carrying Test		failure load stage minimum	DIN 51354-2 A/8.3/90	12

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

• Health and Safety

This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <https://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.