

HARD WATER SPOTS

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This article examines what makes up water stains and the harm water stains do to windows. Also, it discusses some preventative maintenance steps that will minimize water stains. Window cleaning companies are finding that this is a problem with no easy solutions.

The last couple of years have been banner years for new construction. Already some of these buildings along with many existing buildings are being damaged by a clear, odorless, tasteless liquid... WATER. Yes, water contains minerals that bond to glass and produce unsightly stains. More serious than being unsightly if left untreated, these deposits will permanently etch the glass reducing its tensile strength.

To get a better understanding of water stains, let's first take a look at the composition of glass. Glass is a hard, brittle substance, usually transparent, made by fusing silicates with soda and lime. Silicates are a salt or ester derived from silica, a hard glassy mineral, found in quartz and sand. Quartz is a crystalline mineral usually colorless and transparent. Lime is a white substance (calcium oxide) obtained by the action of heat on limestone, and soda is the same as sodium nitrate, a clear crystalline salt. What does all of this mean? It means that windows are composed of minerals.

Whenever foreign minerals are introduced to glass such as hard water, lime, and petroleum materials, a reaction occurs known as mineral deposits. If mineral deposits remain on glass for a period of time, they begin to bond to the glass.

Once bonding occurs, special attention must be given to insure that the glass will not become permanently damaged. Unfortunately many property managers learn to late and for them replacing the glass is the only choice left. This is not a pleasant reality.

Let's examine the most common problem, sprinkler systems. Have the landscape company adjust sprinklers so that they do not spray directly on the windows. Set the automatic timers so that watering time is early in the morning. Because wind often causes the water to spray on the glass, it is important to water when the wind is calm. Try to have your customer increase ground floor window cleaning to every 90 days. By

doing this, water stains will not have time to accumulate. Although this may increase his window cleaning budget, it will still be less than treatment or replacement. If these steps do not solve the problem, you may consider a change of landscaping. By planting ivy or some type of plants that don't require much water, it becomes possible to change the sprinkler heads nearest the windows. By having your customer install a bubbler, you will eliminate any spray on the glass and still have an effective watering system. Remember, this system is only effective for flood watering and does not apply to lawn areas.

Many companies are noticing stains on windows above the second story. The primary cause of this damage is due to lime and/or petroleum materials. When it rains or early morning moisture occurs, the precast material becomes wet causing the water to run onto the windows. Not all precast material is sealed properly and this is where the problem begins. Since precast contains lime and petroleum, the water is able to blend with these materials. Once the window has had time to dry, a residue is left on the glass. This residue will bond to the glass if not removed. The sun will intensify this process causing the minerals to bake into the glass. This is a serious problem and should not be neglected. The steps that can be taken to correct this are few. The first and most recommended is to seal the precast. If sealing the precast is not preferred for any reason, the only other choice is to increase the amount of window cleaning. By doing this the residue will not have time to bond to the glass, and you should be able to maintain its original appearance.

Use this article to educate your customers your dealing with. The more often the windows are cleaned the less it will cost them in the long run.

Glass not only comes in all shapes and sizes but also with a difference in surfaces. Some types of glass are harder, others softer. The type of glass will determine how damaging water stains can be on it. In general, the darker the glass, the softer it is. Softer glass is much more likely to become permanently damaged from water stains in less time than harder glass. This holds true because the pores are more exposed than those of a harder piece of glass. Since the softer glass is much more susceptible to deeply embedded stains, it also becomes more complicated for removal. If your windows are smoked or dark in color, don't hesitate to have any water stains on them removed. The longer you wait the more likely damage will be beyond repair and replacement is your only choice left.

Mirror-type windows, also known as solar, are much harder making it more difficult for the water stains to bond. Also, they are much easier to clean provided the right chemical is used. Unfortunately, the wrong chemical can cause permanent damage upon application. The most noticeable damage is the loss of the mirror effect leaving the windows completely etched.

Water stains on glass is a distinctive problem that requires special attention. You should not consider this part of the normal window cleaning process, it is much more involved. Safe and effective removal of water stains is time consuming and labor intensive. In spite of the extra cost for this type of service, it is still much less than the actual replacement cost of the glass.

As new buildings continue to rise out of the ground and take their place alongside existing buildings, thousands and thousands of square feet of glass sparkle in the sun. Protect the cosmetic, visual, and structural beauty of your glass through restoration and proper maintenance.