

TECHNICAL BULLETIN

Acid Etched and Other Abraded Surfaces on Glass

Glass surfaces that have been abraded, either mechanically (i.e. sandblasting) or chemically (i.e. acid etching) do not have the same non-porous characteristics as standard glass surfaces and therefore must be handled with increased care during installation, and will likely require extra attention to cleaning after installation. Although acid etched surfaces may be less susceptible to the handling and cleaning issues historically associated with sandblasted surfaces, it is, nonetheless, an abraded surface and is vulnerable to the same issues that plague sandblasted glass.

Abraded glass surfaces, when viewed through a microscope, look like a series of irregular peaks and valleys. As a result the surface is far more susceptible to non-uniformity of appearance due to normal and routine contact with other objects. The result of this contact can result in either “contact transfer” of foreign materials and/or further abrasion.

Contact transfer can alter the surface’s appearance in two ways. Firstly, the abraded surface will chafe or roughen any object with which it contacts (not unlike sandpaper) and the material will be deposited on the glass surface. Secondly, the abraded glass surface has become porous and has a tendency to hold any contact transfer materials with which it contacts. This is especially true with regards to human contact where perspiration, oil, and other “dirt” from hands and fingers come in contact with the glass surface. Plant fabrication equipment and materials (e.g. edger pads, conveyors, and polishing compounds) may also affect the surface appearance under certain lighting conditions.

Further abrasion occurs when a foreign material comes in contact with the abraded surface. Any movement of one related to the other can actually have a smoothing effect on the texture of the abraded surface, thus giving it a slight contrasting appearance.

Although any glass cleaning agent designed for use on standard glass surfaces is safe to use on abraded surfaces, it is important to note that conventional cleaning of abraded surfaces does not always achieve the desired effect. Some cleaning agents will require generous rinsing to remove all of the cleaning residue from the surface pores while others may require a longer soaking period in order to dissolve foreign materials in the surface valleys.

Some success in cleaning abraded glass surfaces has been achieved by first wiping with either white vinegar or even WD-40, removing the excess, and allowing to dry. Then apply rubbing alcohol to remove the residue left by the first cleaning. Another means is to sprinkle a liberal amount of pumice on the affected area and rub with a wet, plastic scouring pad. A commercial glass cleaner that has been found to successfully remove stain from abraded glass where other products wouldn’t is Winsol Crystal 550.

Despite routine cleaning, however, over time repeated soiling may leave permanent smudges on the surface. **Even with new glass, if examined closely enough and at an oblique angle one can almost always detect some non-uniformity in the appearance and texture of abraded glass surfaces, especially on glass that has been fabricated** (e.g. edges polished, holes drilled). **Such variances in the appearance of acid etched or sandblasted glass will not be cause for rejection. NOTE: The installer is responsible for the final cleaning after installation. Cleaning the abraded surface of glass may not completely eliminate blemishes or marks left from handling or fabrication. It may only reduce them.**