



Previous Name: Shell Madrela GP

Shell Gas Compressor Oil S4 PN 220

- Extra Performance
- Natural Gas Applications

Advanced Synthetic Gas Compressor Oil

Shell Gas Compressor Oil S4 PN has been specially developed for cylinder lubrication of reciprocating compressors handling natural gas at high pressure. They are based on synthetic polyglycol base fluids and offer significant benefits over mineral oil-based products, especially in gas re-injection compressor applications.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Extended maintenance intervals**
Shell Gas Compressor Oil S4 PN has reduced hydrocarbon gas solubility to provide reduced viscosity loss in comparison with mineral oil-based products, improving piston ring and packing lubrication. This can help extend service intervals, reducing maintenance and downtime costs.
- **Outstanding wear protection**
The low hydrocarbon gas solubility and associated low viscosity loss also results in retention of a stronger lubricant film on the cylinder wall, piston rings and packing components. This helps deliver low levels of corrosion and cylinder wear.
- **Maintaining system efficiency**
Lower cylinder feed rates are possible with Shell Gas Compressor Oil S4 PN compared to conventional mineral oils due to the higher levels of wear protection and lubrication provided improving reliability and reducing the oil carryover into the compressed gas.
In gas re-injection applications, the oil carryover in the re-injected gas is compatible with well bore treatment chemicals and resists deposit formation and well impairment caused by plugging of the well strata.

Main Applications



- **Gas re-injection compressors**
Recommended for cylinder lubrication of reciprocating compressors used for oilfield gas re-injection at pressures of up to 400 bar.
- **LPG and LNG vehicle fueling**
Suitable for use in compressors handling natural and petroleum gas for vehicle fueling applications.
- **Other Applications**
Shell Gas Compressor Oil S4 PN may also be used for compression of hydrocarbon process gases, carbon dioxide, hydrogen, helium and nitrogen.

Specifications, Approvals & Recommendations

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

Compatibility & Miscibility

- **Change-over Procedure**
Shell Gas Compressor Oil S4 PN contains polyalkylene glycols and is not compatible with mineral oils or most other synthetic lubricant types. Care should be taken when changing from such products to Shell Gas Compressor Oil S4 PN. Additional advice on applications can be obtained from your Shell representative.
- **Seal Compatibility**
Shell Gas Compressor Oil S4 PN may be used with most common seal and packing materials compatible with polyglycols.
Leather seals are not recommended for use with polyglycol-based lubricants, as the natural fats are removed causing seal shrinkage and hardening.

Typical Physical Characteristics

Properties			Method	Gas Comp Oil S4 PN 220
Kinematic Viscosity	@40°C	mm ² /s	ISO 3104	198
Kinematic Viscosity	@100°C	mm ² /s	ISO 3104	34.8
Viscosity Index			ISO 2909	223
Flash Point (COC)		°C	ISO 2592	295
Pour Point		°C	ISO 3016	-39
Density	@15°C	kg/m ³	ISO 12185	1067

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 S4 PN 220 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.