



MAINTENANCE FOR LIMESTONE NEUTRALIZATION / DILUTION TANKS

1. Proper limestone is necessary. There are two types of proper limestone. The first type is our regular limestone chips (#RLS-50), for schools, colleges, universities, laboratories, hospitals, photographic wastes, and general chemicals (acids and caustics). The second type is strictly for battery acids (sulfuric acid only). The second type is called dolomitic limestone chips (#DLS-50) and costs twice as much money. Both types of limestone are packaged in fifty pound bags that weigh about fifty to sixty pounds each.
2. All limestone chips must be replaced within a maximum of two years. This is because the surface of the stones becomes crystallized and are no longer effective. In cases where gel type or oily type substances develop on the stone surfaces, more frequent changing of the limestone is necessary. If too much of this is occurring, the use of a filtering device prior to the limestone tank would be necessary (such as our sediment interceptors). This is also true if a lot of debris is coming down with the effluent to clog up and cause stoppages in the pipe lines or limestone tank.
3. Care must be taken not to damage the tank walls or bottom, internal fittings and gasket on top, when taking out old limestone and putting new limestone in.
4. Always fill the tank with the water, up to the bottom (invert) of the outlet fitting (lowest fitting). Gently add the proper limestone chips in the manner described in paragraph #3 above. As the limestone is added, some water will overflow out of the outlet fitting.
5. Safety precautions must always be taken. Check with O.S.H.A. requirements. Generally, you should always ventilate the room and/or area prior to opening the tank covers, such as opening windows, doors, etc. to get fresh air circulation. You should wear eye protection and rubber gloves at a minimum. A carbon filter mask and possibly a rubber apron with rubber boots should be used on the larger units. Do not allow sparks, matches, or cigarettes near the units, as solvents are often discharged through the units. These can be flammable or explosive! Take the old limestone and put it on heavy plastic polyethylene sheeting. Sprinkle baking soda (sodium bicarbonate) all over the old stones. Let them sit there for a few hours to neutralize any residual acids/chemicals still on the stones. Afterwards, wash the stones down with water.
6. If no toxic chemicals have been discharged through the neutralization/dilution tanks, you may then (after you have completed paragraph #5 above), dump the old stones into a dumpster. If, however, toxic chemicals were used, then the limestone could be contaminated with toxic chemicals. If they are, you must hire a licensed and insured toxic waste disposal service to take the material away and incinerate it. (They must have governmental approval documents to do this work. If they improperly dispose of your wastes, you could be fined seriously. That is why you must get certificates of insurance from them to cover you.)
7. When ordering new limestone, order extra bags for maintenance purposes. Every month (or every other month in some cases), you must remove the cover following the safety procedures above and check to see if the level of the limestone has settled or dissolved down. The level must be maintained at the bottom (invert) of the outlet fitting. If it is too high, stones will fall out and clog your drain line. If it is too low, you may not be completely neutralizing. Of course, read our literature on limestone chips.
8. If you have algae growing (a greenish or reddish growth) on your limestones, pour some liquid bleach (such as "Clorox") on them to kill the algae. Of course, follow paragraph #5 above when working with bleach.