



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, for schools, colleges, universities, laboratories, hospitals, photographic wastes, and general chemicals (acid and caustics). The second type is strictly for battery acids (sulfuric acid only). The second type is called dolomitic limestone chips and costs twice as much money. Both types of limestone are packaged in fifty-pound bags.
2. All limestone chips must be replaced within a maximum of two years. This is because the surfaces 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 of 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, bottom of tank, internal fittings, and gasket on top, when taking out old limestone and putting new limestone in.
4. Always fill the tank with 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 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 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 the limestone chips sit for a few hours to neutralize any residual acids or chemicals that are 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. However, if toxic chemicals were used then the limestone could be contaminated. If this is the case, you must hire a **licensed and insured** toxic waste disposal service to do the work for you. If they improperly dispose of your wastes you could be fined seriously. This 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.
8. If you have algae growing, a greenish or reddish growth, on your limestone chip you can pour some liquid bleach on them and this will kill the algae. Please follow paragraph #5 above when working with bleach.