Technical Data Sheet

Replacement For: **Shell Argina T 40**

Shell **Argina** *S3 40*

- *PROTECTION FROM DEPOSITS AND CORROSION*

Lubricants for medium-speed trunk piston engines

Shell Argina S3 40 is a multifunctional crankcase lubricant for highly rated medium-speed diesel engines operating on residual, blended or distillate fuels. Shell Argina S3 40 has a BN of 30 and is designed for conditions of moderate oil stress.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Extended oil life**

  Shell Argina S3 40 is a BN 30 oil which has been optimised to resist oxidation and maintain BN in order to reduce the amount of oil sweetening that is required.

  Please contact your Shell technical representative who will be able to offer additional support in product selection and guidance on extending oil life and minimising sweetening.

- **Engine protection**

  Shell Argina S3 40 has an optimised level of detergency leading to exceptionally clean crankcase, valve deck and pistons. The formulation has been further optimised to reduce deposits in critical areas, e.g. piston undercrown.

- **System efficiency**

  Shell Argina S3 40 has a high detergency/low dispersancy formulation in order to effectively release contaminants and water in centrifugal separators.

  Shell Argina S3 40 can be used to top up engines already running on any other member of the Argina family, giving immediate control of BN without the need for an oil change.

Main Applications

Medium-speed industrial or marine propulsion and auxiliary engines, burning residual fuel oils, which create conditions of moderate oil stress. These conditions usually occur:

- In newer engine designs, less than 10 years old
- Where oil consumption is > 1 g/kWh
- Where load factors are <85%
- Where fuels with sulphur <3% are in use

Shell Argina S3 40 can also be used in marine engine reduction gears and certain other ship-board applications, where specialist lubricants are not required.

Advice on applications not covered in this leaflet may be obtained from your Shell Representative.

Specifications, Approvals & Recommendations

Shell Argina S3 40 is approved by Wartsila and MAN

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

Typical Physical Characteristics

Properties			Method	Shell Argina S3 40
SAE grade (viscosity class)				40
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	130
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	13.7
Viscosity Index			ASTM D2270	101
Density	@15°C	kg/m^3	ASTM D4052	905
Flash Point		°C	ASTM D93	230
Pour Point		°C	ASTM D97	-21
Base Number		mg KOH/g	ASTM D2896	30
Sulphated Ash		% m/m	ASTM D874	3.8

Properties		Method	Shell Argina S3 40
Load Carrying Capacity (FZG Gear Machine)	Failure load stage	ISO 14635-1 A/8.3/90	11

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 Argina S3 40 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 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.

- **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 avioid 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.