

TEA STAINING, SURFACE DAMAGE & REMEDIAL WORK

WHAT IS TEA STAINING?

The brown surface stains that can occur on stainless steel surfaces are in the vast majority of cases cosmetic rust stains known as 'tea staining' - caused by atmospheric conditions such as salt air. These stains will not progress to causing any structural damage to the stainless steel. The remedial work required to rectify tea stains depends on the cause of the staining and the degree to which it has attached itself to the stainless.



Coastal areas are particularly harsh environments for stainless steel fixtures

REMEDIAL WORK

First attempts to remove tea staining should be as unobtrusive as possible to the stainless steel.

Apply a chalk-based, bleach-free, cream cleanser with a soft damp cloth and rub gently. If this doesn't remove the tea staining it may be worth trying a proprietary stainless steel cleaner. These are commonly based on dangerous chemicals (such as phosphoric, oxalic or sulphamic acids) and must be handled with care. After cleaning with these chemicals it is important to always neutralise the surface with a 1% ammonia or sodium bicarbonate solution, then rinse with clean water and wipe dry.

Other causes of surface rust and staining can have a more significant impact on the stainless surface such as 'pitting' and may require a more aggressive approach to repair.

Surface damage can be caused by:

- Failing to adequately clean off the glue/residue left behind after removing the plastic protective film supplied on stainless products. Retention of this invisible residue will prevent the chromium-oxide film from regenerating, leaving the surface susceptible to discoloration
- Using harsh cleaning liquids that contain powerful acidic or alkaline chemicals
- Using scourers that have previously been used on ordinary steel
- Using a cloth/brush that has previously been in contact with a harsh cleaning chemicals
- Splashing chemicals or cleaning materials onto the stainless surface and not rinsing off
- Leaving acids in contact with the stainless for prolonged periods of time (particularly when allowed to dry) without being thoroughly rinsed off the surface
- Failing to keep the surface clean. Allowing the stainless to stay covered with dirt or grime for extended periods will prevent the chromium-oxide film from regenerating
- Installing or leaving a stainless steel fixture in constant contact with a dissimilar metal - such as ordinary steel
- Allowing salt or salty foods to dry on the surface of the stainless

If initial efforts to clean off tea staining or rust marks fail, use of synthetic pads such as Scotch Brite® is recommended. Be advised, this abrasive pad will remove microscopic particles of the stainless steel and will in turn alter the finish of the surface. In these instances, very carefully rub out the rust spot in the direction of the grain. Thoroughly rinse with clean water and dry. It is critical that all particles are removed as any remaining rust particles can potentially regenerate. If rust spots are still present, repeat steps until all rust particles are removed from the affected area.