

Thursday 12 April - Water hardness

Hard water is a serious problem, and it is a common one. No natural water supply is completely free of hardness.

GPG (grains per gallon). This is the most common method of designating the hardness of a water supply in our industry. Hardness can also be expressed in terms of parts per million (ppm) or milligrams per liter (mg/L). Conversion of parts per million or milligrams per liter into grains per gallon is quite simple. Simply divide the parts per million (or milligrams per liter) by 17.1 to convert to grains per gallon.

Here is what an analysis in grains per gallon or parts per million means:

Grains par gallon (gpg)	Milligrammes par litre (mg/L)	Parties par million (ppm)
moins de 1,0	moins de 17,1	douce
1 à 3,5	17,1 à 60	légèrement calcaire
3,5 à 7,0	60 à 120	modérément calcaire
7,0 à 10,5	120 à 180	calcaire
10,5 et plus	180 et plus	très calcaire

Most waters possess hardness minerals in amounts from 3 to 50 gpg. Unfortunately, where water is extremely hard, the problem is often compounded by the presence of other contaminants.

Most people are quite aware that water containing 15 to 30 grains of hardness minerals is definitely hard and difficult to use.

On the other hand, many people will tolerate a 5 grain water that is very objectionable to anyone accustomed to using completely soft water.

Why does hard water constitute a problem?

Hardness is a source of many problems:

Water leaves soap curd and detergent deposits on fabrics. This dulls colors and gives a grey or yellow appearance to white fabrics. Also, hard water soap curd clings to fabric fibers, causing threads to become brittle and shortening the life of the material. (Clothes washed in zero soft water are free of troublesome hard water soap curd.)

Water hardness makes home cleaning operations more difficult.

Hard water wastes soap and synthetic detergents.

Hard water leaves unsightly soap scum rings in the bathtub.

Hard water spots and streaks glassware and dishes.

Hard water builds up scale deposits in all water-using appliances, clogs hot water pipes.

Hardness may dry and irritate skin, if skin disease exists it can aggravate it.

And hard water hampers good grooming efforts.

To have zero hard water, you have to install proper equipment depending on the amount of contaminants in your water, and consider application. We offer a free chemical analysis, so we can determine the equipment needed to solve your problem.

Reference: Water Treatment Fundamentals, Seventh Edition