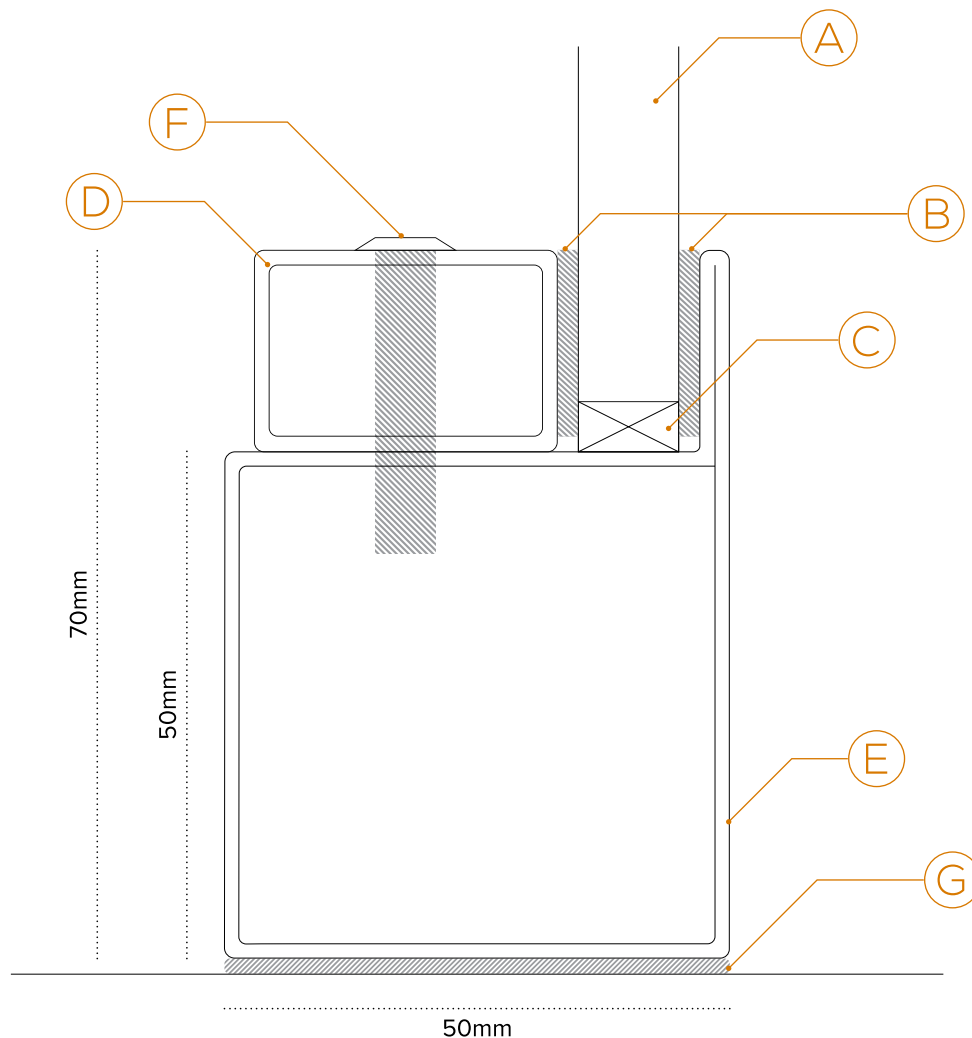




GLAZING SYSTEM GUIDELINES
FIRELITE CERAMIC GLASS

FireLite Glazing System



- A FireLite ceramic glass (5mm)
- B Glazing gasket and seal (e.g. 15mm high, 4mm thick)
- C Setting block (e.g. 5mm thick, 10mm wide & 80mm long)
- D Mild steel bead (e.g. 20mm by 300mm, 2mm thick)
- E Mild steel frame box section (1.5mm thick)
- F Self tapping screw (6mm diameter, 30mm long)
- G Seal to surrounding structure

Example: Typical mild steel glazing system, capable of 4 hour integrity classification. The same principles apply for double glazed, laminated and filmed options.

In all cases installers must follow the door or framing conditions and specifications as provided for the steel system being used.

FireLite Glazing System

FIRELITE

Available as 5mm ceramic glass as well as double glazed, filmed and laminated options (9mm thick). The most important characteristic of FireLite ceramic glass is its robust stability when exposed to a wide variety of fire conditions, especially if covered by water from sprinklers or a firefighter hosestream.

