

## Lubchem SGS-700 Series

### **Biodegradable Wireline Honey Oil**

Lubchem SGS-700 is biodegradable series of synthetic grease seal products, developed to protect wireline exposed to environments where conventional wireline sealants fail. The product line is designed for use in deep, high temperature, corrosive oil & gas wells, up to 400°F, in the presence of H<sub>2</sub>S and CO<sub>2</sub>. Unlike conventional grease seal products, SGS-700 series maintains viscosity at elevated operating temperatures. A down hole 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-700 Series Product Description**

The 700 series is made from a 100% synthetic polymer which is biodegradable, has no reportable quantity (see note), 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 down hole 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 wireline, thereby reducing costs. The SGS-700 series synthetic polymer base oil has been selected due to its unique properties which include the following:

- SGS-700 series maintains viscosity under temperatures encountered at bottom hole environments.
- SGS-700 series is insoluble in down hole environments.
- SGS-700 series is highly impermeable, 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-700 series is non-volatile, has high oxidation stability and is extremely resistant to shear.

### Corrosion Inhibitor 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-700 series formulations are considered a barrier or protective layer designed to keep the corrosive elements away from the metal. However, it is not the sole source of protection. Lubchem SGS-700 series formulations also incorporate high performance down hole corrosion inhibitor (Lubchem IS-3018) along with an excellent EP (extreme pressure) package. The corrosion inhibitor, Lubchem IS-3018 is effective at levels as low as 5ppm. 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, O<sub>2</sub>, and CO<sub>2</sub>.

### Solubility

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