

Subject: Water Softeners Used with Scotsman Ice Machines

In many areas, softening the water supply produces a water that is superior for washing clothes, bathing and other day to day activities. "Hard Water" really means water that minimizes soap suds, requiring more soap to be used. However, when "soft" water is used to produce ice in a commercial ice machine, the soft water is usually NOT an improvement over "hard" water. This is due to the similarity between "hard" and "soft" water. Hard water is water that contains excessive dissolved minerals, usually calcium and magnesium. Soft water is hard water that has been treated by a water softener to remove the calcium and/or magnesium and replace it with sodium. This means that if there were high concentrations of calcium or magnesium in the water, after it has been softened there will be a high concentration of sodium in the water.

Because the water softening process does not reduce the mineral content, but changes it, the water that is left in the sump of a cuber at the end of the freeze cycle still contains a concentrated solution of minerals, irregardless of whether it began as hard or soft water.

Softened water is also not a complete answer for all water conditions. If there are also suspended solids in the water, having soft water will be an incomplete answer, because water softeners do not take out suspended solids. Furthermore, if a water softener were to fail and inject brine (salt water) into the water supply of the ice machine, the results would be catastrophic to the metal components of the ice machine.

In view of the above, Scotsman does not recommend water softeners as a singular type of water treatment for ice machines. However, in some situations the change to soft water may make cleaning the machine easier.