FireLite is not sensitive to temperatures that can easily arise in building fires. That applies in three respects:

- A The maximum temperature that develops during a fire.
- B Temperature differentials that can occur across a glazed panel from the pane centre to the edge within the glazing frame.
- C Thermal shock due to the sudden rise in temperature on initial exposure to flames or when an increase in fire intensity arises during a fire.

That means easy and relatively simple glazing - and no particular sensitivity to the sorts of provisos that can apply to other fire-resistant glass types.

Download Summary of main considerations for the glazing and handling of FireLite.

See also:

- Fire resistance testing
- Firefighter hosestream resistance
- Thermal stress - temperature differentials limits

Ceramic Glass Ltd disclaims all liability where FireLite is used in frames or doors which have not been appropriately tested and approved for fire resistance applications, also where the frames have not been properly constructed or where the ceramic glass has been installed using a glazing system that has not been appropriately approved for use. In case of doubt, confirmation should be sought from Ceramic Glass Ltd.

Download (Drawn up on formal heading Ceramic Glass Ltd)

FIRELITE GLAZING GUIDELINES

For FireLite ceramic glass (5mm thick), including double glazed, laminated and filmed versions.

FireLite where it is intended to be used as a fire-resistant barrier should always be used as part of an appropriately tested and approved fire-resistant glazed system in an appropriately tested and approved door or frame.

GLAZING GASKET

Typically an inert ceramic fibre compressible seal, but other types of proprietary glazing sealants can be used as well without unduly affecting the ceramic glass. The gasket will normally have an adhesive layer on one side which should be used against the steel bead or upstand flange to locate the gasket. The normal guidance of avoiding ceramic glass to steel (or timber frame) contact should be observed, but FireLite is less sensitive to that than other fire-resistant integrity glass types.

EDGE COVER

The typical extent of cover of the FireLite edge in the frame is in the range 14mm to 18mm. FireLite is not sensitive to the extent of edge cover because of its favourable thermal properties.

NOTE

FireLite ceramic glass does not have to be thermally toughened for fire resistance. Toughened soda-lime-silica glass types used for fire resistant applications, on the other hand, are very sensitive to edge cover and the type of glazing sealant, which can cause unexpected sudden complete failure of the toughened glass. Such types have to be used with limited edge cover allowance. They cannot typically tolerate more than a 10mm edge cover, and users should always be aware of that important condition.

FireLite Glazing System

RETAINING SCREWS

Typically for example 6mm diameter self-tapping and 30mm long, on 180mm centres horizontally or 165 centres vertically. Guidance provided by the steel system supplier should be followed.

SETTING BLOCKS

To locate FireLite in the glazing pocket and ensure that edge contact does not occur between the ceramic glass and the metal frame at any point. They should be non-combustible and inert.

Seal to surrounding structure when installed: It is important that the chances of fire and smoke spread into the surrounding structure should be minimised. Installers should therefore ensure that the gap between the frame and the structure is adequately sealed with a suitable fire-resistant material (such as tightly packed Rockwool or a proprietary linear gap fire stopping material which has been tested and approved either to BS EN 1366-4: 2006 or BS 476 part 20:1987 for at least 4 hours resistance).

STORAGE ON SITE

The normal considerations for storing and handling the ceramic glass on building and installation sites should be observed as a point of standard good practice as for any glass product.

The following core principles apply for handling and storage:

- Storage in a covered dry space, away from transit routes where vehicles could come into contact or where individuals could inadvertently contact the stored pallets.
- Support ceramic glass panes fully over their full height and width.
- Cover the support contact areas with the glass ceramic with a soft material such as felt.
- Provide back support to the stored panes at a stable angle (such as 60 to 100).
- Use soft individual spacers to separate adjacent stacked panes so that the risk of contact between panes is minimised.
- Preferably ensure that the weight of each stack of glass is optimum (e.g. no more than 20 panes per stack).
- Always follow good recommended glazing industry practices for handling glass when manually picking up and moving glass panes (e.g. suitable gloves and arm protection, lifting equipment when necessary if the weight could otherwise cause personal injuries, particular care when working at height above floor level).

FireLite ceramic glass is not as sensitive as some other fire-resistant integrity glass types to edge chips or scratches and surface imperfections which for some other products can cause unexpected failure under thermal stress. FireLite is not as vulnerable to such stresses. However, it is good practice for all glass products, of whatever type, for undue surface damage during handling and storage to be avoided.

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