



## PWT-1000 Water Treatment Technology

**What is PWT-1000?** PWT-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 natural wastewater treatment process. It was scientifically formulated to eliminate H<sub>2</sub>S, lower sodium and metal levels/toxicity; reduce electrical conductivity and total suspended solids.

PEB found in **PWT-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, **PWT-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 mining wastewater. In addition to the PEB, **PWT-1000** contains a broad spectrum amino acid complex that speeds up the natural degradation of organics by efficiently catalyzing complex organic molecules found in wastewater. **PWT-1000** is designed to quickly reduce sodium levels and toxicity while improving water clarity. It also helps minimize scale formation due to reduced metal/mineral salts and is a water treatment tool that requires limited equipment. Therefore, **PWT-1000** shows a significant competitive advantage over alternative products for the treatment of related industrial wastewater.

**How is PWT-1000 Used?** It can be used as an “on-site” treatment tool for H<sub>2</sub>S elimination/reduction or as an enhancement for wastewater recycling by creating increased volumes for re-use by precipitating the contaminants in the remaining water for lower disposal costs.

**How is PWT-1000 Applied?** PWT-1000 is designed for the treatment of the wastewater generated through fracking operations, coal seam gas exploration and mining that contains various levels of H<sub>2</sub>S, sodium, trace metals, and all by-products of the exploration efforts. The treatment of these waters can be completed by injection at the point of generation and/or at the holding tanks or ponds. Effective treatment can be successfully completed using multiple methods within the current disposal structure already in use with limited need for additional equipment or staff. As a highly concentrated liquid, **PWT-1000** can be diluted prior to use or added directly to the wastewater. For optimal performance, product is to be applied and agitated evenly into the entire water column, and/or supplied under continuous injection through the transfer lines.

**How Much Product Is Needed?** **H<sub>2</sub>S Removal:** Add one (1) gallon **PWT-1000** per 100 barrels of wastewater. Mix for ten (10) minutes and let sit till H<sub>2</sub>S has dissipated. **Sodium, Metal, TDS, and TSS Treatment:** General application rate per treatment for ponds/lagoons/dams is 10 to 350 PPM **PWT-1000** per treatment based on the system requirements and goals to be achieved. Multiple treatments may be required due to contaminant loading and/or final water quality that are being achieved. Specific application rates are determined prior to sale by the manufacturer and/or distributor. **PWT-1000** has optimum performance in water temperatures between 42° and 120° F (6° and 50° C).

**Technical Information: Storage:** 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.

