

Shell Omala Oils

High quality industrial gear and bearing oils



Shell Omala Oils are high quality, lead-free, 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 and other industrial applications.

Applications

Shell Omala Oils are formulated using high viscosity index, solvent refined, base oils and incorporate a special sulphur-phosphorus additive to provide an extreme pressure performance which allow trouble free application in following areas:

- **Steel gear transmissions**
- **Industrial gear drives where a full EP performance is required**
- **Bearings**
- **Circulating and splash lubricated systems**

For automotive hypoid gears, the appropriate Shell Spirax Oil should be used, as the Omala are not designed for this purpose.

Performance Features and Benefits

- **Outstanding oxidation and thermal stability**
Withstands high thermal loading and resists the formation of sludge. Provides extended oil life, even with bulk oil temperatures of up to 100°C in certain applications.
- **Effective corrosion inhibition**
Protects both steel and bronze components, even in the presence of contamination by water and solids.
- **Lead-free**
Operator acceptability. Reduced health and product removal risks.
- **Wide range of viscosities**
Caters for the most varied and arduous industrial applications.
- **Water shedding properties**
Omala also have excellent water separation properties, such that excess water can be drained easily from lubrication systems.
Water can greatly accelerate surface fatigue with 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.

- **Excellent Load Carrying Capacity**
Reduces gear tooth and bearing wear on both steel and bronze components. The load carrying capacity of Omala, as determined in laboratory tests, is significantly better than that of leaded gear oils. Gear tooth wear is reduced, particularly under conditions of high load.

Typical test results for Omala 220 are :

Extreme Pressure Properties Timken wear and lubricant testing machine Min OK Load ASTM D 2782	60 lbs
Four Ball Extreme Pressure Test Initial seizure load ASTM D 2783	250 kg
FZG Load Carrying Test Failure load stage FZG A/8.3/90 FZG A/16.6/90	>12 >12

Specification and Approvals

Meets the ISO 12925-1 Type CKC specification.
Meets the David Brown S1.53.101 specification.

Advice

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

Health and Safety

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

Protect the environment

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

Typical Physical Characteristics

Omala		68	100	150
ISO Viscosity Grade	ISO 3448	68	100	150
Kinematic Viscosity	ISO 3104			
at 40 °C	mm ² /s	68	100	150
at 100 °C	mm ² /s	8.7	11.4	15.0
Viscosity Index	ISO 2909	99	100	100
Flash Point COC	°C ISO 2592	190	195	195
Pour Point	°C ISO 3016	-24	-24	-24
Density at 15 °C	kg/m ³ ISO 12185	887	891	897

Omala		220	320	460
ISO Viscosity Grade	ISO 3448	220	320	460
Kinematic Viscosity	ISO 3104			
at 40 °C	mm ² /s	220	320	460
at 100 °C	mm ² /s	19.4	25.0	30.8
Viscosity Index	ISO 2909	100	100	97
Flash Point COC	°C ISO 2592	200	205	205
Pour Point	°C ISO 3016	-18	-15	-12
Density at 15 °C	kg/m ³ ISO 12185	899	903	904

Omala		680	800	1000
ISO Viscosity Grade	ISO 3448	680		1000
Kinematic Viscosity	ISO 3104			
at 40 °C	mm ² /s	680	800	1000
at 100 °C	mm ² /s	38.0	39.0	45.5
Viscosity Index	ISO 2909	92	92	85
Flash Point COC	°C ISO 2592	205	215	225
Pour Point	°C ISO 3016	-9	-6	-6
Density at 15 °C	kg/m ³ ISO 12185	912	930	931

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