

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.

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. Reduces health and product removal risks.
- **Wide range of viscosities**
Provides for the most varied and arduous industrial applications.
- **Water shedding properties**
Shell OMALA® Oils 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 Shell OMALA® Oils, 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.

Main 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 allows 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 Shell OMALA® Oils are not designed for this purpose.

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

Specifications, Approvals, and Recommendation

Meets ISO 12925-1 Type CKC
DIN 51517-Part 3 (CLP)
AGMA 9005-E02
US steel 224
Meets David Brown S1.53.101

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 test results for Shell OMALA® Oil 220 are:

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

Typical Physical Characteristics

Shell OMALA® Oils			68	100	150	220	320	460
ISO Viscosity Grade			68	100	150	220	320	460
Kinematic Viscosity	@ 40 °C	cSt	68	100	150	220	320	460
	@ 100 °C	cSt	8.7	11.4	15.5	19.4	25.0	30.8
Viscosity Index			99	100	100	100	100	97
Flash Point (COC)		°C	190	195	195	200	205	205
Pour Point		°C	-24	-24	-24	-18	-15	-12
Specific gravity	@ 15 °C	kg/m ³	0.887	0.891	0.897	0.899	0.903	0.904

Shell OMALA® Oils			680	1000	1500	3200
ISO Viscosity Grade			680	1000	1500	3200
Kinematic Viscosity	@ 40 °C	cSt	680	1000	1500	3200
	@ 100 °C	cSt	38.0	45.5	61.4	88.8
Viscosity Index			92	85	91	83
Flash Point (COC)		°C	205	225	260	250
Pour Point		°C	-9	-6	-6	3
Specific gravity	@ 15 °C	kg/m ³	0.912	0.931	0.921	0.937

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