

Shell Omala HD

High performance synthetic industrial gear and bearing oils



Omala HD are based on the highest quality synthesized hydrocarbon fluids. These base fluids, combined with specially selected additives, offer an outstanding lubrication performance under the severest operation conditions, improved gear efficiency as well as HIGH micro pitting resistance for an optimal gear protection.

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*

Performance Features and Benefits

Omala HD are formally approved by Flender AG fulfilling their requirements including :

- **Oxidation stability** for a lifetime at 80°C of at least 10'000 hours or two years
- **Excellent Load carrying capacity** load stage 12 pass in the FZG double speed test (DIN 51354 Part 2)
- **Micro pitting resistance HIGH** according to the FVA-54/II test

as well as compatibility proven with internal gearbox paints, solids and liquid seals as well as Flender foam test pass result.

Additionally, they provide :

- **Superior lubrication performance improving gear efficiency**
- **Significantly better lubrication performance than that provided by conventional petroleum mineral oils**
- **Excellent oxidation & thermal stability extending components and lubricant life**
- **Resists the formation of harmful products of oxidation at high operating temperatures improving system cleanliness and therefore reliability of the equipment**
- **Low pour point allowing effective lubrication at low start-up temperatures**

- **Longer periods between servicing. Lower maintenance and disposal costs.**
- **Outstanding rust and corrosion protection of all metal surfaces**

Seal & Paint Compatibility

Omala HD are compatible with all seals materials and paints normally specified for use with mineral oils

Change over procedure

Omala HD are compatible with petroleum mineral oils and no special change-over procedure is necessary however to achieve the complete benefit of Omala HD they should not be mixed with other oils. It is also advisable to ensure that oil systems are clean and free from contamination.

Specification and Approvals

Meet the ISO 12925-1 Type CKD specification.
Meet the ANSI/AGMA 9005-D94 specification.
Meet the US Steel 224 specification.
Fulfill the requirements of and is approved by Flender AG.
Meet 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 HD | | | 68 | 100 | 150 | 220 |
|---------------------|--------------------|--------------------|--------------------|------|------|------|
| Kinematic Viscosity | | ISO 3104 | | | | |
| | at 40°C | | mm ² /s | 68 | 100 | 150 |
| | at 100°C | mm ² /s | 10.7 | 14.3 | 19.7 | 25.8 |
| Viscosity Index | | ISO 2909 | 145 | 145 | 149 | 148 |
| Density at 15°C | kg/m ³ | ISO 12185 | 842 | 846 | 849 | 853 |
| Flash Point COC | °C | ISO 2592 | 225 | 230 | 235 | 240 |
| Pour Point | °C | ISO 3016 | -57 | -54 | -54 | -48 |
| FZG-Test | A/16.6/90 | DIN 51354-2 | | | | |
| | Failure load stage | | >12 | >12 | >12 | >12 |
| Timken-OK-Value | lbs | ASTM D 2782 | >90 | >90 | >90 | >90 |

| Omala HD | | | 320 | 460 | 680 | 1000 |
|---------------------|--------------------|--------------------|--------------------|------|------|------|
| Kinematic Viscosity | | ISO 3104 | | | | |
| | at 40°C | | mm ² /s | 320 | 460 | 680 |
| | at 100°C | mm ² /s | 33.4 | 45.5 | 62.6 | 93.9 |
| Viscosity Index | | ISO 2909 | 145 | 155 | 164 | 178 |
| Density at 15°C | kg/m ³ | ISO 12185 | 855 | 857 | 859 | 860 |
| Flash Point COC | °C | ISO 2592 | 245 | 245 | 245 | 245 |
| Pour Point | °C | ISO 3016 | -45 | -42 | -39 | -36 |
| FZG-Test | A/16.6/90 | DIN 51354-2 | | | | |
| | Failure load stage | | >12 | >12 | >12 | >12 |
| Timken-OK-Value | lbs | ASTM D 2782 | >90 | >90 | >90 | >90 |

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