Technical Data Sheet

Previous Name: **Shell Mysella**

Shell **Mysella** *S2 Z 40*

- *Reliable Protection*
- *Ash-less Content for Two Stroke Engines*

Ash-less stationary gas engine oil

Shell Mysella S2 Z is a heavy-duty lubricant for high performance natural gas engines which require an "ash-less" product. Using ash-less technology Shell Mysella minimises engine wear, deposits in combustion chambers and exhaust ports and viscosity increase in service.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Extended oil life**
  Shell Mysella S2 Z is highly resistant to nitration and oxidation, which can cause filter deposits, viscosity increase and acid build-up.
- **Engine protection**
  New engines will remain almost deposit-free. In addition the detergency of Shell Mysella S2 Z reduces the likelihood of blocking the oil screens and filters.
- **Engine efficiency**
  Shell Mysella S2 Z combines a low tendency to form carbon with a strong detergency system, to avoid port plugging in 2-stroke (2-cycle) engines which essentially eliminates the need to clean cylinder ports between overhauls. The "ash-less" formulation enables spark plugs to remain almost "as new", with their lifetime limited only by spark gap erosion. It also virtually eliminates detonation and pre-ignition, due to the absence of deposit "hot spots".

Main Applications

Two and lightly loaded four stroke spark-ignited engines fueled by natural gas and low pressure natural gas, used in:

- Gas transmission
- Gas gathering / storage
- Gas processing and petrochemical plants
- Electric power generation
- Irrigation pumping service

Specifications, Approvals & Recommendations

Shell Mysella S2 Z is suitable for low BMEP engine types where an ash-less oil is required. These include "American Heritage" engines such as the following:

Suitable for use in engines manufactured by

- Allis-Chalmers
- Ajax
- Caterpillar (except 3400, 3500, 3600)
- Clark
- Climax
- Colt-Fairbanks Morse
- Cooper-Bessemer (2-cycle)
- Dresser-Rand (Category I & II)
- Dresser-Rand (Category III)
- International-Harvester
- Waukesha
- Minneaopolis-Moline
- White Superior (naturally aspirated)
- Worthington

For engines under warranty, Shell advises contact with the engine manufacturer and Shell representative to choose the appropriate oil given the equipment operating conditions and customer maintenance practices.

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

Typical Physical Characteristics

Properties			Method	Shell Mysella S2 Z 40
SAE Viscosity Grade				40
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	135
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	13.5
Density	@15°C	kg/m^3	ASTM D4052	894
Flash Point, closed cup		°C	ASTM D93A	230
Pour Point		°C	ISO 3016	-18
BN		mg KOH/g	ASTM D2896	0
Sulphated Ash		%wt	ISO 3987	0
Phosphorus		ppm	ASTM D4047	670

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 Mysella S2 Z 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 your Shell representative.

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Oil Analysis**

  For optimum results regular oil analysis is strongly recommended

- **Advice**

  Advice on applications not covered here may be obtained from your Shell representative.

  Note: this product is not designed for automotive gas engines