

## Lubchem SGS-800 Series

### **Biodegradable Wireline Honey Oil**

Lubchem SGS-800 is a biodegradable series of synthetic grease seal products, developed to protect wireline exposed to environments where conventional wireline sealants fail. The SGS-800 line is designed for use in deep, high temperature, corrosive oil & gas wells, up to 475°F, in the presence of HS and CO<sub>2</sub>. Unlike conventional grease seal products SGS-800 series maintains viscosity at elevated operating temperatures. A downhole corrosion inhibitor and EP additive package are incorporated and provide unequalled protection.

### **Application**

For use with standard wireline grease injection units.

### **Features**

- Completely biodegradable
- Non-hazardous
- Protects against H<sub>2</sub>S up to 500,000ppm
- Protects against CO<sub>2</sub> up to 50%
- Fully additive treated

### **Performance Evaluation of SGS-800 Product Description**

The SGS-800 series is made from a 100% synthetic polymer which is biodegradable, has no hazardous transportation limit and is not considered hazardous waste. The products are offered in viscosity grades of 10, 12,16, 20 & 24 to meet a wide range of operating temperature and handling requirements. Each viscosity grade contains an additive package which includes an EP (extreme pressure) additive and a downhole corrosion inhibitor.

### **Product Features**

The synthetic polymer oil used in the formulation of Lubchem SGS products provides good lubrication qualities, excellent high temperature stability, and is insoluble in down hole environments. The result is a product that provides barrier protection from corrosive fluids and gasses, maintains viscosity at elevated temperatures (better than traditional hydrocarbon based fluids) and remains on the wire line, thereby reducing costs. The SGS700 synthetic polymer base oil has been selected due to its unique properties which include the following:

- SGS-800 series maintains viscosity under temperatures encountered at bottom hole temperatures.
- SGS-800 series is insoluble in down hole environments.
- SGS-800 series is highly impremeable, and is impervious to CO<sub>2</sub>, H<sub>2</sub>O, O<sub>2</sub>, H<sub>2</sub>S and water vapor.
- SGS-800 series is non-volatile, has high oxidation stability and is extremely resistant to shear.

### Corrosion Inhibitor and EP Package

The synthetic polymer base oil is an excellent sealant which provides a formidable barrier against wear and corrosion to wire line in highly corrosive and high temperature applications. The carrier oil in the SGS-800 formulations is considered a barrier or protective layer designed to keep the corrosive elements away from the metal. However, it is not the sole source of corrosion protection. Lubchem SGS-800 formulations also incorporate a high performance downhole corrosion inhibitor (Lubchem IS3018) along with an excellent EP (extreme pressure) Package. The corrosion inhibitor, Lubchem IS-3018 is effective at levels as low as 5 ppm. The inhibitor chemically bonds to the wire line surface and provides an inhibitor film one molecule layer thick. This inhibitor layer will not degrade under any concentration of H<sub>2</sub>S, Acids, Oxygen or CO<sub>2</sub>.

### Solubility

Toluene	Insoluble @ 77°F Slight Solubility @ 212°F
Cyclohexane	Insoluble @ 77°F Insoluble @ 167°F
Water	Insoluble Insoluble @ 210°F
Ethanol	Slight Solubility @ 77°F Partial Solubility @ 170°F

### Standard Viscosities

<b>Synthetic Grease Seal 816 (SGS-816)</b>	
Viscosity Class	16 visc
Viscosity CPS @ 77°F	5000-6000
Pumpable Temperature	-15°F
<b>Synthetic Grease Seal 820 (SGS-820)</b>	
Viscosity Class	20 visc
Viscosity CPS @ 77°F	14500-16500
Pumpable Temperature	-0°F
<b>Synthetic Grease Seal 824 (SGS-824)</b>	
Viscosity Class	24 visc
Viscosity CPS @ 77°F	21000-24000
Pumpable Temperature	10°F

### Custom Viscosities

Custom viscosities are available in ranges from 1000 cSt to 260,000 cSt. Custom viscosities can be controlled to within 1% of the customer's specification. In other words if a viscosity of 26,781 cSt provides the sealing you require, your product will be 26,781 cSt every time you use it.