

Issue #11  
Three Signs That Your Glass Needs Replacement

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Many often replace their glass panels when it shatters, thinking that is the only way to go about building maintenance. However, that is not the only way. As the saying goes, 'prevention is better than cure'. Likewise in this situation, preventive measures are better. Firstly, it is always more cost-effective as you do not have an urgent time-line to meet; secondly, you do not have to worry about the gaping hole in your house/building you have to seal, while waiting for your replacement glass panel to arrive.

So how do we implement preventive measures? By checking our glass panels regularly. Not only will doing so help us identify older glass that needs replacement quickly, but it will also identify low quality glass that should be replaced as soon as possible.

Low quality pieces of glass unfortunately do make their way into the market from time to time. Using them might cause comfort levels in your home/building to drop, or even cause a surge in your electricity bills. In this newsletter, we'll show you some examples of worn-out glass and low quality glass so that you're able to identify the telltale signs and replace them with better-quality glass instead.

# Sign 1

## Old Glass Panels



Good quality glass panels often last quite a few decades, but ultimately they will need a replacement after being subjected to varied weather conditions and wear and tear over the years. So how do you tell when it's time to replace that old glass window/door/shower screen/panel before it gives way?

One way is by examining the glass for scratches, chips and cracks. If there are many scratches on a single pane of glass, it is probably time to replace it as it is starting to obstruct your clear view of the outside. Encountering stiff joints when you're trying to open your glass windows/doors is also a sign that the frame, together with the glass, should be changed.

Deep scratches can also result in breakage down the road, and therefore should be replaced first, as a preventive measure.

However, if you spot chips at the edge of a glass panel, replace it immediately. This is because it has the highest risk of breakage as chips at the edge weaken a glass quite considerably.

## Sign 2

# Distorted Glass Panels

At first glance, the glass reflection on the opposite building seems normal:



However, look closer and you will find that the windows of the opposite building are reflected in a distorted manner, with some windows appearing slanted and not in sync with one another (close-up view below). This is a sign that the glass is of bad quality, as the distortion you see in the reflective glass is actually caused by roller waves that were produced while the glass was being tempered (during the fabrication process). Not only is this unsightly, but it also means that the glass is not able to fit into the frame as snugly as was originally intended, causing gaps in the building which might lead to a building consuming more energy than it should.



Roller wave distortions are actually easily controlled and rectified if proper quality control measures and suitable technology have been implemented at the factory itself. Therefore, check your glass panels and if the reflections look distorted, you should check your warranty terms and ask your glass manufacturer to replace it if possible.

## Sign 3

# Delaminated Glass Panel



**Delaminated glass panel of a shopping mall (top-right corners)**

One clear sign that the glass is delaminating is when you see whitish stains at the edges that cannot be removed no matter how thoroughly you clean the glass; this is because it is not a stain, but a sign that the glass is delaminating. The white colour forms as a result of the glass peeling away from the interlayer.

Delaminated glass panels are a cause for concern as water and dust can seep into the panels, causing further delamination and rendering the glass less effective at its original purpose of protecting the building from excess heat and noise. Delamination happens when the interlayer is no longer able to hold both glass together well enough, causing the glass to fall off when it breaks, instead of the glass pieces remaining adhered to the interlayer. This also means that the delaminated glass has lost its original purpose of being a safety glass (i.e. causing least injury when it breaks), which must be rectified immediately by changing the glass panel.

Delaminated glass panels should be replaced as soon as possible to avoid the risk of glass falling out. If the glass panels are always in contact with moisture-laden areas, it might be time to consider using a more durable interlayer (DuraSafe-SGP) than the one currently installed.



We hope this newsletter has given you more insights into identifying glass that needs replacement. Till the next round!

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