HARDNESS

Causes of white residue on glassware, dishes and household plumbing fixtures

ILLINOIS AMERICAN WATER

What are the causes of white residue?

The two most common causes of white residue on dishes and household plumbing fixtures are water hardness or problems with home water heaters.

Hardness in water is made up primarily of two elements: calcium and magnesium. Both naturally exist in groundwater and surface water supplies. Periods of low precipitation can cause hardness levels to increase for short periods of time. These levels usually decrease after rainfall or snowmelt due to dilution in the raw water sources.

The degrees of water hardness are as follows:

Degree of water hardness	Range in parts per million (ppm)	Range in grains per gallon (gpg)
Soft	Less than 17.0	Less than 1
Slightly Hard	17.1 to 59	1.0 to 3.4
Moderately Hard	60 to 119	3.5 to 6.9
Hard	120 to 179	7.0 to 10.4
Very Hard	Greater than 180	Greater than 10.5

Illinois American Water does not soften the water, because calcium and magnesium pose no health problems and can promote stronger bones.

Conversely, removal of these components through advanced processes has the potential to increase sodium levels in the drinking water, which could be harmful for those who have high blood pressure. Softer water is also more corrosive and might shorten the life of your home plumbing.

How can I determine if the residue is the result of water hardness or my hot water tank?

Collect some of the white flakes and try dissolving them in vinegar. If the material is calcium carbonate (hardness) it will foam and dissolve when it comes into contact with the vinegar. If the material does not dissolve, the problem might be the result of a faulty dip tube in your hot water heater. In addition, dip tube particles will float, hard water mineral buildup will usually sink. White particles, which are calcium carbonate, can also be easily crushed into a powder when rubbed between your fingers. Particles that are present due to dip tube problems will not crush when subjected to moderate pressure.

For more information

Contact our Customer Service Center at (800) 422-2782

Our customer service representatives are available 24/7 to assist you.

Visit us online at illinoisamwater.com.

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FREQUENTLY ASKED QUESTIONS AND ANSWERS

What is the difference between “hard” and “soft” water?

Hardness is a term used to describe the high level of calcium and magnesium in the water. Excessive hardness can cause scale (white spots) to be deposited in boilers, pipelines, faucet aerators and shower heads. Hard water also requires the use of large amounts of laundry soap to achieve the desired results. Soft water is either water that is low in calcium or magnesium, or water that has been treated in a softener.

Why does my dishwasher leave spots on my glasses?

The spots that might appear on glassware after it is washed and air-dried are caused by harmless minerals (usually calcium), which remain on the glass when the water evaporates. Commercial products are available that allow the water to drain from the glassware more completely. Spots on glass shower doors appear for the same reason.

Why are there white deposits found around my showerhead?

If a particular area has hard water, it is most likely a result of the mineral deposits which form when the water evaporates. There are commercial products available in stores that will remove this buildup. Soaking the showerhead in a solution of white vinegar will also dissolve the deposits.

About Home Water Softeners

A water softener can improve the aesthetic qualities of your household water. For example, soap products perform better in softer water.

Water softeners do not improve the safety or quality of your water. Most water softeners exchange sodium for existing calcium and magnesium in the water and, therefore, increase the sodium content of the water.

The sodium increase in softened water may be a concern to you. If you are on a sodium-restricted diet, you might want to consult your physician prior to purchasing a system.

Also, there is evidence that softened water might be corrosive to certain metallic pipe materials.

The cost of softening water is another factor that must be taken into consideration. According to Consumer Reports, water softeners can consume from 15 to 120 gallons of water for every 1,000 gallons of water processed. The decision to purchase a home water softener is a personal preference.