Technical Data Sheet

Previous Name: **Shell Corena NG**

Shell **Gas Compressor Oil *S3 PSN 220***

- *Extra Performance*
- *Natural Gas Applications*

Special Applications Natural/Sour Gas Compressor Oil

Shell Gas Compressor S3 PSN are unique, synthetic blend lubricants designed for the total loss lubrication of cylinders of high pressure reciprocating compressors used in severe, wet and/or sour, natural gas service.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Outstanding wear protection**

  Shell Gas Compressor Oil S3 PSN has good wetting ability and helps form a resistant lubricant film on the cylinder wall when compared to "compounded" oils. This special lubricant film strength resists wash-off by wet air, wet gases and solvent and helps provide excellent wear resistance for sliding contacts in the Compressor.

- **Maintaining system efficiency**

  Shell Gas Compressor Oils S3 PSN Oils have been designed with excellent low temperature flow characteristics without sacrificing wear protection. The superior low temperature properties lessens the need for heat tracing of flow lines from the day tank to the oil pump and reduces the chance of "no-flow" shutdowns of the Compressor.

  Excellent cleanliness and oxidation resistance of Shell Gas Compressor Oils S3 PSN helps maintain exhaust valve cleanliness and reduce carbon deposits on pistons, rods and in the packing areas to help preventing premature packing failure and/or reduced Compressor efficiency.

Specifications, Approvals & Recommendations

- Shell Gas Compressor Oil S3 PSN complies with requirements of Dresser Industries and most other manufacturers.

  For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

Main Applications

- **Natural gas/sour gas compressors**

  Shell Gas Compressor Oil S3 PSN is designed for "once-through" cylinder lubrication of reciprocating compressors which use oil injection systems to lubricate cylinders and rod packings. It is suitable for compressors operating up to 14,000 kPa (2000 psi).

- **Propane Gas Compression**

  It provides premium performance in propane compression and has been proven in field tests to satisfactorily lubricate propane refrigeration cylinders with -30°C suction temperatures.

- **Other Applications**

  Shell Gas Compressor Oil S3 PSN oils are ideal for break-in of Compressor cylinders and rod packings.

  They are also suitable for use when compressing wet air, wet gases/steam or solvent gases such as propane, and organic chemicals like aldehydes and ketones.

Compatibility & Miscibility

- **Seal Compatibility**

  Shell Gas Compressor Oil S3 PSN is compatible with all sealing materials commonly used in gas compressors.

Typical physical characteristics

Properties			Method	Shell Gas Compressor Oil S3 PSN 220
Kinematic Viscosity	@40°C	mm^2/s	ASTM D 445	211
Kinematic Viscosity	@100°C	mm^2/s	ASTM D 445	17.9
density	@15°C	kg/m^3	ASTM D 1298	888
Flash Point (COC)		°C	ASTM D 92	268
Rust Test - 48 Hrs Distilled Water			ASTM D 665	Pass
Rust Test - 48 Hrs Synthetic Sea Water			ASTM D 665	Pass

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 Gas Compressor Oil S3 PSN is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of 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.