



Shell Madrela[®] S

High Performance Gas Compressor Lubricant

(Formerly Pennzcom G 125)

Shell Madrela[®] S is a premium quality fluid based on synthetic and severely hydroprocessed base oils and selected additives specially designed to meet the demanding needs of rotary and screw gas compressors.

Applications

Shell Madrela[®] S compressor lubricant is recommended for use in oil flooded rotary vane and screw type compressors. The outstanding oxidative stability of this fluid makes it ideal for rotary and screw compressors, where the lubricant is injected directly into the gas stream.

The excellent lubricant life of Shell Madrela[®] S compressor lubricant makes it especially suitable for use in those applications where production schedules do not allow for frequent shutdowns for maintenance and oil changes, or where location or inaccessibility of equipment makes frequent oil changes difficult.

Complex fluids like Shell Madrela[®] S compressor lubricant are also ideal for use in applications where straight mineral oils have previously shown a history of undesirable deposit problems.

Shell Madrela[®] S Compressor Lubricant is recommended for compressing inert and hydrocarbon gases such as:

- | | |
|---------------|------------------|
| - Natural Gas | - Isobutane |
| - Methane | - Argon |
| - Helium | - Synthetic Gas |
| - Butane | - Carbon Dioxide |
| - Propylene | - Propane |
| - Ethylene | - Neon |
| - Hydrogen | - Air |

Performance Features & Benefits

Shell Madrela[®] S compressor lubricant is a premium quality fluids specially designed to meet the performance demands of today's compressors, especially those being used to compress hydrocarbon gases.

- **“State-of-the art” complex fluid make-up**

Shell Madrela[®] S compressor lubricant is formulated from a carefully selected blend of synthetic and mineral base oils. The mineral base oil portion is composed of severely hydroprocessed base oils. These premium base oils are blended with a customized additive chemistry, which offers excellent oxidative and thermal stability.

- **Outstanding oxidative and thermal stability**
This customized additive system means Shell Madrela[®] S compressor lubricant offers good thermal stability, good demulsibility, good entrained air release properties and good cold weather performance.
- **Low oil consumption/carryover**
Shell Madrela[®] S compressor lubricant offers good volatility characteristics, which lead to improved oil feed rates and vapor pressure, as well as reduced lubricant carryover.
- **Effectively minimizes deposit and varnish formation**
Shell Madrela[®] S compressor lubricant provides excellent resistance to heat and oxidative breakdown that results in reduced sludge, varnish, lacquer and deposit formation on compressor components, as well as longer lubricant life.
- **Resists rust & corrosion**
Shell Madrela[®] S compressor lubricant separates readily from water found in compressor systems. It protects against rust and corrosion, and is inhibited against foaming and air entrainment, to provide for maximum lubrication, ready separation from wet air in oil/air separators, and extended oil separator service intervals.
- **Excellent antiwear performance**
The additive system, including select antiwear agents, provides for extended compressor life, and compatibility with all types of metals. Shell

Madrela® S compressor lubricant has a high viscosity index and a low pour point, which allows for its use in a wide range of ambient and operating temperature ranges.

customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell.com/us/lubricants>.

Health and Safety

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other

Protect the environment

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

Typical Physical & Chemical Characteristics

Test	Method	Typical Results
Gravity, °API	ASTM D-287	34.3
Specific Gravity @ 60°F(15.6°C)	ASTM D-1298	0.8534
Viscosity		
@ 40°C, cSt	ASTM D-445	145
@ 100°C, cSt	ASTM D-445	16.8
Viscosity Index	ASTM D-2270	125
Flash Point, °C(°F)	ASTM D-92	271(520)
Pour Point, °C(°F)	ASTM D-97	-36(-33)
Color	ASTM D-1500	0.5
Total Acid Number, mg KOH/g	ASTM D-664	0.58
Rotating Pressure Vessel Oxidation Life, Min @ 150°C	ASTM D-2272	540
Rust Test	ASTM D-665B	Pass
Demulsibility, min to 40/37/3 (ml oil/ml water/ml emulsion)	ASTM D-1401	30
Foam Test, ml foam, (Tendency/Stability)	ASTM D-892	
Sequence I		0/0
Sequence II		10/0
Sequence III		0/0
Four Ball Wear Test, scar diameter, mm	ASTM D-4172	0.34

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