



Previous Name: Shell Hyperia S

Shell Omala S4 Wheel 680

- Extra protection
- Geared Wheel Hub applications

Advanced Synthetic Industrial Gear Oil

Shell Omala S4 Wheel is an advanced synthetic heavy duty industrial gear oil offering outstanding lubrication performance under severe operating conditions, including improved energy efficiency and long service life. It is recommended specifically for use in General Electric Off-Highway Motorized Wheels fitted to haul trucks used in mining applications.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long oil life - maintenance saving**

Shell Omala S4 Wheel is formulated to resist chemical and thermal breakdown and to resist the formation of harmful oxidation products at high operating temperatures to help maintain system cleanliness over extended maintenance intervals.

Shell Omala S4 Wheel offers the potential to significantly extend service intervals compared to conventional gear oils.

- **Excellent wear and corrosion protection**

Shell Omala S4 Wheel provides high levels of load carrying capacity even under shock loading conditions giving superior protection compared to mineral oil-based products in terms of gear and bearing component life.

Shell Omala S4 Wheel also provides outstanding rust and corrosion protection of all metal surfaces.

- **Enhanced system efficiency**

Shell Omala S4 Wheel can help maintain or enhance the efficiency of gear systems through improved low temperature performance. This provides better lubrication at low start-up temperatures.

Shell Omala S4 Wheel also has excellent water shedding and air release properties helping it maintain critical oil films and efficient lubrication.

Main Applications



- **Proven performance in off-highway applications**

Shell Omala S4 Wheel has a long history of use in severe off-highway applications and extreme climates. Its advanced, synthetic formulation meets the requirements of major equipment builders such as General Electric, Komatsu, Euclid-Hitachi and Liebherr.

- **Approved for use in GE and Hitachi motorised wheel hubs**

Specially suitable for the gearcases of General Electric and Hitachi motorised wheels fitted to haul trucks used in mining applications.

- **Enclosed industrial gear systems**

For use in enclosed 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 Wheel oils are 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.

Specifications, Approvals & Recommendations

- David Brown S1.53.106H
 - US Steel 224
 - DIN 51517-3 (CLP)
 - **Approved by GE under GEK-30375H against the following :**
 - ISO 220 GE Specification D50E35B
 - ISO 320 GE Specification D50E35C
 - ISO 460 GE Specification D50E35D
 - ISO 680 GE Specification D50E35E
- For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Compatibility & Miscibility

- **Seal & Paint Compatibility**

Shell Omala S4 Wheel is compatible with all seal materials and paints normally specified for use with mineral oils.
- **Change-over Procedure**

Shell Omala S4 Wheel is based on advanced synthetic base fluids and is compatible with petroleum mineral oils - no special changeover procedure is necessary.

However, to achieve the complete benefit of Shell Omala S4 Wheel it should not be mixed with other oils. It is also advisable to ensure that oil systems are clean and free from contamination.

Typical Physical Characteristics

Properties			Method	Shell Omala S4 Wheel 680
Kinematic Viscosity	@40°C	mm ² /s	ISO 3104	680
Kinematic Viscosity	@100°C	mm ² /s	ISO 3104	61
Viscosity Index			ISO 2909	157
Flash Point (COC)		°C	ISO 2592	274
Pour Point		°C	ISO 3016	-43
Density	@15°C	kg/m ³	ISO 12185	860.7
FZG Load Carrying Test		failure load stage minimum	DIN 51354-2 A/8.3/90	12
Timken OK Load		lbs minimum	ASTM D2782	80

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 & Safety**

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.