

NORTHERN FIRE SOLUTIONS

FIRE RESISTING DOORSET ASSEMBLY INSTALLATION
GUIDANCE (V16) DOC ID – NFSFIREDOORINSTALL/V16



AS EASY AS A,B,C.....



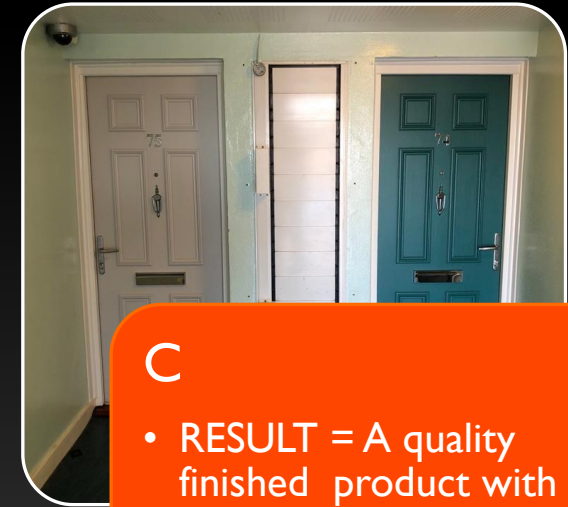
A

- BM Trada Q Mark 3rd party accredited testing and certified manufacture of complete doorset assembly.



B

- BM Trada Q Mark 3rd party accredited, certified installation of complete doorset assembly.



C

- **RESULT** = A quality finished product with proven performance and full traceability, ensuring confidence and peace of mind for both the client and end user.

PRE INSTALLATION PREPARATION

STORAGE.

The store area must be clean, level and suitable for the stacking and moving of doorsets during the installation process. **DO NOT** store upright or leaning as this can cause bowing.



PRIOR TO REMOVAL OF EXISTING DOORSET

Before you rip out the existing doorset **ALWAYS** carry out the following checks.

1. The new doorset has the correct Q Mark manufacturing identification = plugs/labels
2. Measure the new doorset to check it suits the proposed structural opening



STRUCTURAL OPENING

After removing the original doorset, carry out final checks on the structural opening. Ensure any damage is repaired prior to commencing the install and ensure the substrate is suitable to take the required fixings.

Q MARK FIRE PLUG GUIDANCE

NFS Installation Guidance for Complete Fire Doorset Assemblies (V16)



PLUG OUTER COLORS

	YELLOW OUTER	30 MINUTES fire integrity period. Used for either a leaf, frame or complete doorsets.
	BLUE OUTER	60 MINUTES fire integrity period. Used for either a leaf, frame or complete doorsets.
	BROWN OUTER	90 MINUTES fire integrity period. Used for complete doorsets only.
	BLACK OUTER	120 MINUTES fire integrity period. Used for complete doorsets only.

Please ensure all Q Mark fire rated items are fitted with the correct identification plugs as shown on the BM Trada illustration.

Any additional works carried out not by NFS must be identified by the certified company's own plugs for those works to be covered under the Q Mark scheme..

All final installations must be identified by the certified company's coded plug or label.

****NFS recommend our products be installed by fully trained Q Mark certified fitters.**

Q MARK FIRE PLUG GUIDANCE

CONT.

NFS Installation Guidance for Complete Fire Doorset Assemblies (V16)



FACTORY COMPLETED DOORSETS

COMPLETE DOORSET – Q-MARK CERTIFIED FOR FIRE ONLY (ALL DOORSET MATERIAL TYPES)



SILVER

Fitted within the appropriate outer plug to a door leaf and/or door frame to identify that it is a Q-Mark certified (factory hung) doorset. Where fire door plugs are not able to be fitted due to the doorset materials or design, then a label that depicts these plugs can be supplied by BM TRADA if necessary. The completed leaf and frame must have been physically quality checked together as a matched pair in the factory. The leaf and frame may then be sent to site at different times providing that clear traceability is in place to join the correct leaf and frame together again on site for installation.

