Shell Omala F

Premium quality industrial gear oils

Shell Omala F oils are premium 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.

They are formulated using high viscosity index, solvent refined, base oils and incorporate a special sulphur-phosphorus additive to provide an extreme pressure performance significantly better than that provided by leaded gear oils.

Shell Omala F oils are formally approved by Flender AG

Approvals

Shell Omala F is approved against Flender AG's requirements of 22/1/96 which include

- Sufficient oxidation stability for a lifetime of 10,000 hours or two years at 80°C
- a load stage 12 pass in the FZG double speed test (DIN 51354 Part 2)
- a pass in the FVA-54/II micro pitting (grey staining) test at load stage 10 at 90°C

plus

compatibility with internal gearbox paints

compatibility with solid seals

compatibility with liquid seals

Flender Foam Test

Applications

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

*Shell Omala F should **not** be used for automotive hypoid gears. The appropriate Shell Spirax Oil should be used for this purpose.*

Performance Features

- ***Excellent load carrying and anti-friction characteristics***

  Reduces gear tooth and bearing wear on both steel and bronze components

- ***Outstanding oxidation and thermal stability***

  Withstands high thermal loading and resists the formation of sludge and other harmful products of oxidation. Extended oil life, even with bulk oil temperatures 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 risk

- ***Wide range of viscosities***

  Caters for the most varied and arduous industrial applications

- ***Resistant to micro-pitting***

  Standard setting anti micro-pitting performance to reduce the risk of premature failure through surface distress

- ***Water shedding properties***

  Shell Omala F oils have excellent water separation properties. Excess water can be drained easily from lubrication systems. (Water can greatly accelerate surface fatigue on gears and bearings as well as promoting ferrous corrosion on internal surfaces. Water contamination should be avoided or removed as quickly as possible after the occurrence).

Load Carrying Capacity

The load carrying capacity of Shell Omala F 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. Typical test results for Shell Omala F 220 are:

Extreme Pressure Properties Timken Wear & Lubricant Testing Machine OK Load lbs (IP 240/ASTM-D2782)	60 min.
Four Ball Extreme Pressure Test Initial seizure load kg (IP 239/79)	250
Load Carrying Capacity FZG Gear Machine A/8.3/90 } Failure load A/16.6/90 } stage (IP 334)	>12

Heater Capacity

The capacity of heaters, used to raise bulk oil temperatures, should not exceed 11.5 KJ/m^2 (7.5 W/in^2).

Change-over Procedures

The following procedures and precautions are recommended when changing oils - including leaded grades:-

As a general principle, oil that has been in use for some time should be renewed completely. For complete benefit, Shell Omala F should be not be mixed with other oils.

Gearboxes

Drain the gearbox completely and inspect internally. Remove any sludge deposits manually. Flush the gearbox with new oil. Drain and refill with the appropriate viscosity Shell Omala F oil.

Gear systems

Drain off the old oil. The minimum amount of Shell Omala F oil necessary to maintain circulation should be pumped around the system, for as long as practicable, to flush out all pipe work and inaccessible points. Use warm oil, if possible. Discard the flushing charge and, provided a careful inspection shows the lubrication system, including filters, drains and sumps to be free of contamination, refill with the appropriate viscosity Shell Omala F oil. If the examination is not satisfactory, repeat the procedure.

For newer charges of leaded gear oil, an inspection as detailed should be carried out. If the system is found to be reasonably clean, top-up the existing oil with Shell Omala F oil may be carried out observing the following safeguards:

1. Make top up by adding frequent small quantities, rather than occasional large charges.
2. Inspect the system regularly for an initial period of three months, particularly with regard to the cleanliness of filters. The inspection frequency may be extended gradually to normal manufacturers' recommended periods as long as conditions are satisfactory

Health & Safety

Shell Omala F is unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

Avoid contact with skin. After skin contact, wash immediately with soap and water.

For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet.

Protect the environment

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

Advice

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

Typical Physical Characteristics

Shell Omala F	**68**	**100**	**150**	**220**	**320**	**460**	**680**	**1000**
Kinematic Viscosity								
@ 40°C cSt	68	100	150	220	320	460	680	1000
100°C cSt	8.7	11.4	15.0	19.4	25.0	30.8	38.0	44.3
(IP 71)								
Viscosity Index (IP 226)	100	100	100	100	100	97	92	82
Density @ 15°C kg/l (IP 365)	0.887	0.891	0.897	0.899	0.903	0.904	0.912	0.925
Flash Point °C (PMCC) (IP 34)	191	193	196	199	202	204	204	202
Pour Point °C (IP 15)	-27	-27	-21	-18	-18	-9	-9	-6

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