

# WATER HARDNESS

## What is it and How is it Measured?

Calcium and magnesium are two minerals which mostly make water "hard." Both of these minerals are classed as "contaminants," but that is a poor choice in terminology, for calcium is essential in our diet! – Most water softeners merely exchange one group of non-toxic elements for another group of toxic elements.

Technical Description - Water hardness is measured either in grains per gallon (GPG) or as calcium hardness in milligrams per liter (mg/l) or parts per million (ppm). GPG is based on calcium hardness. To convert from calcium hardness ppm, just divide by a factor of 17.2 and this gives you hardness in GPG.

A soft or slightly hard water has up to 3.5 GPG; moderately hard water runs from 3.5 to 10.5 GPG; and very hard water is greater than 10.5 GPG.

### SOFT WATER Via Salt Based Softening

A soft water via salt is aggressive at leaching metals (like lead) from your lines and faucets. Many faucets are solid brass (with a relatively high lead content) and are chrome plated. This means that if you have soft water, there is a great chance that your initial drawing of cold water will have a higher lead content than normal. Refrain from using Hot or warm water from the tap for cooking, drinking water, beverages, or infant formula as it could be higher in heavy metals like lead!

### WATER SOFTENERS

Besides making the water more corrosive and aggressive at leaching metals from your lines and fixtures, the ion exchange beads from water softening systems may back - siphon into your toilet tanks, and the soft water may attack vital plumbing parts.

While supposedly solving one set of problems, the salt based softener could possibly introduce other problems which you may or may not be aware of! Such a typical water softener, besides leaching lead and other metals from your plumbing, can increase your sodium intake.

In a water softening device hard water flows through synthetic resin beads. Sodium ions (salt) are loosely attached to each bead and the water exchanges hardness ions (calcium and magnesium) for the soft sodium ions. These devices can also be costly to run since they can waste up to 120 gallons for every 1,000 delivered.

### CONCLUSION...

If you are contemplating installing a softener, there are serious questions you should ask:

1. How will my drinking water quality be affected?
2. How else can the problems be solved?

**Consider all the benefits and the ease of implementing InjectaFLO with SCALE SOFT.**

**NewFresh Water Systems - Green in home water treatment**

Scale Hardness Conditioning and Soft Feeling Water Systems

[Info@NewFreshWater.com](mailto:Info@NewFreshWater.com)

[www.NewFreshWater.com](http://www.NewFreshWater.com)

Phone: 877 Euro-Water, 877 387-6928

2009 RR 620 North #180, Austin, Texas 78734