

More Details on FracCure's Neutral Anolyte Biocide

Neutral Anolyte is produced by technology which is based upon the Electro-Chemical Activation (ECA) of water. As such, it overcomes health, safety, and environmental pollution concerns that are associated with traditional chemical biocides.

Since no man-made chemical compounds are involved, the ECA-generated biocides are safe for humans, animals, birds, marine life, and the environment. The activated electrolyzed aqua solutions revert back into ordinary water and their natural state as 100% green, biodegradable, environmentally-friendly compounds and elements.

The ECA process uses nothing but electricity, water, and a diluted salt brine solution to create the electrical path for electrolysis to occur in a dual-chambered water electrolysis cell. This cell simultaneously co-produces two different types of electrolyzed water -- Acidic Ionized Water in the Anode Chamber of the water cell, and Alkaline Ionized Water in the Cathode Chamber.

The Acidic Ionized Water is referred to as Neutral Anolyte Biocide. The Alkaline Ionized Water is called Catholyte which is a high pH detergent cleaning solution that is able to remove oil, grease, and heavy metals through precipitation.

The activated electrolyzed aqua solutions that are generated in the water electrolysis cell are unique and cannot be produced in the traditional manner using man-made chemicals. Through the ECA process, highly active reagents such as ozone, atomic oxygen, peroxide compounds, and chlorine dioxide are synthesized from the actual feed water itself.

Neutral Anolyte is a powerful disinfectant against bacteria, viruses, spores, mold, fungi, and algae. When properly stored, Neutral Anolyte retains its efficacy for up to twelve months. Neutral Anolyte brackets the 7 pH range and has proven to be a much more effective anti-microbial agent against public and non-public pathogens than chlorine.

The primary killing power in Neutral Anolyte is the Free Available Chlorine (FAC). Free Available Chlorine is chlorine that is present in the form of Hypochlorous Acid [HOCL] and Hypochlorite Ions [ClO-], or as dissolved elemental chlorine that is available to react where needed. Hypochlorous Acid is the primary component in Neutral Anolyte Biocide. It produces the greatest killing power against micro-organisms as a stronger disinfecting and sanitizing agent than traditional chemical biocides.



While Hypochlorite Ions [ClO⁻] are also an active killing agent, Hypochlorous Acid is roughly 80 times more effective than Hypochlorite Ions in killing power. This is largely because HOCL has greater efficacy in penetrating microbial cells at the mitochondrial level. It is virtually 100% effective in totally inactivating and destroying the entire cell (membrane, body, and DNA). It thus prevents residual cells from mutating into a stronger form of micro-organism.

Some electrolyzers produce Neutral Anolyte Biocide with only 350 to 500 parts per million [ppm] of Free Available Chlorine. Other electrolyzers can produce 500 to 700 ppm of FAC. In contrast, FracCure's Neutral Anolyte Biocide can contain up to 1700 ppm of FAC because it is produced in a specially-designed ECA system.

Chemical biocides often become ineffective with micro-organisms that survive treatment and become resistant to man-made biocides. Micro-organisms do not become resistant to FracCure's Neutral Anolyte Biocide due to the physical collapse and oxidation destruction of the microbial cell and its DNA structure.

With the ever-increasing ban on the use of man-made toxic chemicals that pollute the atmosphere, soil, and water, the only viable alternative is the use of Neutral Anolyte Biocide and Catholyte Electrolyzed Water. Neutral Anolyte Biocide is not harmful to humans and does not require protective clothing or face masks for application.

In oil and gas applications Neutral Anolyte Biocide is effective in killing the following pathogens: sulfate reducing bacteria (SRB), acid forming bacteria (AFB), and slime producing bacteria, to name a few. Since Neutral Anolyte consists mostly of reverse osmosis water, it does not interfere with typical frac fluid components.

In the public arena Neutral Anolyte Biocide is virtually 100% effective in killing the following notorious pathogens: Hepadnavirus, E. Coli, Salmonella sp., Listeria monocytogenes, Streptococcus sp., Pseudomonas aeruginosa, Asperigillus niger, Candida albicans, Anthrax, MRSA, Clostridium, Avian Influenza, HIV, Hepatitis, SARS virus, Legionella, Bacillus sp., and Staphylococcus aureus, to name a few.

Neutral Anolyte Biocide is a marvelous product that has the potential to replace hundreds of disinfectant chemicals in both industrial and public settings. One of its greatest applications will be in the oil and gas industry including frac pit operations.