

HEAT STRENGTHENED GLASS



Heat Strengthened glass is produced in a tempering furnace in a similar method to that of toughened glass except that the final cooling process is slower. As a result, the glass produced is generally twice the strength of ordinary annealed float glass, has more resistance to heat fracture and capable of resisting higher wind loads. As a monolithic panel, it is not a safety glass product, though can be laminated as a Grade A safety glass.

A characteristic of heat strengthened glass is its breakage pattern. Upon breakage it fragments into larger pieces and tends to stay intact in the opening. This is particularly useful in high rise spandrel panels as the fragments are less likely to fall out of the opening. Heat strengthened glass when laminated is also recommended in overhead glazing where in the event of breakage, the same breakage pattern characteristics will tend to hold the panel in place more safely compared to that of a fully toughened laminated panel which may sag and fall out of the opening especially when both lites of the laminated glass are broken.

Heat strengthened glass is also less susceptible to spontaneous breakage due to nickel sulphide contaminants where surface compression is less than 52MPa.

FEATURES & BENEFITS

- > 2 times the strength of ordinary annealed float glass;
- > more resistant to thermal breakage, resisting temperature differential of 180oC;
- > fall out protection – less likely to fall out of opening in the event of breakage;
- > as a laminated product complies to AS 2208 as a Grade A safety glass;
- > less susceptible to spontaneous breakage.

APPLICATIONS

Spandrels, overhead glazing as a laminated panel and for higher wind loads.

RANGE

Available 4–12mm float glass.

SIZE LIMITS*

Maximum Size – 5050mm x2800mm

Minimum Size – 260mm measuring across the diagonal or 250mm x100mm for flat ground and polished edges

*subject to glass thickness, types and design specifications.

MANUFACTURING STANDARDS

Meets the requirements of AS1288:2021 Glass in buildings - Selection and installation Section 2 Clause 2.1.2. When tested to this clause per ASTM C1279, heat strengthened glass has a surface compression between 24–52 MPa.

HOW TO SPECIFY

- > specify National Glass Heat Strengthened Glass;
- > select appropriate thickness and glass type;
- > all glass to be selected and installed in accordance but not exclusively to the following Australian Standards;

AS 1288 Glass in buildings – Selection and installation

AS 2208 Safety glazing materials in buildings

AS 4666 Insulating glass units

AS/NZS 4667 Quality requirements for cut-to-size and processed glass

AS 1170 Wind & Structural Design Actions