



Shell Madrela Oils GP

Synthetic lubricant for gas compressors

Shell Madrela Oils GP have been specially developed for cylinder lubrication of reciprocating compressors handling natural gas at high pressure. They are based on polyglycol base fluids and offer significant benefits over mineral oil-based products, especially in gas re-injection compressor applications.

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 (5,800 psi).

- **LPG and LNG Vehicle fueling**

Suitable for use in compressors handling natural and petroleum gas for vehicle fueling applications.

- **Reciprocating gas compressors handling hydrocarbon and other gases**

Madrela GP may also be used for compression of hydrocarbon process gases, carbon dioxide, hydrogen, helium and nitrogen.

Special changeover procedures are required when moving from mineral oil-based products to Madrela GP and vice versa.

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

Performance Features and Advantages

- **Reduced hydrocarbon gas solubility**

Developed specifically to provide reduced gas solubility. This results in reduced viscosity loss in comparison with mineral oil-based products, improving piston ring and packing lubrication. Service intervals can be extended, reducing maintenance and downtime costs.

- **Reduced feed rate**

The improved lubrication allows a reduction in cylinder feed rates, reducing lubricant consumption and costs.

- **Lubricant film retention**

The reduced viscosity loss also results in retention of a stronger lubricant film on the cylinder wall, piston rings and packing components. Corrosion protection is increased and wear rates further reduced.

- **No effect on well formation**

In gas re-injection applications, Madrela GP that is present as carryover in the re-inject is compatible with well bore treatment chemicals and resists deposit formation and well impairment caused by plugging of the well strata.

Seal compatibility

Madrela GP may be used with most common seal and packing materials. However, leather seals are not recommended for use with polyglycol-based lubricants, as the natural fats tend to be removed causing seal shrinkage and hardening.

Health and Safety

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

Protect the environment

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

Typical Physical Characteristics

Madrela GP			100	220
Kinematic Viscosity				
at 40°C	cSt	ISO 3104	85	198
at 100°C	cSt	ISO 3104	16.4	34.8
Viscosity Index		ISO 2909	208	223
Flash Point COC		°C	288	295
Pour Point		°C	-51	-39
Density at 15°C		lb/gal	8.7	8.9

These characteristics are typical of current production. While future production will conform to Shell's specification, variations in these characteristics may occur.