Technical Data Sheet

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 up to 4.0% weight.
It is particularly suitable for the new generation of highly rated, fuel efficient, low speed marine diesel engines operating with higher pressures, higher temperatures and longer strokes.
Shell Alexia 50 is blended from high viscosity index base oils and additive technology developed by Shell.

DESIGNED TO MEET CHALLENGES

Performance, Features & 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 lead to corrosive wear, seized and broken rings and consequent blow-by and scavenge fire risks, and to the formation of excessive deposits. To obtain optimum performance with Shell Alexia Oil 50 it is important to:

- Observe the engine manufacturers' recommended cylinder oil feed rates as the minimum.
- Consider using higher rates, especially when running in new liners and/or rings.
- Equally distribute the oil between injection quills.
- Ensure the lubricator drive system is well maintained and properly adjusted.
- Clean and overhaul lubricator boxes according to engine manufacturers' recommendations.

Main Applications

- Cylinder lubrication of low speed marine diesel engines which burn residual fuel with a sulphur content of between 1.0 to 4.0% weight.

Specifications, Approvals & Recommendations

Approved by all manufacturers of low speed crosshead diesel engines.

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Compatibility & Miscibility

- **Mixing of cylinder lubricants**

  Please note that due to its high additive content, it is not advisable to mix Shell Alexia 50 with any other cylinder lubricant.

Typical Physical Characteristics

Properties			Method	Shell Alexia 50
SAE Viscosity Grade				50
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	225
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	19.5
Viscosity Index			ASTM D2270	>95
Density	@15°C	kg/l	ASTM D4052	0.932
Flash Point (PMCC)		°C	ASTM D93	>205
Pour Point		°C	ASTM D97	<-6
BN		mg/KOH/g	ASTM D2896	70
Sulphated Ash		% wt	ASTM D874	8.7

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

Health, Safety & Environment

- **Health and 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.

  Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from http://www.epc.shell.com/

- **Protect the Environment**

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

Additional Information

- **Advice**

  Advice on applications not covered here may be obtained from your Shell representative.