

Heavy Metals Removal using WACMP

ResinTech WACMP is a weakly acidic cation resin with an unusually high selectivity for heavy metal ions. Unlike ordinary cation resins, such as ResinTech CG8, ResinTech WACMP has a higher affinity for heavy metal ions than for calcium and magnesium ions which are present in varying degrees in all normal water supplies. This makes ResinTech WACMP ideal in many instances for the removal of heavy metal ions. However, being weakly acidic, ResinTech WACMP will not function effectively at pH's below 6.5.

RECOMMENDED OPERATING AND REGENERATION PROCEDURES

ResinTech WACMP should be operated in the sodium cycle. This gives it excellent kinetics so that it can be operated at flow rates up to 4 or 5 gpm per cubic foot with little or no loss in operating capacity and still retain extremely low leakage levels.

At 2 gpm per cubic foot the operating capacity will exceed 35 kilograins per cubic foot for heavy metal ions expressed as calcium carbonate.

In order to operate in the sodium form, the resin must be stripped of the metal ions from the previous cycle through an acid regeneration step followed by a sodium hydroxide neutralization. The acid used for regeneration (usually sulfuric or hydrochloric) must be picked carefully to avoid precipitation of some of the heavy metal ions during the regeneration step. The use of nitric acid is not recommended due to the potential explosion hazards associated with this strong oxidizing agent.

