

OIL-1000 Crude Oil Treatment Technology

What is OIL-1000? OIL-1000 is a unique formula containing a patent pending Polyelectrolyte Enhanced Biopolymer (PEB) and a readily biodegradable natural amino acid complex creating a double action "catalyst and support system" that enhances the safe and natural treatment of crude oil. It was scientifically formulated to eliminate H2S while having no negative impact to the oil's quality or ability to be refined without any additional process requirements.

PEB found in **OIL-1000** is an ultra-pure balance of beneficial, long chain, negatively charged, stable carbon groups that acts as a natural buffering agent creating a stable treatment environment. PEB also acts as a sequestering agent binding metal ions into an insoluble stable complex that becomes a non toxic organic metal complex and mineral. As a chelating agent, **OIL-1000** detoxifies poisonous metal agents by converting them to a less toxic biochemically inert form while providing an unprecedented capacity to capture and absorb a wide array of contaminants found in gas/oil exploration and refining operations. In addition to the PEB, **OIL-1000** contains a broad spectrum amino acid complex that speeds up the natural degradation of organics by efficiently catalyzing complex organic molecules found in crude oil. **OIL-1000** is designed to quickly reduce H2S and toxicity through its ability to alter the environmental factors in crude oil that form H2S. Elemental sulfur and sulphates are neutralized, organics are stabilized while the oxygen deficient environment is reversed inhibiting the conversion to H2S. Treatments also reduce the corrosive effects on metals related to H2S/salt based solutions to piping and equipment. Therefore, **OIL-1000** shows a significant competitive advantage over alternative products for the treatment of crude oil.

<u>How is OIL-1000 Used?</u> It is an "on-site" treatment tool for H2S elimination/reduction at the exploration site, as a treatment for safe truck or rail transport, as treatment at storage depots, or at the refinery. **OIL -1000** is recommended as a maintenance tool or as an emergency response hazmat material.

<u>How is OIL-1000 Applied?</u> OIL-1000 is designed as a direct treatment to crude oil that contains various levels of H2S. The treatment can be completed by injection at the point of generation and/or at the holding tanks in the field, prior to trucking or rail transport, or at the refinery. Effective treatment can be successfully completed using multiple methods within the current handling structure already in use with limited need for additional equipment or staff. As a highly concentrated liquid, OIL-1000 can be safely added directly to the crude oil. For optimal performance, product is to be applied and agitated evenly into the entire oil column, and/or supplied under continuous injection through the transfer lines.

How Much Product Is Needed? H2S Removal: Add one (1) to two (2) gallons (4to 8 liters) of **OIL-1000** per 100 barrels of crude oil. Oil should be turned continuously till H2S has dissipated. Additional treatments may be required due to contaminant loading and/or time required for complete elimination. Specific application rates are determined prior to sale by the manufacturer and/or distributor. **OIL-1000** has optimum performance in oil temperatures between 42° and 120° F (6° and 50° C).

<u>Technical Information: Storage:</u> Do not store product in direct sunlight. Insure that the product remains under 120°F (50°C). Should the product freeze in storage, do not apply heat to thaw, remove product to room temperature conditions and let thaw normally.

Shelf Life: Properly stored unopened containers have a shelf life of 2 years if unopened and 1 year after opening.

