

Sealed Units

Sealed units provide a high standard of vision. The following is a guide to the quality that can be expected.

Glass used in the manufacture of sealed units is similar to that used traditionally for single glass and will therefore, have a similar level of visual quality.

Viewing sealed units for scratches on the outer faces of the panels must be carried out before any rendering, plastering or other works adjacent to the glazing takes place, and as early as reasonably practicable following installation.

How to do a professional inspection...

Stand in the room no less than 2 meters away from the sealed unit and look directly through it.

- For toughened, laminated or coated glasses, stand no less than 3 metres away.
- Where it is not possible to stand at the right distance then stand as far away as you can from the sealed unit.
- Do so in natural daylight, but not directly towards the sun and with no visible moisture on the surface of the glass.
- Exclude 50mm wide band around edge of the glass from the check.
- Glass must be viewed at an angle of 90°

What to expect from Inspection

Flat transparent glass, including laminated, toughened or coated glass is acceptable if the following are neither obtrusive nor bunched:

- Bubbles or blisters
- Fine scratches not more than 25mm long
- Minute particles

The obtrusiveness of blemishes is judged by looking through the glass, not at it, under natural light. It must be understood that the glass used in sealed units is a processed glass, and as a consequence, blemishes are to be expected.

Sealed units with optical defects such as smears, fingers prints or other dirt on the cavity faces of the glass, or extraneous material in the cavity are unacceptable, if they are visually disturbing.

Multiple Reflections

This occurs in certain light conditions and is caused by multiple surface reflections within sealed units which may vary from pane to pane.

Brewster's Fringes - the Rainbow Effect

Small transitory rainbow effects are sometimes produced by the glass refraction of light. Their appearance is due to high quality glass sheets being placed parallel to each other.

Low Emissivity Glass (Low- e-glass)

Tint: early versions of Low-e glass may make some light coloured materials (such as net curtains) appear slightly darker when viewed directly through the glass. Recent innovations in Low-e coatings which are more neutral now make this effect less evident.

Haze: This phenomenon may occur at certain times of the day when the sun is at a particular angle or when viewed under some lighting conditions. This phenomenon is also influenced by the type of Low-e coating.

External condensation: Thermally efficient windows are so good at keeping the heat that the outer pane can get cold as it is no longer being warmed by wasted heat. Under some weather conditions and at certain times of the year, this can result in the formation of condensation on the outside surface of the glass.

The appearance of sucker marks, transit pads and labels may appear when condensation forms on outside of the window. This is a positive indication of a thermally efficient window.

Special Glasses

Toughened glass may show visual distortions which are accentuated by reflections in sealed units. This is a natural phenomenon and not a fault.

Laminated glass may have a few more blemishes due to it being made of several layers.

Tripled glazed Units can be highly reflective especially when manufactured with two panes of low emissivity glass. The presence of two coated panes may highlight glass imperfections that are within tolerance. If spacer bars do not line up perfectly this does not affect the performance of the unit. A tolerance of 2-3mm is acceptable.

Leaded Glass

Externally exposed lead will oxidise – this is a natural phenomenon and does not indicate a fault with the material.



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