There will be no further preparation work carried out to either the leaf or frame before it can be fitted into the building substrate. It is permissible for hardware such as locks, hinges or door closers etc. to be finally fitted during the installation process, but the preparations to accept the hardware will have been completed by the Q-Mark

certified fire door manufacturer. All items of hardware (including closers, locks, handles, hinges, letterplates etc.), along with the supply of any required intumescent protection materials, must be supplied by the Q-Mark certified fire door manufacturer and identified for the specific doorset.

Clear instructions for final assembly and installation of the doorset must be supplied by the Q-Mark certified fire door manufacturer relating to a specific Initial Type Test or Field of Application within their scope of certification.

The final assembly and installation of the doorset should be able to be completed with simple tools only, such as a screwdriver. No further preparations are allowed to be completed by the installer other than appropriate pilot holes for screws etc.

Smoke control cannot be claimed when a silver inner tree has been fitted.

COMPLETE DOORSET – Q-MARK CERTIFIED FOR FIRE AND SMOKE CONTROL (ALL DOORSET MATERIAL TYPES)



WHITE

Fitted within the appropriate outer plug to a door leaf and/or door frame to identify that it is a Q-Mark certified (factory hung) doorset with fire resistance and smoke control. This is only applicable where a fire resistance & smoke control. Field of Application is specifically shown on the certified manufacturer's scope of certification document for the particular manufactured doorset. Where Q-Mark plugs are not able to be fitted due to the doorset materials or design, then a label that depicts these plugs can be supplied by BM TRADA if necessary. The completed leaf and frame must have been physically quality checked together as a matched pair in the factory. The leaf and frame may then be sent to site at different times providing that clear traceability is in place to join the correct leaf and frame together again on site for installation.

There will be no further preparation work carried out to either the leaf or frame before it can be fitted into the building substrate. It is permissible for hardware such as locks, hinges or door closers etc. to be finally fitted during the installation process, but the preparations to accept the hardware will have been completed by the Q-Mark

certified fire door manufacturer. All items of hardware (including closers, locks, handles, hinges, letterplates etc.), along with the supply of any required intumescent protection materials, must be supplied by the Q-Mark certified fire door manufacturer and identified for the specific doorset.

Clear instructions for final assembly and installation of the doorset must be supplied by the Q-Mark certified fire door manufacturer relating to a specific Initial Type Test or Field of Application within their scope of certification.

The final assembly and installation of the doorset should be able to be completed with simple tools only, such as a screwdriver. No further preparations are allowed to be completed by the installer other than appropriate pilot holes for screws etc.

A White inner tree must be used where the doorset is manufactured to include both fire resistance and smoke control, which must be in accordance with the specific fire resistance and smoke control Field of Application report(s) listed on the manufacturer's Q-Mark scope of certification document for that specific doorset design.

Q MARK FIRE PLUG GUIDANCE CONT.

NFS Installation Guidance for Complete Fire Doorset Assemblies (V16)



FACTORY GLAZED DOORSETS

GLAZING (ALL DOORSET MATERIAL TYPES)



ORANGE

Fitted within the appropriate outer plug to a door leaf only if glazing is in the door leaf. This plug is in addition to all other required plugs, to identify that glazing has been correctly specified and fitted to the door leaf by a Q-Mark certified fire door manufacturer as per the same Initial Type Test or Field of Application used to manufacture the door leaf.

If glazing is included within an integral sidelight or fanlight (not within the door leaf), then

all components for the glazing system must be specified and supplied by the certified fire door manufacturer, but may be finally fitted on site where necessary, in which case clear installation instructions must be provided by the Q-Mark certified fire door manufacturer relating to a specific Initial Type Test or Field of Application within the fire door manufacturer's scope of certification.

INCOMPLETE DOORSETS – FURTHER WORK BY OTHERS

DOOR LEAF OR DOOR FRAME (NOT APPLICABLE TO COMPOSITE DOOR MATERIAL TYPES, SCHEME 170)



RED

Fitted within the appropriate outer plug to a door leaf (leaf manufacture only) or door frame (frame manufacture only) to identify that it is a Q-Mark approved door leaf or door frame. The leaf and frame could come from different Q-Mark certified fire door manufacturers.

