

GLASS STAINING (FOR CONSUMERS)



Introduction

Glass is a popular building material due to its unique properties. It is transparent, providing valuable light into our buildings, very hard (Mohs scale 5.5) and it is also easy to clean.

Contrary to popular belief, the surface of the glass is not perfectly smooth or flat. Under a microscope it is apparent the surface is covered with small peaks and valleys. Many people are also surprised to learn that the surface of the glass can become stained. Staining or corrosion of the glass surface is a relatively uncommon occurrence that only takes place under a specific set of circumstances.

How does staining occur

Staining or corrosion is caused by a chemical change or degradation of the glass surface, with prolonged exposure to moisture the most common cause. If water droplets are in contact with the glass surface for a significant length of time the alkalinity or pH of this water increases to a level which becomes quite alkaline. The alkaline water droplet begins to corrode the glass surface. Initially this is not visible to the naked eye however continued prolonged exposure will result in visible staining.

The quality of the water can also have an impact on the rate the glass surface corrodes, e.g. bore water contains an excessive amount of minerals. This may exhibit a rust colored stain. Water contaminated by other building materials such as concrete may also cause staining.

Identifying staining

At a microscopic level the glass surface becomes pitted and manifests itself as iridescence (rainbow stain) or as a dense translucent haze. Severe staining or corrosion on shower screen panels or bath tub enclosures is often incorrectly mistaken as soap scum build up. In this instance the glass surface may have become rough which in turn attracts more water, accelerating the rate of corrosion.

The only way to remove the stain is to re-polish the glass surface by using a mild abrasive such as cerium oxide or other specialized products. This is often a difficult and time consuming process and in many cases replacement of the glass is the preferred option.

Minimizing the risk of staining

The following suggestions will assist in minimizing the risk of glass staining.

Shower screens - Squeegee or chamois down the glass after every use and clean regularly.

Windows & doors - Ensure hoses or garden sprinkler systems are not directed onto the glass.

Glass balustrades - Ensure hoses or garden sprinkler systems are not directed onto the glass.

Glass pool fences - Endeavour to reduce the amount of splashing from the pool onto the glass. Rinse or clean regularly.

Glass table tops – Do not allow water to pond on glass furniture.

To keep your glass in pristine condition, all glass should be cleaned regularly.



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