



Shell Omala SG 680

Industrial Gear Oils

Shell Omala SG oils are high quality extreme-pressure oils designed primarily for the lubrication of heavy duty industrial gears. Their high load carrying capacity and anti-friction characteristics combine to offer superior performance in gears.

- *Extra Protection*
- *Standard Application*

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long oil life – Maintenance saving**

Shell Omala SG Oils are formulated to resist thermal and chemical breakdown throughout the maintenance interval. They withstand high thermal loading and resist the formation of sludge to provide extended oil life capability, even with bulk oil temperatures of up to 100°C in certain applications.

- **Excellent wear & corrosion protection**

Excellent load carrying capacity reduces gear tooth and bearing wear on steel components.

Shell Omala SG has excellent corrosion protection, protecting steel components, even in the presence of contamination by water and solids.

- **Maintaining system efficiency**

Shell Omala SG Oils have excellent water separation properties, such that excess water can be drained easily from lubrication systems to help extend the life of the gears and ensure efficient lubrication of the contact areas.

Water can greatly accelerate surface fatigue of gears and bearings as well as promoting ferrous corrosion on internal surfaces. Water contamination should therefore be avoided or removed as quickly as possible after the occurrence.

Main Applications



- **Enclosed industrial gear systems**

Shell Omala SG Oils are formulated using an effective sulphur-phosphorus additive system to provide an extreme pressure performance which allow trouble-free application in most enclosed industrial gearboxes using steel spur and helical gears.

- **Highly loaded gears**

Shell Omala SG Oils have an effective full extreme pressure (EP) additive system allowing them to be used in highly-loaded gear systems.

- **Other applications**

Shell Omala SG Oils are suitable for lubrication of bearings and other components in circulating and splash-lubricated systems.

For highly loaded worm drives, Shell Omala S4 WE, Shell Morlina S4 B and Shell Omala S1 W are recommended.

For automotive hypoid gears, the appropriate Shell Spirax Oil should be used.

Shell do not recommend/support use in systems with fine filtration (<10 microns) because sustained foam control performance is not assured. Please consult your Shell Local Technical Advisor and Product Application Specialist

Specifications, Approvals & Recommendations

- ISO 12925-1 CKC
- DIN 51517-3 CLP
- ANSI/AGMA 9005-F16
- GB 5903-2011 L-CKC
- Approved by SEW Eurodrive according <https://www.sew-eurodrive.de/lubricants/>

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

Typical Physical Characteristics

Properties			Method	Shell Omala SG 680
ISO Viscosity Grade			ISO 3448	680
Kinematic Viscosity	@40°C	mm ² /s	ISO 3104	680
Kinematic Viscosity	@100°C	mm ² /s	ISO 3104	38
Viscosity Index			ISO 2909	92
Density	@15°C	kg/m ³	ISO 12185	912
Flash Point (COC)		°C	ISO 2592	270
Pour Point		°C	ISO 3016	-9

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

Shell Omala SG 680 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 <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.