Shell Alexia 50

Cylinder Lubricant for low-speed crosshead diesel engines

Shell Alexia 50 is a premium quality cylinder lubricant designed for use in all low speed crosshead diesel engines which burn residual fuel with sulphur content higher than 1.5%wt.
It is particularly suitable for the new generation of highly rated, fuel efficient, low speed marine diesel engines operating with higher pressures & higher liner wall temperatures.
Shell Alexia 50 is blended from high viscosity index base oils and additive technology developed by Shell.

Main Applications

- Cylinder lubrication of low speed marine diesel engines which burn residual fuel with a sulphur higher than 1.5%wt.
- Shell Alexia 50 is suitable for use in applications where high levels of Acid Stress occur. High levels of Acid Stress can occur if liner wall temperatures are too low, charge air temperatures are too low or lubrication feed rate is not sufficient to ensure a suitable BN throughput for acid neutralisation.

Performance Specifications

Approved by all manufacturers of low speed crosshead diesel engines

Performance Benefits

Improved Engine Reliability

- Outstanding acid neutralising properties which help to prolong the life of components
- Minimal deposits on pistons, piston rings, ring grooves, under piston spaces and in cylinder ports.
- Low cylinder and piston ring wear with typical cylinder wear rates below 0.05 mm per 1000 hours due to enhanced boundary lubrication properties.

Lower Maintenance Costs

- Keeps engines exceptionally clean, minimises maintenance requirements and allows the periods between overhauls to be extended

Re-assurance

- Completely stable in storage under all the widely varying conditions encountered aboard ship
- Proven ability to keep engines clean and control wear & scuffing in the latest engine designs
- Compatible with all normal oil seal materials.

Oil Feed Rates

Insufficient cylinder oil feed rates can contribute to Acid Stress & hence higher rates of corrosive wear. Insufficient cylinder oil feed rates can also reduce the cleaning of ring/groove deposits which in turn can lead to seized & broken rings, blow-by of hot gases & scavenger fire risks.
To obtain optimum performance with Shell Alexia Oil 50 it is important to :-

- Observe the engine manufacturers' recommended cylinder oil feed rates.
- Observe the engine manufacturers' recommendations in terms of engine operating parameters.
- Regularly scavenge port inspections can help verify acceptable running conditions.
- Consider using higher rates, especially when running in new liners &/or rings & under conditions of high Acid Stress.
- Ensure equally distributed oil feeds to each injection quill

- Ensure the lubricator drive system is well maintained & properly adjusted
- Clean & overhaul lubricator boxes according to engine manufacturers' recommendations

Advice

Applications where the fuel sulphur content is consistantly below 1.5% should be discussed with your Shell representative.
Please note that due to its high additive content, it is not advisable to mix Shell Alexia 50 with any other cylinder lubricant.
Advice on applications not covered in this leaflet may be obtained from your Shell representative.

Health & Safety

Shell Alexia 50 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained. Avoid contact with skin. Use impervious gloves with used oil. 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.

Typical Physical Characteristics

Shell Alexia 50	Test Method	Result	Units
SAE Viscosity Grade		50	
Kinematic Visc. 40°C	ASTM D445 - IP 71	225	mm2/s
100°C	ASTM D445 - IP 71	19.5	mm2/s
Viscosity Index	ASTM D2270 - IP 226	>95	
Density 15°C	ASTM D4052 - IP 365	0.932	kg/l
Flash Point (Closed)	ASTM D 93 - IP 34	>205	°C
Pour point	ASTM D 97 - IP 15	<-6	°C
BN	ASTM D2896 - IP 276	70	mg/KOH/g
Sulphated Ash	ASTM D874 - IP 163	8.7	%wt

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