

Shell OMALA® Oils HD

Synthetic heavy duty industrial gear oils

Shell OMALA® Oils HD are advanced synthetic heavy duty industrial gear oils offering outstanding lubrication performance under severe operating conditions, including improved energy efficiency, long service life and high resistance to micro-pitting for optimal gear protection.

Performance Features and Benefits

- **Excellent load carrying capacity and micro-pitting performance providing long component life**

Provides high levels of load carrying capacity even under shock loading conditions, along with high resistance to micro-pitting (grey staining). These features provide benefits over mineral oil-based products in terms of gear and bearing component life.

- **Excellent oxidation and thermal stability extending lubricant life**

Resists the formation of harmful products of oxidation at high operating temperatures, improving system cleanliness and therefore reliability of the equipment. Shell OMALA® Oils HD are formally approved by Flender AG for at least 20,000 operating hours or four years, assuming an average operating temperature of 80 °C. Shell OMALA® Oils HD can operate successfully at bulk operating temperatures of up to 120 °C.

- **Longer service intervals**

Extended component and lubricant life offers the opportunity to extend service intervals and to reduce maintenance and disposal costs.

- **Exceptional lubricant performance improving gear efficiency**

Offers improved low temperature performance and reduced change in viscosity with increase in temperature in comparison to mineral oil-based products. This provides better lubrication at low start-up temperatures and the opportunity for energy savings by optimizing the viscosity for normal operating conditions.

- **Outstanding rust and corrosion protection of all metal surfaces**

- **Rapid water shedding and air release performance**

Main Applications

- Enclosed industrial reduction gear systems operating under severe operating conditions, such as high load, very low or elevated temperatures and wide temperature variations
- Particularly recommended for certain 'lubricated-for-life' systems
- Plain and rolling element bearings
- Oil circulation systems

Advice on applications not covered in this handbook may be obtained from your Shell representative.

Specifications, Approvals, and Recommendations

Meet the ISO 12925-1 Type CKD specification.
Meet the ANSI/AGMA 9005-D94 specification.
Meet the US Steel 224 specification.
Meets the David Brown S1.53.101 specification.
Fulfills the requirements of and is approved by Flender AG.

Compatibility and Miscibility

Seal and paint compatibility

Shell OMALA® Oils HD are compatible with all seal materials and paints normally specified for use with mineral oils.

Handling and Safety Information

For information on the safe handling, storage, or use of this product, refer to its Material Safety Data Sheet at <http://www.epc.shell.com/>. If you are a Shell Distributor, please call 1+800-332-6457 for all of your service needs. All other customers please call 1+800-237-8645 for all of your service needs.

Protect the Environment

Do not discharge into drains, soil, or water.

Typical Physical Characteristics

Shell OMALA® Oils HD			150	220	
Kinematic Viscosity	@ 40 °C	cSt	157.7	229.4	
	@ 100 °C	cSt	21.7	28.3	
Viscosity Index			163	160	
Flash Point (COC)			°C	238	250
Pour Point			°C	-45	-45
Specific Gravity			@ 15°C	0.877	0.881
FZG			failure load stage	>12	>12
Timken OK Load			lbs	>85	>85

Shell OMALA® Oils HD			320	460	680	1000	
Kinematic Viscosity	@ 40 °C	cSt	312.7	462.6	670.4	1002	
	@ 100 °C	cSt	35.4	50	64.9	94.4	
Viscosity Index			159	170	169	183	
Flash Point (COC)			°C	252	264	256	260
Pour Point			°C	-42	-36	-33	-24
Specific Gravity			@ 15°C	0.883	0.879	0.881	0.901
FZG			failure load stage	>12	>12	>12	>12
Timken OK Load			lbs	>90	>90	>90	>90

These characteristics are typical of current production. While future production will conform to Shell specifications, variation in these characteristics may occur.