



Shell ALEXIA 140

- ULTIMATE PROTECTION
- HIGH PERFORMANCE

High Performance Cylinder Lubricant for two-stroke low speed diesel engines

Shell Alexia 140 is a high performance cylinder lubricant designed for use in two-stroke low speed diesel engines running under conditions of extreme oil stress requiring high alkalinity and detergency levels. It has been engineered to offer excellent performance for the newest, more demanding engines, under challenging operational conditions such as “slow” and “flexible” steaming regimes combined high sulphur fuel levels. With a BN level of 140 Shell Alexia 140 is suitable for use with engines burning residual fuel, providing extra protection at OEM design lubricating feed rates.

Shell Alexia 140 is also ideal for use in on board cylinder oil mixing systems in combination with lower BN Shell Alexia cylinder oil products or Shell Melina system oils. This offers ultimate flexibility to lubricate most demanding engines run across a broad range of sulphur fuel levels and operating conditions.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

• Engine protection

Shell Alexia 140 offers outstanding acid neutralising properties and extra detergency which helps to prolong the life of components and effectively manage lubricating feed rates. It has superior deposit control and minimises deposit build up on pistons, piston rings, ring grooves, under piston spaces and in cylinder ports. Shell Alexia 140 has been especially designed for the most demanding engines and operating conditions, where significantly more protection from the lubricant is required. It is formulated to combat all aspects of oil stress.

Main Applications

• Two-stroke low speed diesel engines - Direct Application

Cylinder lubrication of two-stroke low speed diesel engines running under conditions of extremely high oil stress (for example, engines with very long strokes or fitted with turbocharger cut out) and burning residual fuel oil with Sulphur > 2.5%.

For HFO use in the lower Sulphur range, it is recommended that the results from on board analysis (such as Shell Onboard Alert and Shell Onboard+) and onshore used oil analysis (such as Shell RLA) are used, in conjunction with inspections, to determine whether it would be beneficial to switch to a lower base number product such as Shell Alexia 50 or Shell Alexia S6.

This is particularly important when running under full load conditions, in combination with the lower fuel sulphur levels.

• Two-stroke low speed diesel engines – Special blending Applications (e.g. MDT ACOM or Blend-on-board systems)

Shell Alexia 140 is suitable for on board special blending applications particularly in combination with Shell Alexia S3 or Shell Melina S, providing tailored alkalinity and detergency levels upon engine type and operational needs across the full fuel sulphur range.

Specifications, Approvals & Recommendations

• Cylinder oil feed rates

Insufficient cylinder oil feed rate can lead to corrosive wear, seized and broken rings and consequent blow-by and scavenge fire risks, and to the formation of excessive deposits. The feed rate should be determined in accordance with OEM guidelines and should then be further optimised using a combination of onboard analysis (such as Shell Onboard Alert and Shell Onboard+) and onshore used oil analysis (such as Shell RLA), in conjunction with engine inspections.

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

Typical Physical Characteristics

Properties		Method	Shell Alexia 140
SAE Viscosity Grade			60
Viscosity Index	minimum	ASTM D2270	95
Density	@15°C kg/l	ASTM D4052	0.975
Flash Point (COC)	°C minimum	DIN ISO 2592	250
Pour Point	°C maximum	ASTM D97	-6
BN	mg/KOH/g	ASTM D2896	140
Sulphated Ash	% wt	ASTM D874	16.9

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 140 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 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.

• Oil Condition Monitoring

Shell RLA engine condition monitoring service enables the ship operator to monitor the condition of the oil and equipment and to take remedial action when necessary. This helps to avoid breakdowns and costly downtime.

Shell RLA OPICA is an integrated software system enabling RLA data to be received electronically in the office and/or on the vessel. It contains powerful data management and graphics, enabling efficiency gains in report handling and machine condition monitoring.