Technical Data Sheet

Shell Argina *S5 40*

- *EXTRA PROTECTION FROM DEPOSITS AND CORROSION*
- *EXTENDED OIL LIFE*

Lubricants for medium-speed trunk piston engines

Shell Argina S5 40 is a multifunctional crankcase lubricant for highly rated medium-speed diesel engines operating on residual fuel. Shell Argina S5 40 has a BN of 55 and is designed for the latest high output and low oil consumption engines.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Extended oil life**

  Shell Argina S5 40 is a BN55 oil which has been optimised to resist oxidation, maintain BN and viscosity 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 S5 40 has the highest detergency of all the Shell Argina products, 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 S5 40 has a high detergency/low dispersancy formulation in order to effectively release contaminants and water in centrifugal separators.

  Shell Argina S5 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 very high oil stress. These conditions usually occur:

- In newer, high output engine designs and especially DF (duel fuel) engines
- Where oil consumption is < 0.5 g/kWh
- Where load factors are >90%
- Where fuels with sulphur >3% are in use

Note: Due to its high base number 55, this oil has a high ash content. To avoid excessive ash deposits, do not use with low sulphur fuels, or engines with high oil consumption. For these applications other products in the Shell Argina family may be more suitable.

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

Specifications, Approvals & Recommendations

Shell Argina S5 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 S5 40
SAE grade (viscosity class)				40
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	123
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	13.7
Viscosity Index			ASTM D2270	108
Density	@15°C	kg/m^3	ASTM D4052	920
Flash Point		°C	ASTM D93	230
Pour Point		°C	ASTM D97	-21
Base Number		mg KOH/g	ASTM D2896	55
Sulphated Ash		% m/m	ASTM D874	6.8

Properties		Method	Shell Argina S5 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 S5 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.