

# Bulk Detergent Mixing Instructions

Here are the directions for mixing the soap and prewash in a bulk form:

**\*\*Never add water to chemical. Only add chemical to water!!**

**Prewash:** Fill the tank about  $\frac{3}{4}$  full with water. Turn on whatever method of circulation/mixing for the detergent. Next, put on protective garb (rubber apron, boots, gloves, and full face mask). Open the "AC" portion (small blue drum) and remove the 5 gallon pail of surfactant. Next, pour all of the powders in the drum into the tank of water. Remember: 1 Small blue drum for every 500 gallons of prewash. Do the same thing with the second small blue drum if you are making a 1000 gallon batch of prewash. After those are poured in, prepare the drum of sulfuric by moving it over next to the mixing tank. Open the drum and set the drum pump into the tank. Route hose up into the mixing tank and secure it so it cannot come back out of the tank. Ensure that the circulation/mixing method that you use is turned on before pouring the sulfuric into the tank. Turn on the drum pump to pump the sulfuric into the mixing tank. As best you can, empty the drum of sulfuric with the drum pump if you are mixing 1000 gallons of prewash. **Only use  $\frac{1}{2}$  of a drum of sulfuric acid if you are mixing a 500 gallon batch.** Turn off drum pump and allow excess sulfuric in the hose to drain back into the sulfuric tank. **Do not allow the water in the tank to siphon back into the sulfuric drum or you will have a reaction between the water and sulfuric in the drum!** Prepare a 5 gallon pail of water. Remove drum pump from sulfuric tank and place into the 5 gallon pail of water. Turn on and flush out the line into the mixing tank. After that is flushed, put equipment away. Next, get a clean 5 gallon pail and carefully pour the remaining sulfuric out of the drum into it. After emptying, put the cap back on the sulfuric drum and tighten. Rinse it off and set it aside. Pour the sulfuric that is in the 5 gallon pail into the mixing drum. Rinse out that pail when empty. Fill mixing tank until about 90% full. Pour surfactant contained in the 5 gallon pail(s) into the mixing tank. Finally, top off the mixing tank and let it circulate/mix for about an hour.

**Soap:** Fill tank about  $\frac{3}{4}$  full of water. Turn on whatever method you have for mixing the detergent. Next, put on protective garb (rubber apron, boots, gloves, and full face mask). Open soap drum and remove 1 gallon jugs. These contain the surfactant and soap boost products which you will add later. Take the ones marked "K2Boost" and pour the contents into the tank. Next add the correct amount of soap powder to match the amount of detergent you are making: 125# for 500 gallons, 250# for 1000 gallons of detergent. After powder is mixed, top off the mixing tank until it is about 90% full. Next take the 5 jugs marked "S" and empty the contents into the mixing tank. This is your surfactant. Next, top off the mixing tank with water. Let the circulation/mixer method allow the detergent to mix for an hour. You should have no residue left over in the bottom of the tank. If there is you either have too short a time for mixing or an overly hard water problem.