



# Shell Omala S4 GXV 320

- *Extra Life and Protection*
- *Special Applications*

## Advanced Synthetic Industrial Gear Oil

Shell Omala S4 GXV 320 is an advanced synthetic heavy duty industrial gear oil, approved by Siemens AG, offering outstanding lubrication performance under severe operating conditions, including reduced friction, long service life, high resistance to micro-pitting for optimal gear protection and superb compatibility with seals.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

#### • Long oil life - maintenance saving

Shell Omala S4 GXV 320 is formulated using an advanced additive system in combination with specially selected synthetic base fluids to provide outstanding resistance to breakdown over long duration and/or high temperature operation.

Shell Omala S4 GXV 320 can operate successfully at bulk temperatures up to 120°C. Shell Omala S4 GXV 320 offers the potential to significantly extend service intervals compared to conventional industrial gear oils.

#### • Excellent wear and corrosion protection

Shell Omala S4 GXV 320 is formulated to have excellent load carrying capacity and micro-pitting performance providing long component life even under shock loading conditions. These features provide benefits over mineral oil-based products in terms of gear and bearing component life.

Shell Omala S4 GXV 320 also has excellent corrosion protection, even in the presence of contamination by water and solids.

#### • Maintaining system efficiency

Shell Omala S4 GXV 320 can help maintain or enhance the efficiency of industrial gear systems through improved low temperature performance and lower friction in comparison to mineral oil-based products. This provides better lubrication at low start-up temperatures.

### Specifications, Approvals & Recommendations

- ISO 12925-1 Type CKD
- ANSI/AGMA 9005-F16
- Siemens AG – Omala S4 GXV ISO 150 – 680 are approved by Siemens AG for use in Flender gearboxes and gear motors.

### Main Applications



#### • Gear motor systems and other inaccessible installations

Shell Omala S4 GXV 320 is particularly recommended for certain systems where extra long life is required, maintenance is infrequent or systems are inaccessible.

#### • Excellent compatibility with seals, paints and sealants

Recommended for industrial reduction gear systems using a wide range of seals, including nitrile rubber and fluoro-elastomers. Meets the demanding requirements of Siemens for Flender gearboxes and gear motors.

#### • Enclosed industrial gear systems

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

#### • Other applications

Shell Omala S4 GXV 320 is suitable for lubrication of bearings and other components in circulating and splash-lubricated systems.

For highly loaded worm drives the Shell Omala “W” series oils are recommended. For automotive hypoid gears, the appropriate Shell Spirax Oil should be used.

- China National Standard GB 5903-2011 CKD
- AIST (US Steel) Req. No. 224

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

- DIN 51517-3 (CLP)

## Typical Physical Characteristics

| Properties             |        |                            | Method     | Shell Omala S4 GXV 320 |
|------------------------|--------|----------------------------|------------|------------------------|
| Kinematic Viscosity    | @40°C  | mm <sup>2</sup> /s         | ASTM D445  | 320                    |
| Kinematic Viscosity    | @100°C | mm <sup>2</sup> /s         | ASTM D445  | 37                     |
| Viscosity Index        |        |                            | ASTM D2270 | 169                    |
| Flash Point (COC)      |        | °C minimum                 | ASTM D92   | 240                    |
| Pour Point             |        | °C                         | ASTM D97   | -42                    |
| Density                | @15°C  | kg/m <sup>3</sup>          | ASTM D4052 | 866                    |
| Four Ball EP Weld load |        | kg minimum                 | ASTM D2783 | 250                    |
| FZG Load Carrying Test |        | failure load stage minimum | A/8,3/90   | 14                     |

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

Omala S4 GXV 320 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 Material Safety Data Sheet, which can be obtained from [www.epc.shell.com](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

### • Change over procedure

Omala S4 GXV 320 is based on synthesized hydrocarbon fluids and is compatible with petroleum mineral oil-based industrial gear lubricants - no special change-over procedure is necessary. However, to achieve the complete benefit of Omala S4 GXV 320, it should not be mixed with other oils.

It is also advisable to ensure that oil systems are clean and free from contamination.

### • Advice

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