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Title

The Fire Resistance Performance of Doorsets When Fitted Allgood Door Hardware if Tested in Accordance with BS EN 1634-1: 2014 + A1: 2018 or BS476: Part 22:1987

WF Assessment Report No.:

421461 Issue 5

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Prepared for:

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Signatories and Revision History

Issue No.	Date	FM No.	Report scope and Signatures
1	09/07/2020	421461	Initial report issued to Allgood.
2	14/05/2021	502761	Alternative product codes added.
3	05/01/2022	503181	Additional scope (30mins) added to flushbolts.
4	12/09/2025	551511	5 year revalidation including adding and removing products as well as amendments to scope.
5	07/04/2026	556297	Modification, addition of WC set AA701 (escutcheon).

Assessor	Reviewer
Name: *** A.Green-Morris**	Name: ***R.Anning**
Signature: Signed by: E988A69B8C424DA...	Signature: Signed by: 144229DE9F3343A...

*For and on behalf of Warringtonfire

Executive summary

This report presents an assessment of the fire resistance performance of the door hardware as fire tested and described in the report the Appendix when modified as detailed in Section 3 of this report.

This assessment report is subject to the requirements and limitations described in Sections 2 and 8.

The assessment in Section 5 of this report found that if the door hardware as tested and described in the Appendix had been modified as proposed, it is expected that it would have been capable of providing the required fire resistance performance as outlined in section 5 if tested in a similar manner to BS EN 1634-1:2014+A1:2018 or BS476: Part 22:1987.

This report represents our opinion as to the performance likely to be demonstrated on a test in accordance with the test standard specified above, on the basis of the test evidence referred to in this report. We express no opinion as to whether that evidence, and/or this report would be regarded by any Building Control authorities or any other third parties as sufficient for that or any other purpose.

Contents

1. Introduction

This report presents an assessment of the fire resistance performance of the door hardware as fire tested and described in the Appendix and when modified as detailed in Section 3 of this report.

2. Assessment framework

An assessment is an opinion of the likely performance of a component or element of structure if it was subjected to a standard fire test.

This assessment report has been carried out in accordance with the Passive Fire Protection Forum (PFPF) 'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence - 2021' and has been written in accordance with the general principles outlined in BS EN 15725: 2023; *Extended application reports on the fire performance of construction products and building elements, as applicable.*

This scope document cannot be used as supporting documentation for either a CE or UKCA marking application or EXAP scope for doorsets, nor can the conclusion be used to establish a formal classification against EN13501-2.

The scope presented in this report relates to the behaviour of the element under the particular conditions of the test; they are not intended to be the sole criterion for considering the potential fire hazard of the door assembly in use.

This report has been prepared and checked by product assessors with the necessary competence, who subscribe to the principles outlined in the Passive Fire Protection Forum (PFPF) 'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence - 2021'. The aim of the PFPF guidelines is to give confidence to end-users that assessments that exist in the UK are of a satisfactory standard to be used for building control and other purposes.

This report uses established empirical methods of extrapolation and experience of fire testing similar elements, in order to extend the scope of application by determining the limits for the designs based on the tested constructions and performances obtained. The scope is an evaluation of the potential fire resistance performance, if the variations specified herein were to be tested in accordance with test standard specified.

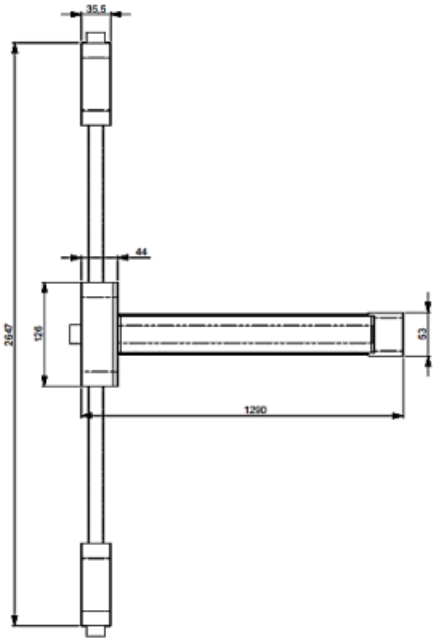
This report has been written using appropriate test evidence generated at UKAS accredited laboratories, to the relevant test standard. The supporting test evidence has been deemed appropriate to support the stated design and is summarised in Section 3 and Appendix A.

