

AQUAMEND™ Biocarrier Media

Supports remediation of wastewater or groundwater in bioreactor systems

Reactor systems supported with AQUAMEND™ have successfully treated a broad range of contaminated water, including industrial process waters containing high levels of oil, grease, ammonia, nitrate and COD; landfill leachates containing a wide variety of volatile organics, base neutral acid extractable (BNA) compounds, and phenolics; and groundwaters containing PCP and nitrate. The reactor systems can be installed either within an industrial facility or sub-surface for on-site water management.



The AQUAMEND technology is based on a family of innovative and patented biocarrier media. AQUAMEND media are biocompatible, engineered, inorganic surfaces that provide an ideal surface for the development of immobilized biofilms and, therefore, are uniquely effective in bioreactor systems for the remediation of wastewater or groundwater. The media is contained in a specially designed tank, and contaminated water is pumped into the reactor for treatment. The microorganisms that are contained within and on the surface of the biocarrier degrade or transform the contaminant of concern, producing treated effluent that is suitable for discharge. Depending on the application, the bioreactor may be aerated through the use of an air blower and diffusers. AQUAMEND has proven to support bioremediation also in the presence of high levels of metals and salts and can easily be placed in series with other treatment options to treat inorganics.

AQUAMEND biocarriers were developed to address the limitations of other commonly available biocarrier materials. They exhibit high surface area, high porosity, very high mechanical and dimensional stability, and excellent resistance to attrition. Because of these properties, bioreactors equipped with AQUAMEND media can better respond to system upsets including acid and base shocks, surges of toxic organics, nutrient starvation, oxygen limitation, and heavy metal contamination, while offering lower sludge production.

Micro- and macro-nutrients are necessary for microorganisms to grow in a healthy fashion. Many wastewaters contain sufficient nutrients for cell growth; however a supplement will improve the performance of the system. A unique feature of the AQUAMEND system is the specificity of the nutrient package that is added to the water. Not only will this improve the stability of the bioreactor, but in some cases it will increase the treatment efficiency, thus resulting in lower capital costs.