The door leaf or door frame will not be in a finished state. The required intumescent strips will either not have been prepared for or be

supplied at this stage. Therefore further work is needed to be carried out before the door leaf assembly is ready to be hung into a door frame.

Clear instructions for further processing and installation of the door assembly must be supplied by the Q-Mark certified fire door manufacturer relating to a specific Initial Type test or Field of Application within the fire door manufacturer's scope of certification.



GREEN

Fitted within the appropriate outer plug to a door leaf (leaf manufacture only) or door frame (frame manufacture only) to identify that it is a Q-Mark approved door leaf or door frame. The leaf and frame could come from different Q-Mark certified fire door manufacturers.

The door leaf or door frame may not be in a finished state. It must be fully prepared for all the required intumescent strips around the perimeter gap, which can be either fitted or supplied loose but must be supplied. If the intumescent strips are supplied loose, they must be clearly identified to the appropriate door leaf or frame to which they will be fitted.

The door leaf or frame might not be fully prepared for all of the appropriate hardware, in which case it must be clearly specified which hardware and any required associated intumescent protection is to be finally fitted at a later date by others.

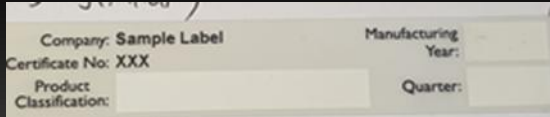
Clear instructions for the further processing and installation of the door assembly must be supplied by the Q-Mark certified fire door manufacturer relating to a specific Initial Type test or Field of Application within the fire door manufacturer's scope of certification.

Q MARK PAS24 & UKCA LABEL GUIDANCE

NFS Installation Guidance for Complete Fire Doorset Assemblies (V16)



Q MARK PAS24 ENHANCED SECURITY DOORSETS



All doorsets that are certified as Q Mark PAS24 will have the schemes silver label in place (as above).

This is located directly below the second hinge from the top.

UKCA EXTERNAL PAS24/FD30s TIMBER DOORSETS



All PAS24/FD30s External Timber Doorsets MUST be fitted with the above UKCA label in addition to the Q Mark fire plugs and PAS24 labels as stated in this document. This label is positioned between hinges 2 & 3 from the top.

PACKING MATERIALS

INTUMESCENT MASTIC: The specification for mastic must be as given in clause 9.4.2 in BS 8214: 2026, summarised below: Also refer to clause 9.4.1.

Test evidence for the mastic must be to one of the following standards: BS 476 part 20, BS EN 1366-4, BS 476 part 22 or BS EN 1634-1. The test evidence can be for the mastic between any materials.

Supporting test evidence must be for the required period of fire resistance or greater.

Length of tested seal must be at least 1m, but this does not restrict its use in an application for a fire door of larger length.

FIRE FOAM: The specification for fire foam must be as given in clause 9.4.2 in BS 8214: 2026, also refer to clause 9.4.1.

Test evidence for the foam must be to one of the following standards: BS 476 part 20, BS EN 1366-4, BS 476 part 22 or BS EN 1634-1. The test evidence can be for the mastic foam between any materials.

Test evidence for the foam must be specific to the foam manufacturer and the chosen product. All evidence must be to BS 476 part 22 or BS EN 1634-1 and precisely followed for use with Fire and Smoke Resisting Doorsets. *CHECK MIN FRAME DEPTH and PERMITTED CABLE PENETRATIONS PRIOR TO CHOOSING YOUR SYSTEM*

Test evidence must have been carried out with no mastic capping or architraves otherwise these must be utilised as per associated report.

PACKING MATERIALS CONT.

MINERAL ROCK FIBRE: The specification for mastic must be as given in clause 9.4.2 in BS 8214: 2026, summarised below: Also refer to clause 9.4.1 All other details must be as per the specification given in the tables in section 9.4.1 in BS 8214: 2026 (e.g. maximum permitted gap size, intumescent mastic and architrave requirements) Must be a fibre that is manufactured using rock. Glass wool and other types of mineral fibres are not acceptable.

