

## Stainless Steel Crevice Corrosion

In recent years, stainless steel has become one of the most preferred home building materials and home appliance materials among consumers. In fact, stainless steel is being used to make some of the most used and abused appliances and items in the house. Stainless steel, for example, is now being used for kitchen sink grids. This is because apart from the fact that stainless steel is very attractive to look at, this kind of steel is also easy to maintain. Stainless steel is corrosion resistant because of the chromium that is alloyed with the iron in its production, which provides a protective oxide film on the surface of the steel. This means that if in case the surface of the steel is damaged or cut, oxygen from any source (which includes the atmosphere) can instantly reestablish the protection.

This does not mean, however, that stainless steel is not subject to different kinds of decay, such as stainless crevice corrosion. There are still environmental factors that can cause stainless crevice corrosion, especially on low grade stainless steel.

### Understanding stainless crevice corrosion

There are many different types of corrosion that degrade the protective layer of stainless steel. There is pitting corrosion, stress corrosion cracking, sulfide corrosion, and galvanic corrosion. But one of the most common types of stainless steel corrosion is still stainless crevice corrosion, which is the result of the accumulation of foreign material in crevices that are created on the surface of the stainless steel item. Usually, these crevices are created because of the way the components of stainless steel item are designed. Stainless steel items under gaskets, those with sharp re-entrant corners, and those that have overlapping surfaces are very prone to stainless crevice corrosion.

Conditions that cause stainless crevice corrosion, (including very high temperatures) can totally degrade the whole surface of the stainless steel item, which in turn would make the steel vulnerable to oxidation or rusting. There is good news, though – the problem can be avoided. Manufacturers are now finding way to make sure that the design of the stainless steel item is made in a way that would discourage crevice corrosion. In addition to this, using high-grade stainless steel can also help prevent the occurrence of stainless crevice corrosion.

Among the different kinds of corrosion that stainless steel can become vulnerable to, one of the most common types of corrosion is the stainless crevice corrosion, which usually occurs in joints, cavities, holes, grooves, gaskets, and gaps of any stainless items like stainless sinks. That is why manufacturers of consumer stainless steel products are actively taking necessary measures such as improving the design of sinks and high-grade stainless steel without jacking up cost. This is because doing so can help the people who use stainless steel items avoid the problems caused by stainless crevice corrosion.

(Source: [stainless-online.com](http://stainless-online.com))