

# BRUSHED STAINLESS STEEL CARE & MAINTENANCE



## Material Properties

Stainless steel is the generic name for a number of different steels used primarily for their resistance to corrosion. The one key element they all share is a certain minimum percentage of chromium of 10.5%. Although other elements, particularly nickel and molybdenum, are added to improve corrosion resistance, chromium is always the deciding factor. However, despite its various additions, stainless steel still behaves much the same as steel, and even the highly alloyed stainless steel grades (such as 316) still contain a minimum of 62% iron.

Gloster manufactures using 304 grade stainless steel with an electro-polished (EP) finish brushed finish. Electropolishing is widely used in the electronics, food and medical industries and on components for cruise ships and yachts, where a corrosion resistant, smooth and easy to maintain surface is of vital importance. Electro-polishing is an electrochemical process whereby the combination of an electrical current and a strong acid erodes the surface of the stainless steel substrate atom by atom. This process removes much of the iron from the surface of the steel, but leaves the chrome intact, resulting in shinier, but much improved corrosion resistant surface.

However, as with any item left permanently outside, even electro-polished stainless steel furniture requires regular maintenance to keep it looking as new. Before the furniture leaves our factory, the welds are ground flush and the surface is polished with Scotchbrite, usually in the long direction of the legs or rails. This provides a smooth, resistant surface that is easy to clean and maintain.

Although electro-polished stainless steel is generally highly resistant to corrosion, the surface can be susceptible to cosmetic deterioration by the effects of salt water and air-borne chemicals. This may result in small brown spots appearing on its surface (this process is likely to be accelerated in coastal areas). These spots in no way affect the strength, integrity or longevity of the furniture, they are simply superficial discolouration's that require cleaning to restore the stainless steel to its original appearance.

## Cleaning

Brushed stainless steel should require very little maintenance, other than to gently clean with water and a mild liquid detergent to remove any dirt or splashes. A microfibre cloth or sponge should be used to wipe over the surfaces of the furniture. Removing surface water with a drying cloth (like you would use on your car) will help avoid water spots.

If rust spots appear on the surface of the stainless steel, the Scotchbrite pad supplied with the furniture can be used to clean the area. Gently rub the Scotchbrite pad in the same direction as the existing brushed surface of the stainless steel, until the rust spot is removed. Never use steel wool to clean stainless steel, as the carbon steel will contaminate the stainless steel, causing rust.