

Technical Update No 19
Safety and fragility of roof glazing

CWCT Technical Note 67 gives guidance on how to test glazed roofing to demonstrate non fragility.

CWCT Technical Note 92 gives a glazing solution that is deemed to satisfy the requirements of Technical Note 67 for specified sizes of pane.

This Technical Update provides clarification of several issues covered by TN 67 and TN 92.

Technical Note 67

Test Locations

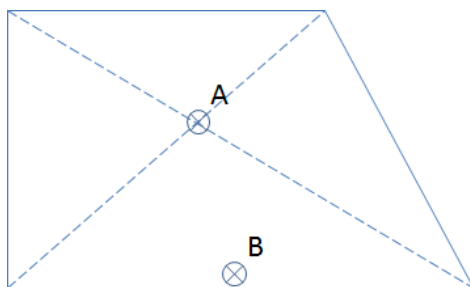
The test locations indicated below are sufficient to satisfy the requirements of TN 67. Any further impact points specified are additional to the requirements of TN 67 and are only to be undertaken when the TN67 test sequence has been completed. Any failure to pass additional specified requirements is not to be reported as a failure to pass TN 67 requirements.

Each pane being tested is to have only one impact applied per test position identified.

Where dimensions are given for the distance of the impact point from the edge, the impactor is to fall within +/-75mm of the nominal position.

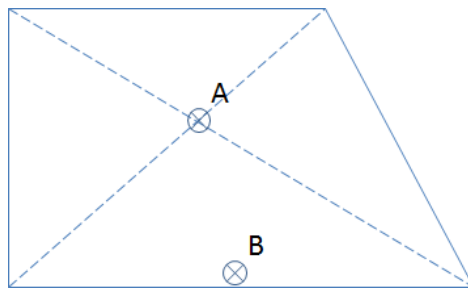
The requirements below apply to any shape of pane with straight edges.

1. Framed glazing supported on four sides



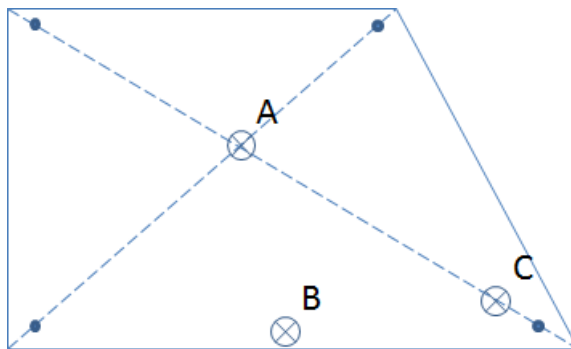
- A. Centre of the pane
- B. Midpoint of longest edge, test position 225mm from edge

2. Framed glazing with at least one unsupported edge



- A. Centre of the pane
- B. Midpoint of longest unsupported edge, test position 150 mm from edge

3. Point supported glass,



- A. Centre of pane
- B. Mid-point of longest edge, test position 150mm from edge,
- C. Adjacent to fixing (for non-rectangular panes at most acute angle of pane), test positioned 225mm diagonally inboard of fixing.

Static load test

The static load should be 180kg if the shorter span is greater than 1100mm

For a triple laminate, the central glass ply can be broken by drilling through the upper ply at its centre and using a centre punch. If this does not produce sufficient cracks, the lower pane should be drilled from below and a centre punch used again.

The temperature for the static load test should be specified but a default value of 40°C should be used in the absence of a specified value. Any reference to the result of the test should make reference to the temperature. The temperature applies to the glass not the surrounding air.

Testing at lower temperatures is not required. At elevated temperatures the interlayer may soften allowing the glazing to sag which may allow it to fall from its supporting frame. At lower temperatures the interlayer will be stiffer reducing the risk of the glass falling under static loading.

The edge condition in the test should be as proposed for the final construction.

Technical Note 92

Technical Note 92 refers to 11.5 mm laminated glass consisting of two plies of 5mm annealed or heat strengthened glass with a 1.5mm ionomer interlayer. The 5mm glass plies may be replaced by one 4mm ply and one 6mm ply of annealed or heat strengthened glass provided the 6mm ply is the upper ply when the glass is installed in the rooflight.