

## PROTECTING YOUR INVESTMENT AGAINST CORROSION

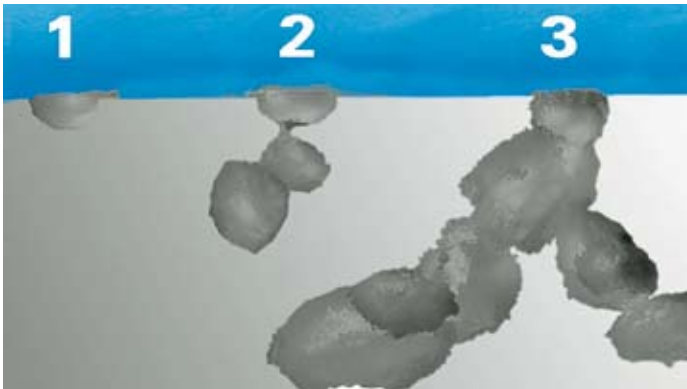
Solahart's tank technology has evolved over more than forty years of research and development and a substantial investment in production techniques. Every conceivable material has been tried in the quest for a technology that will withstand corrosion and extend the life of your Solahart water heater. Solahart use a ceramic lined tank for the good reason that it provides the best corrosion protection on the market.



- What is corrosion?
- Protecting Against Corrosion

### What is Corrosion?

Corrosion is a chemical change that occurs on the surface of a metal and rusting is the most common example. Few metals ever escape corrosion in water, regardless of their quality, including 'stainless' steel. Gold or platinum do not corrode, but their cost and other physical properties make them unsuitable for water storage heaters.



*The stages of corrosion: 1. Initial Pit forms; 2. Auto catalytic process speeds up as concentrated solution becomes more aggressive; 3. Leak occurs as pit breaks through outer surface.*

Corrosion begins its destructive process as a result of small flaws in metal surfaces, at weld points, or from stress. A common assumption is that water is not corrosive. This is not the case, and some water supplies are more corrosive than others.

Hot water storage systems are not immune from corrosion and the most effective way of dealing with the problem is to fuse the inside of a strong steel storage tank with a ceramic lining to isolate the tank structure from potential corrosion. (see also Fact File 05)

### Protecting Against Corrosion

Solahart take corrosion protection even further by the installation of a simple replaceable component that takes the brunt of any corrosive potential the water may have. By using a bare metal component (known as an 'anode') that is more readily corrodible, it protects the tank.

This approach to corrosion protection is employed all over the world where metal objects are immersed in water. Literally billions of dollars are invested in ships and oil rigs worldwide, they are all protected by replaceable anodes, which withstand the harshest of climates and water conditions.

Over time, the anode dissolves, releasing a completely harmless magnesium salt into the water. The life of the anode varies, typically between 5 and 15 years, depending on the quality of the water. Bare steel is never exposed to water in the system.

A further advantage with a protective anode is that it can be easily checked during regular services and replaced, as necessary, to ensure lasting protection of your tank and extend the life of your Solahart water heater.

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