



Previous Name: Shell Omala HD

# Shell Omala S4 GX

## Advanced Synthetic Industrial Gear Oil

- EXTRA PROTECTION
- EXTRA LIFE
- SPECIAL APPLICATIONS

Shell Omala S4 GX is an advanced synthetic heavy duty industrial gear oil offering outstanding lubrication performance under severe operating conditions, including reduced friction, long service life and high resistance to micro-pitting for optimal gear protection.

### Performance Benefits

- **Long oil life – Maintenance saving**

Shell Omala S4 GX 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.

This performance is recognised by Flender AG where a formal approval for 20,000 hours (four years) at 80°C usage as been granted.

Shell Omala S4 GX can operate successfully at bulk temperatures up to 120°C.

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

- **Excellent wear & corrosion protection**

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

- **Maintaining system efficiency**

Shell Omala S4 GX 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.

Shell Omala S4 GX 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.

### Applications

- **Wind turbines and other inaccessible installations**

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

- **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 GX 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 and Approvals

Meets ISO 12925-1 Type CKD, except ISO 1000  
 Meets ANSI/AGMA 9005-E02 (EP), except ISO 1000  
 Meets US Steel 224, except ISO 1000  
 Fully approved by Flender AG  
 Meets David Brown S1.53.106, except ISO 1000  
 Meets DIN 51517-3 (CLP), except ISO 1000  
 Approved for wind turbine gearboxes by:  
 Gamesa  
 Dongfang Wind Turbines  
 Dalian Heavy Industries  
 Sinovel

## Health and Safety

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

## Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

## Advice

Check compatibility with other products before use. Advice on applications not covered in this leaflet may be obtained from your Shell representative.

## Typical Physical Characteristics

Shell Omala S4 GX		68	150	220
ISO Viscosity Grade	ISO 3448	68	150	220
Kinematic Viscosity	ISO 3104			
at 40°C	mm <sup>2</sup> /s	69.3	157.7	229.4
at 100°C	mm <sup>2</sup> /s	11.4	21.7	28.3
Viscosity Index	ISO 2909	158	163	160
Flash Point COC	°C ISO 2592	228	238	250
Pour Point	°C ISO 3016	-54	-45	-45
Density at 15°C	kg/m <sup>3</sup> ISO 12185	861	877	881
FZG Load Carrying Test	DIN 51354-2			
Failure load stage	A/8,3/90	>12	>14	>14
	A/16,6/90	>12	>14	>14
Timken OK Load	lbs ASTM D 2782	85	>85	>85

Shell Omala S4 GX		320	460	680
ISO Viscosity Grade	ISO 3448	320	460	680
Kinematic Viscosity	ISO 3104			
at 40°C	mm <sup>2</sup> /s	312.7	462.6	670.4
at 100°C	mm <sup>2</sup> /s	35.4	50.0	64.9
Viscosity Index	ISO 2909	159	170	169
Flash Point COC	°C ISO 2592	252	264	256
Pour Point	°C ISO 3016	-42	-36	-33
Density at 15°C	kg/m <sup>3</sup> ISO 12185	883	879	881
FZG Load Carrying Test	DIN 51354-2			
Failure load stage	A/8,3/90	>14	>14	>14
	A/16,6/90	>14	>14	>14
Timken OK Load	lbs ASTM D 2782	>85	>85	>85

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.