

Low Cost Wastewater Treatment Systems

OMNI offers two different types of wastewater treatment systems. A filter method for continuous or semi continuous treatment and batch process. OMNI media are available for the removal of water insoluble organics such as oils, dissolved heavy metals (Cu,Cr,Pb,Cd,etc.) hydrophilic suspended solids (pigments, etc.), hydrophobic suspended solids and small amounts of water from organic liquids.

In all cases, the wastewater should be at a pH of 4.5 to 6 to insure metal ion solution and emulsion destabilization. If the wastewater only contains oils and/or oil wetted solids, SorbaSolv™ filter media alone will remove most contaminants in a filter system. Some dyes and other stubborn materials may require a double layer of SorbaSolv™ at top and OMNI-TRAP™ below. A residence time of one minute is the minimum. Filters as simple as a 55-gallon or smaller drum as pictured. Unless the wastewater is corrosive, mild steel is satisfactory , otherwise plastic or stainless steel is indicated. Both SorbaSolv™ and OMNI-TRAP™ media are lighter than water. The use of a heavy perforated plate or section of grating is required to prevent media flotation unless drum is filled with media. A typical charge for a 55-gallon drum is 10# SorbaSolv™ and 90# OMNI-TRAP™ media for a dual charge. This size requires 5 cubic feet of media leaving approximate 2 cubic feet (15 gallon) of headspace. This will give reasonable flow rates as a gravity feed. If a more rapid flow rate is required, the use of a centrifugal pump on the effluent side can be use. *NEVER PRESSURIZE A DRUM OR OTHER NONRPRESURE VESSEL!* OMNI can supply custom filters and equipment systems through an associated company (UF Strainrite) with wide experience in the HazMat field. Filters can be used singly, in parallel, or in series depending on flow rates and other conditions.

Wastewater can be treated in batch systems with the equipment pictured. The wastewater should be prepared as outlined above. For the removal of water from oils, Aquasorb crystal or fiber (polyacrylate) is added (1#:50# of water) with about 15 minutes of stirring (500-1500 RPM) with a standard propeller mixer. The Aquasorb will combine with water and settle to the bottom where it ,may be moved as a semi-solid gel. For heavy metal and mixed contaminant wastewaters, OMNI-FIX™ is added (from 1 to 5# OMNI-FIX™ to 1# contaminant) Stir for 15 minutes and allow to settle at least one hour, preferably overnight. The resultant sludge may be removed followed by the clarified top liquid. In most cases the effluent liquid or clarified liquid is completely contaminant free. The exhausted media and settled sludge usually passes the EPA TCLP test for disposal as non-hazardous waste. Both will self solidify upon standing. Samples of the OMNI-TRAP™ or SorbaSolv™ media may be easily evaluated in a simple column.

Our technical service department is read to aid you with your wastewater problems! We will test your wastewater samples FREE of charge. Contact us prior to sending samples for address and shipping requirements.

**OMNI has a complete line of waste control products.
On-Site Treatment Pays!**