



# Shell ALEXIA S3

- EXTRA PROTECTION
- DISTILLATE FUELS
- LOW SULPHUR FUELS

*Cylinder Lubricant for two-stroke low speed diesel engines*

Shell Alexia S3 is a cylinder lubricant designed for use in two-stroke low speed diesel engines. Shell Alexia S3 is suitable for use in engines when operating on low sulphur or distillate fuels of up to 0.5% sulphur. These fuels are expected to be used primarily in Emission Control Areas (ECAs) after the fuel Sulphur limit drops to 0.1% on 1st January 2015.

Shell Alexia S3 has a BN of 25 and is an SAE50 cylinder oil.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

#### Engine protection & cleanliness

Shell Alexia S3 has been optimised to offer excellent cleanliness and protection for all types of engines.

### Main Applications

#### Two-stroke low speed diesel engines

Cylinder lubrication of two-stroke low speed diesel engines when operating on low sulphur or distillate fuel of up to 0.5% sulphur

### Specifications, Approvals & Recommendations

Shell Alexia S3 is validated for use by major manufacturers of low speed crosshead diesel engines including:

- Wärtsilä
- MAN

#### Changeover guidelines

OEM advice should be followed in determining when an engine should switch to Shell Alexia S3. As general guidance the oil should be used at any time when distillate fuel or other fuels with a Sulphur content of <0.5% are being utilised - in the case that the engine switches during a voyage (for instance as it enters an ECA zone) the lubricant should be changed at the same time as the fuel, in accordance with OEM advice.

For further information or support then please contact your local Shell representative.

#### Cylinder Oil Feed Rates

Insufficient cylinder oil feed rates can lead to excessive wear, seized and broken rings. Consequently, this may result in blow-by, scavenge fire risks and in 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 RLA 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.

### Compatibility & Miscibility

#### Mixing of Cylinder Lubricants

Shell Alexia S3 is fully miscible with all other cylinder lubricants. However, for optimum performance, Shell Alexia S3 should not be used in conjunction with any other cylinder lubricant.

### Typical Physical Characteristics

Properties		Method	Shell Alexia S3
SAE Viscosity Grade			50
Viscosity Index	minimum	ASTM D2270 - IP 226	95
Density	@15°C kg/m <sup>3</sup>	ASTM D4052 - IP 365	908
Flash Point (PMCC)	°C	ASTM D93 - IP 34	235

Properties		Method	Shell Alexia S3
Pour Point	°C	ASTM D97 - IP 15	-12
BN	mg/KOH/g	ASTM D2896 - IP 276	25

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 S3 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. 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.