

Water Facts

10. Water Hardness



Water Hardness

What is Water Hardness?

Water hardness is dependent on the geology the water originates from and the associated amount of dissolved calcium and magnesium ions present in the water. It is expressed as the amount (mg/L) of calcium carbonate present.

The degree of hardness is classified into five categories, which are shown in the table below:

Hardness Category	Calcium Carbonate Range (mg/L)
Soft	Up to 100
Slightly Hard	100-150
Moderately Hard	150-200
Hard	200-300
Very Hard	Above 300

What is the hardness of my water supply?

If your water is supplied by Leaf Water you will be able to find out the hardness of your water by looking at the water quality report for your area.

This can be found on the water quality report section of the Leaf Water website.

Why isn't my water softened?

Whilst hardness is viewed by some as a problem due to the formation of scales and scum, for others it isn't a problem and can actually have some health benefits.

Hard waters have the added advantage of forming protective scales on metal pipework limiting corrosion and the release of metals into the water supply. Therefore, in general water suppliers don't soften drinking water supplies.

Can I soften my water?

You can install a water softener on your internal plumbing system to reduce the hardness of your water. However, it is recommended that you do this on the hot water system and ensure your main drinking water supply remains unsoftened, as it is recommended that the total hardness of your water should remain above 150 mg/l (as CaCO₃ calcium carbonate) so as to maintain the health benefits of hard water and to reduce the risk of biological or chemical breakthrough from the softener.

If you do decide to install a softener, it is recommended that you only install a softener from the WRAS Materials and Products Directory [WRAS Approvals](#) and that an approved plumber from the WaterSafe register of approved contractors [\(WaterSafe | Local Approved Plumbers\)](#) is used for the installation.

Why do I get white scale on my kettle, fittings and fixtures?

Due to the presence of higher amounts of calcium and magnesium, hard water causes 'tide marks' on basins, sinks, baths and toilets and a scum on the surface of hot drinks, especially tea brewed in the cup with a teabag (due to the air and tannin in the tea). Scaling of hot water systems, kettles, electric irons and domestic appliances are also common in areas with hard water.

Overtime the formation of calcium and magnesium scales can reduce the efficiency of the heating elements in these systems and devices.

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