PACKERS: Plastic packers may be used but only for 30min fire and smoke resistant doorsets and only if cut back 10mm and capped with appropriate intumescent mastic (see section 1 above).

Softwood packers can be used for 30min fire resistance period only. These do not need to be cut back or capped with intumescent mastic.

Hardwood packers can be used for up to 60min fire resistance period. These do not need to be cut back or capped with intumescent mastic.

Packers made from non-combustible or limited combustibility material (e.g. calcium silicate board or plasterboard) can be used for any fire resistance period. These do not need to be cut back or capped with intumescent mastic.

***Further General guidance on fixing details is given in BS 8214: 2016 and the ASDMA code of practice for timber based door assemblies, which may be referred to as appropriate. Above guidance applies to both single and double doorsets and screens on the basis the supporting structure and outerframes are consistent throughout.*

ARCHITRAVES

PVC:

The use of PVC architraves is permitted on NFS 30 minute fire doorset assemblies based on primary test evidence detailed in report ref CFR1811301B RevB. The tested section was Eurocell PF45 (45x6.5) fixed both sides of frame with Firetherm Intumescent Mastic. The associated fire stopping detail consisted of packing between frame and supporting structure of Unifrax Insulfrax LTX blanket and capped with Firetherm Intumastic acrylic based sealant (Certifire CF578) on both faces.

Only the items tested are permitted for use with NFS primary tested doorsets. Alternatives can be used for cascaded specifications with UKAS report.

TIMBER:

For 30 and 60 minute fire resisting timber doors the following architrave specification is suitable for use with the details given in section 9.4.1, where required in BS 8214: 2026:

Architraves to be minimum 15mm thick constructed from softwood, hardwood or MDF with 15mm overlap on both the frame and wall/supporting structure.

The use of PVC architraves is NOT essential on NFS 30 minute fire doorset assemblies based on primary test evidence detailed in report ref CFR1811301B RevB.

30 minute timber doorsets can be fitted WITHOUT architraves only where an approved packing material and intumescent mastic caps are used, or the system has been approved and stated in a valid UKAS test report or Field of Application (F.o.A).

FIXINGS GUIDANCE

- *The frame jambs are to be fixed to the supporting structure using steel fixings.
- *Intumescent seals may be factory “dry” fixed to allow site removal and secret fixing. It is the installers responsibility to ensure all backing is removed and all seals are correctly refitted ensuring adequate adhesion within the intumescent grooves.
- *Must be fixed at a maximum of 100mm centres from top and bottom of the jambs followed by 600mm maximum centres.
- *The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm.
- *It is not necessary to fix through the frame head unless the doorset width exceeds 1100mm or if fixing a separate fanlight, although approved packers must be inserted. For doorsets exceeding 1100mm in width it is generally recommended that a single central fixing be added through the head.

All coupled faces for example on separate fanlights or sidelights, must have at least one continuous bead of approved intumescent mastic applied prior to fixing and finished joint capped with 640kg/m³ hardwood minimum dimensions 6x30mm to both sides of frame.

***Further General guidance on fixing details is given in BS 8214: 2026 and the ASDMA code of practice for timber-based door assemblies, which may be referred to as appropriate. Above guidance applies to both single and double doorsets and screens on the basis the supporting structure and outerframes are consistent throughout.*

DOOR GAPS & TOLERANCES

DOOR TO FRAME GAPS = MIN 2mm - MAX 4mm – TARGET 3mm (Applies to Head & Jambs)



HINGE SIDE FACE ALIGNMENT TOLERANCE = Leaves must not be proud of each others face or from the face of the frame by more than 1mm



THRESHOLD = Fire Only - MAX 10mm From bottom of leaf to top of floor covering or threshold. For Smoke Control Doors the MAXIMUM gap is 3mm unless an approved drop down seal is fitted when it can increase to 8mm dependent on the seal systems test evidence.

