Shell **Mysella** *S4 NE 40*

Shell Gas Engine Oil with Emulsion Control Technology

Shell Mysella S4 NE is a high-quality oil blended for use in 4-stroke, spark-ignition engines which require a low ash oil and use natural gas as fuel. Mysella S4 NE satisfies the new generation of stationary gas engines and is designed to meet the emerging limiting emissions of NOx, and those which employ the latest lean or clean burn technology. Mysella S4 NE can also provide better performance in high moisture natural gas reciprocating compressor applications where emulsion control is required.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Prolonged oil life**

  Effective detergent-dispersant technology can improve the resistance against oxidation and nitration, viscosity increase and the formation of harmful acids.

- **Engine protection**

  Shell Mysella S4 NE is formulated with low ash and low phosphorus, offering extended life to valves, pistons, rings, liners, and spark plugs. It also provides reduction of combustion chamber deposits and full compatibility with emission catalysts.

- **Multifunctional capability**

  Shell Mysella S4 NE provides excellent reciprocating compressor cylinder and frame lubrication while displaying emulsion-breaking capabilities to reduce operational disruptions, emulsion carryover and contamination of process liquids.

- **Seal & Paint Compatibility**

  Shell Mysella S4 NE is compatible with seal materials and paints normally specified for use with mineral oils.

Main Applications

- Spark-ignited gas engine fueled by natural gas
- Reciprocating gas compressors cylinders and frames in wet natural gas service.

- It is recommended to control emulsion formation and damage caused by hydraulic lock in compression stages, plus preventing gas processing and transmission disruption by increasing emulsion resistance in typical gas processing equipment such as knock-out pots, coalescing filters, dehydrators, and condensers.

Specifications, Approvals & Recommendations

- Shell Mysella S4 NE is suitable in engine types where a low ash oil is required.

Shell Mysella S4 NE meets requirement of:

- Caterpillar Stationary Gas Engines
- INNIO Waukesha Gas Engines
- Superior Gas Engines
- Dresser Rand Gas Engines
- Cummins Gas Engines
- Reciprocating compressors where a SAE 40 oil is allowed for compressor frame and cylinder applications based on gas composition, discharge pressure and other service criteria. It is particularly recommended when the use of a separate compressor lubricant is not possible without sacrificing engine and compressor protection.

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

Typical Physical Characteristics

Properties			Method	Shell Mysella S4 NE 40
Viscosity Grade				40
Kinematic Viscosity	@40^{0}C	mm^2/s	ASTM D445	114
Kinematic Viscosity	@100^{0}C	mm^2/s	ASTM D445	12.8
Density	@15^{0}C	kg/m^3	ASTM D4052	840
Flash Point		^{0}C	ASTM D93	180
Pour Point		^{0}C	ASTM D97	-18
Base Number		mg KOH/g	ASTM D2896	3.8
Sulphated Ash		% wt	ASTM D874	0.49
Phosphorus		ppm	ASTM D4047	300

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

Health, Safety & Environment

- **Health and Safety**

Shell Mysella S4 NE 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 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.