

## Ultra-Archaea for Wastewater Treatment Plants and Infrastructure, Sewage Spills, and Industrial Effluent Contamination

Ultra-Archaea contain beneficial microbes that metabolize sewage waste and organic chemicals at the molecular level. The formula is designed to break up and eliminate FOG (fats, oils, and grease), and to bioremediate sewage and industrial organic chemicals in wastewater. Our formula has been listed on the U.S. EPA NCPPS since 1991. Our consortium is Archaea-based, and consists of aerobic, anaerobic and facultative anaerobic species which provide the necessary broad spectrum remediation activity. Unlike bacteria, enzymes and fungi, our archaea tolerate a range of harsh environmental conditions and will degrade a wide variety of contaminants.

#### **How It Works**

Our microbes have been selected for their appetite to consume organic waste and hydrocarbon contamination. The microbes digest feces, cutting off the food supply for harmful E.coli and coliform bacteria. The archaea also digest the ammonia from urine and metabolize the hydrocarbons that are often present in wastewater. Use of chemical surfactants and pressure-jetting wastewater infrastructure simply dislodges solids and emulsions and moves them downstream to disrupt other parts of the system. Instead our microbes actually digest the FOG caps and caked solids at the molecular level, eliminating the need to pump out lift stations, improving the efficiency and capacity of existing infrastructure, minimizing wear and tear on equipment, and extending the lifespan of aging plants. Effluent quality standards are more easily exceeded, and odors are dramatically reduced.



On raw sewage spills the microbes break down, degrade, and destroy the organic solid and liquid waste. The noxious odors are quickly eliminated as well, without the use of harsh chemical disinfectants, and chemical deodorizers that simply mask odors temporarily. The by-products of this remediation process are water, carbon dioxide and harmless essential fatty acids which in fact are food for plants, fish and other organisms. This allows you to quickly and effectively clean up spills in situ (in place) – saving you time and significant money.

Whether full environmental restoration, or cost-effective optimum end results and compliance are your primary motive, the archaea consortium has been proven to achieve superior results.



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#### How It's Used

Ultra-Archaea contain a consortium of non-toxic, non-GMO, non-pathogenic archaea microbes. It is highly concentrated and packaged in a fine powder bentonite carrier. It is activated by water, when and where it's most convenient for you. One of the benefits of our product is that "a teaspoon or a ton" can be used depending on your needs. Where a sewage spill has occurred, the formula can be sprayed directly onto hard surfaces, soils and vegetation, as well as open water. In streams, rivers and tidal waters, it will attach to and follow the contamination plume. Some contamination will sink, some will be floaters, and some will stay suspended in the water column – and the beneficial microbes will follow along and remediate as it goes. The formula is safe for use around humans, plants and animals, on land and aquatic, and will not harm concrete, asphalt, wood, metal, fiberglass and other construction materials.



### Ultra-Archaea can be applied in the following ways:

- Directly to lift stations, effluent lagoons, and industrial waste water and sewage treatment plant tanks.
- As a temporary alternative treatment to planned or unplanned raw sewage releases or to supplement effluent treatment, the Ultra-Archaea can be mixed with water and added to the discharge pipe or sprayed onto affected surface waters.

For any use, dosage and application method is tailored to your needs.

#### How It's Used

Our team of engineers and scientists will work with you to determine the best Ultra-Archaea product for your issue. The powder is designed with a 5-year shelf life, and is packaged in 6 oz. or 28 oz. shakers, a 6-pack of water soluble packets, or a 25 lb. bulk bag. Because the microbes are concentrated in the powder and are not mixed or activated with water until needed, shipping costs are significantly reduced.

Microbes are nature's way of recycling organic materials. Our beneficial microbial products work in harmony to supplement this natural process. Basically, they are probiotics for the earth, cost-efficient and highly effective.