

5. Visual Quality

5.1 Visible Defects

Visible defects change the visual quality of the product. A differentiation is made between visible defects that are acceptable or unacceptable. The unacceptable ones are sorted and removed. Inspection of a glass panel is as follows; the panel is lit up by a diffused light similar to daylight, and viewed at a distance of 1.0 meters (40 in) in front of a matte black background. The form of the defect is determined without regard to the surrounding defect region. A differentiation is made between point and line defects. Point defects are glass blisters, solid inclusions, knots, and surface blemishes. Line defects are scratches, spots or deposits that are found on inner glass volume or outer glass surface covering a certain length or area.

5.2 Unacceptable Defects

Unacceptable defects lower the usability of the product, which leads to reducing the quality of the panels for transport and inventory.

Type of characteristics	Definition of characteristic
cracks	all sizes visually perceptible
impact marks	all sizes visually perceptible
breakage	inadmissible

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glass made of ideas

5.3 Acceptable Defects

Acceptable defects do not influence the performance of the products, they do not represent cause for rejection or replacement. The size and appearance of these defects do not adversely affect the normal use of the glass-ceramic. Acceptable defects are:

- Small closed blisters or bubbles
- Inclusions like crystals or stones and small defects at the surface
- Acceptable defects may not appear in clusters, the minimum distance between any two acceptable defects must be 50 mm (2 in)
- Defects less than 0.5 mm (0.02 in) are not considered
- Ceramization scratches

Any defects and variation in flatness that exceed the specified limits shall be disregarded in a border area extending 38 mm (1.5 in) from the edge of the sheet.

The Warranty for PYRAN[®] Platinum does not apply to the border area.

5.4 Scratches

The delivery of PYRAN[®] Platinum panels totally free of scratches is not possible due to technical reasons. It has to be distinguished between slight scratches (scratches not detectable with finger nail) and strong scratches (scratches detectable with finger nail). The permissible number of scratches in dependence of their length are given in table.

Characteristics	Acceptable
Slight Scratches: ≤ 15 mm > 15 mm	unconsidered 20
Strong Scratches: ≤ 15 mm > 15 mm	20 0

5.5 Spot Defects (Bubbles, Inclusions, Ceramization Spots) of PYRAN[®] Platinum

Size of Defect	Acceptable	Maximum Number of Defects per sheet
from 0.5 mm up to 1.5 mm	10 defects per sheet	10
from 1.5 mm up to 3.0 mm	2 defects per sheet	

5.6 Spot Defects (Bubbles, Inclusions, Ceramization Spots) of PYRAN[®] Platinum F and PYRAN[®] Platinum L

Size of Defect	Acceptable	Maximum Number of Defects per sheet
from 0.5 mm up to 1.5 mm	15 defects per sheet	15
from 1.5 mm up to 3.5 mm	4 defects per sheet	

