TECHNICAL SALES BULLETIN 027

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Edge Deletion of Insulating Glass (X2 Units)

Why do we need to remove the coating?

An important part of the assembly is the edge deletion process. This involves the removal or stripping of the soft coat using an edge deletion wheel. Edge deletion is normally done on the cutting table or on the X2® assembly line.

These glass panels will be made into a double unit (X2®), which involves 'gluing' these panes together using various types of sealant. As the soft coat is susceptible to corrosion this coating must be removed from the outer edge of the glass prior to assembly (Figure 1), so we are bonding to the substrate (glass) and not the silver based coating.

If this is not done, moisture from the sealant and the external environment will corrode the silver, resulting in the coatings to oxidise and delamination of the X2® unit (Figure 2).

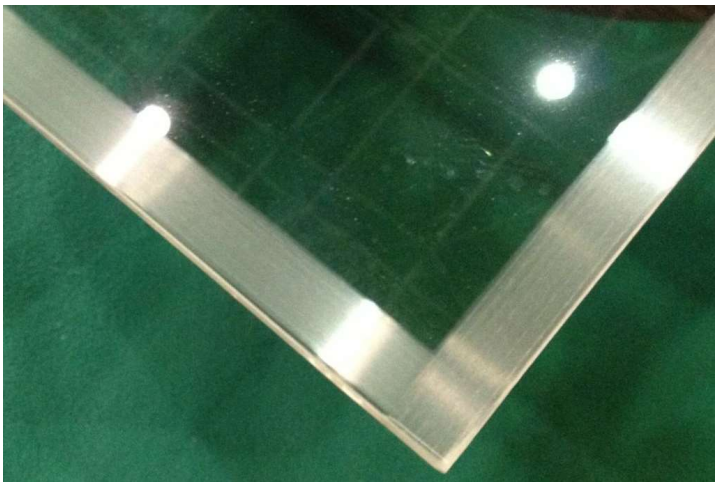

Figure 1

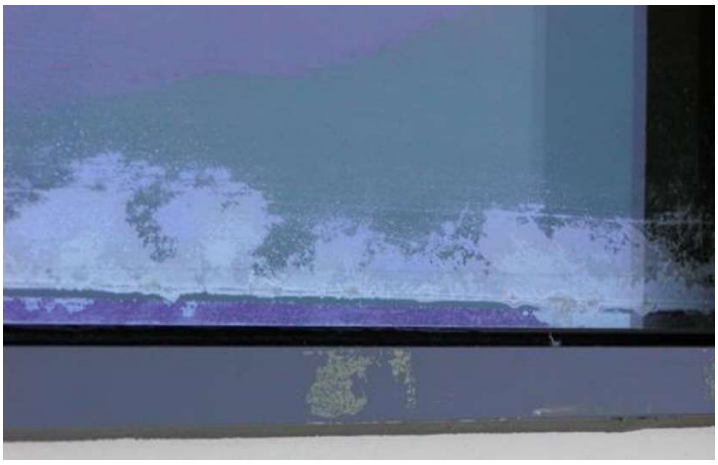

Figure 2

The soft coating has to be removed / deleted approximately 15mm of the perimeter of the surface of the glass to enable the sealant to bond direct to the glass.

Sufficient deletion can lead to a gap forming between the coating and the primary coating of the edge bond. “White lines” then appear. This phenomenon also cannot be avoided and does not qualify as a reason for rejection of the X2® Unit. Neither the functionality of the insulating glass unit nor its service life are compromised, however. In fact, a small gap between the butyl cord and the coating ensures optimal performance for years to come.

AAAMSA guide lines do not specify an allowed tolerance where the deletion may ingress into the vision area and only state the following.
“The spacer is often visible in the rebate and the primary seal, being soft mastic; it is not always perfectly flush with the spacer inner surface. In addition both the spacer and the sealant may protrude beyond the sight line and, provided the requirements of section 10.4.4 are met, this is considered acceptable.”

Based on other international glass processors we have opted to limit the allowed edge deletion into the vision area to 3mm above the spacerbar. In the corners and for shaped units the 3mm tolerance is not applicable. Please see TSB 023 – SIG Design Guide for more information on X2® Units.

Below is a pictures that indicate what can typically be seen on site after the X2® Units have been glazed.