IRONMONGERY INSTALLATION

DOOR CLOSERS: All door closers must be complaint to EN1154 and bear a visible CE Mark. (These will be supplied loose where applicable). All closers must be fitted in accordance with the component manufacturers installation instructions generally supplied in the box with each closer. Concealed closers will have door & frame factory prepped by NFS and will be supplied with the correct intumescent material.

****NO ADDITIONAL MODIFICATIONS ARE PERMITTED TO DOOR OR FRAME WITHOUT WRITTEN PERMISSION FROM NFS.**

LOCKS/LATCHES: Where practicable locks and latches will be machined and fitted in our factory. Alternatively, where there is a need for site installation by others, all components **MUST** be fitted in accordance with permitted test evidence including the use of the correct intumescent materials. All locks and latches must comply with EN12209 and bear a visible CE Mark.

****ANY ITEMS SUPPLIED PRE-MACHINED BY NFS MUST NOT BE MODIFIED WITHOUT PRIOR CONSENT FROM US.**

KICK PLATES: Generally steel, stainless steel or brass (melting point $>800^{\circ}\text{C}$) face fixed hardware may be fitted up to a maximum of 20% of the door leaf area if mechanically fixed or 30% if bonded with a contact or other thermally softening adhesive. Plates must **NOT** return around door leaf edges.

PULL HANDLES: Generally steel, stainless steel or brass (melting point $>800^{\circ}\text{C}$) handles may be fixed or bolted through the door leaf providing the length is limited to 1200mm between fixing points. If bolt through fixed, there must be no more than 1mm between hole and stud.

MODIFICATION & MAINTENANCE

****NFS FACTORY HUNG DOORSETS OR SCREENS MUST NOT BE MODIFIED IN ANY WAY WITHOUT PRIOR WRITTEN CONSENT BY NORTHERN FIRE SOLUTIONS LTD. ANY UNAUTHORISED ALTERATIONS WILL RESULT IN ALL CERTIFICATION AND ASSOCIATED GUARENTEES BEING NULL AND VOID.**

DOOR LEAF ONLY – FURTHER PROCESSING & INSTALLATION – Door Leaf or Frame Only items manufactured by NFS will be plugged based only on the work completed by us. If further work is required by others, then a breakdown should be provided to NFS prior to any work commencing, to enable us to provide the correct guidance from the relevant report or Field of Application within our scope of certification.

***ANY ADDITIONAL PROCESSING WORKS CARRIED OUT BY OTHERS OUTSIDE THE PERMITTED SCOPE WILL VOID ALL CERTIFICATION.**

*** This document is for guidance purposes only and is written in conjunction with Northern Fire Solutions Ltd associated test evidence and permitted scopes. Further general details on installation guidance is given in BS 8214: 2026 and the ASDMA code of practice for timber-based door assemblies, which may be referred to as appropriate. Above guidance applies to both single and double doorsets.*

*** It is the responsibility of the installer to follow the correct guidance, NFS cannot be responsible or liable for the work of others.*

*** NFS always recommend all installations and associated works be carried out by certified 3rd party Q Mark or UKAS accredited operatives.*

*** NFS always recommend any ongoing Maintenance works be carried out by certified 3rd party Q Mark or UKAS accredited operatives.*

DOOR MAINTENANCE — CARING FOR YOUR NEW FIRE DOOR



As with all joinery, an inspection should be carried out at regular intervals ideally every 6-9 months or in accordance with the latest regulatory requirements and any remedial work carried out as required.



Doors should be cleaned down at least twice per annum using a pH neutral, nonabrasive detergent and a soft cloth.



All glazing, draught and weather seals must be checked regularly and kept free from debris - NOTE: the additional smoke seals must be inspected at more frequent intervals with any issues addressed immediately.



Care should be taken to follow the recommendations for further coatings maintenance and inspections from the paint or stain manufacturers, details of which can be obtained from NFS.



Hinges and locking mechanisms should be lightly lubricated twice per annum with a light penetrating oil.



All materials should be disposed of at a licensed recycling centre with guidance sought via the associated personnel.

The above points are for guidance only and are subject to NFS project specific warranty agreements.