

Heat Soak Treatment

Reducing the risk of spontaneous breakage due to nickel sulphide inclusions

The Heat Soak process or treatment should be used when specified in the BCA or when toughened glass has been specified in structural applications and in locations where safety is critical. These applications include:

- K&K Glass Structural Glazed Systems and suspended glass assemblies
- Balustrading
- Toughened glass used in spandrels
- Solar control glazing to high rise buildings
- Overhead and sloped glazing
- Maximum size 5500 x 2500mm

Description

Heat soak process and treatment is a quality control process carried out on K&K Glass toughened safety glass. It is designed to reject glass panels that may potentially break due to impurities such as nickel sulphide or defective edges that are undetectable during manufacture.

Benefits

The heat soak treatment significantly reduces the risk of breakage of installed toughened glass from spontaneous fracture. For building owners, developers and specifiers, heat soak treatment offers a number of benefits.

- Reduces potential public liability.
- Low cost compared to glass replacement costs

Other considerations and alternative products

To be 100%, the breakage characteristics need to be assessed in the selection of toughened glass.

- Laminated safety glass – the PVB or resin interlayer will restrict glass granules falling
- Heat strengthened glass – this provides resistance to thermal breakage and can resist greater loads than annealed glass

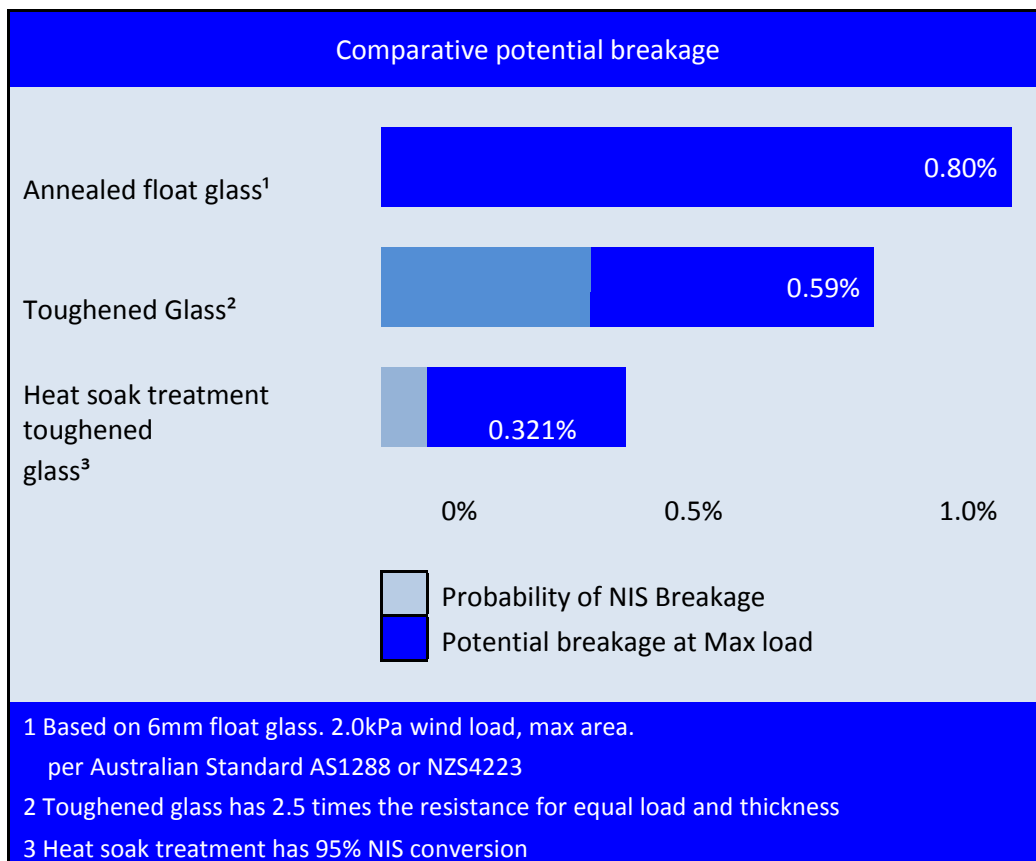
Its breakage characteristic means that if large pieces are broken, they often remain in place similar to annealed glass. It is not a safety glass but has reduced potential breakage from nickel sulphide inclusions due to lower stress than toughened glass.

Technical outline

Toughened glass may potentially break from an impurity in the glass called nickel sulphide (NiS). This type of breakage is very rare as most breakages are the result of impact, incorrect glazing or structural movement.

The heat soak treatment subjects toughened glass to elevated temperatures for a specific time depending on glass thickness. The K&K Glass process is carefully controlled so that the toughened glass maintains its strength. NiS inclusions can occur in batches and therefore may be more apparent in isolated projects. The heat soak treatment reduces the risk by eliminating over 95% of the potential breakages due to NiS inclusions.

Comparative potential



Pease note:

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