3. Description Of the Products

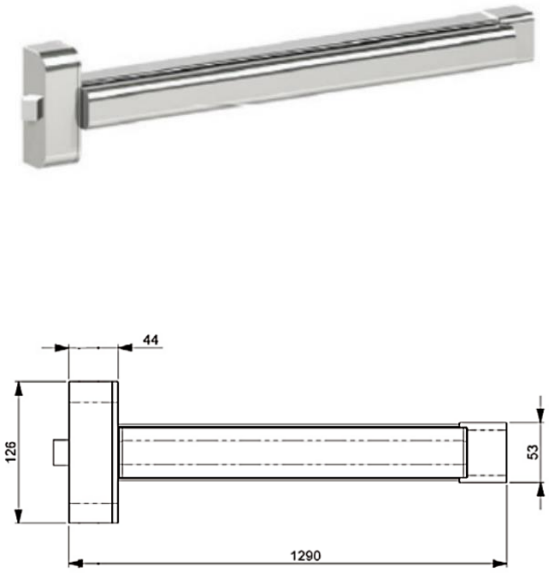
3.1 Panic Hardware

All of the panic hardware is entirely surface mounted and is manufactured from Stainless Steel. They are all fixed in the same way with the difference being the 9420 having a 3 point locking mechanism.

9420



9425



Reference	Description
9420	Touchbar 3 Point Panic Bolt
9425	Touchbar Panic Latch

3.2 Signage and Protection Plates

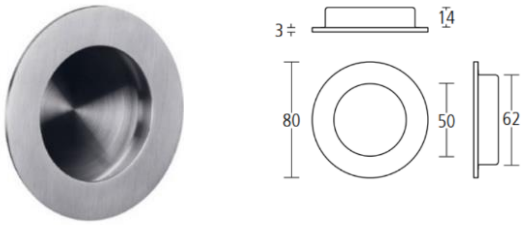
All of the Signage and protection plates are entirely surface mounted and is manufactured from Stainless Steel. They do not require any recessing into the face of the door leaf and are secured either via glue or are screw fixed into the face of the door leaf. The hardware is available in a variety of finishes.

The full list of products are listed within the Appendix.

3.3 Recessed Flush Pull Handles

All the handles are manufactured from stainless steel and incorporate a recessed steel pocket within the face plate. They are available as either back-to back or to one face only. The hardware is available in a variety of finishes.

9420



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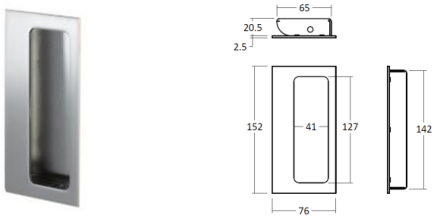
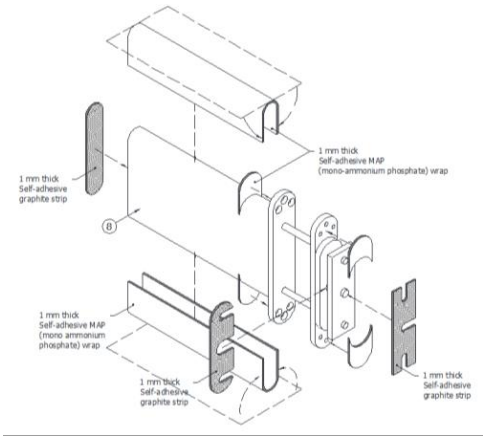


Reference	Description
6210	Steel 50 mm dia. flush pull
6211	Steel 80 mm dia. flush pull
6215	Steel 76 mm x 38 mm steel flush pull
6250	Steel 152 mm x 152 mm steel flush pull
6260	Steel 152 mm x 76 mm steel flush pull

3.4 Perko Closer

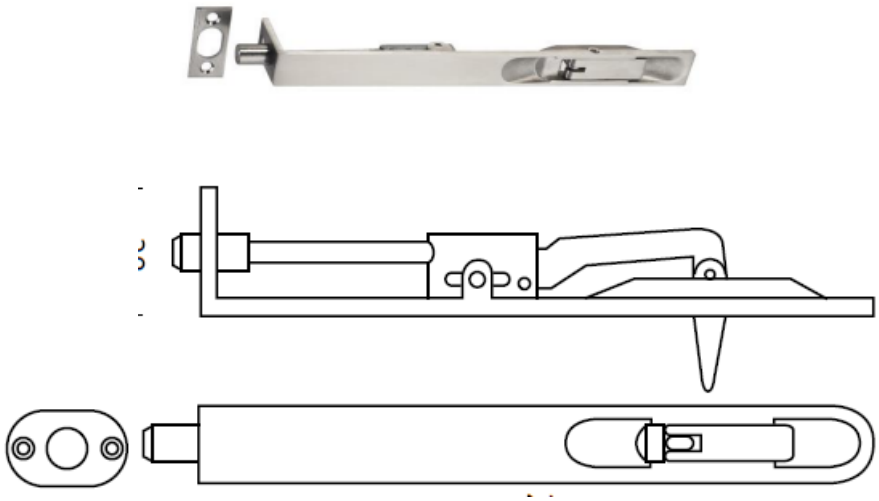
The perko style closer is made from steel and is recessed into the door leaf and frame jamb.



Reference	Description
10508	Concealed Jamb Closer

3.5 Flush Bolts

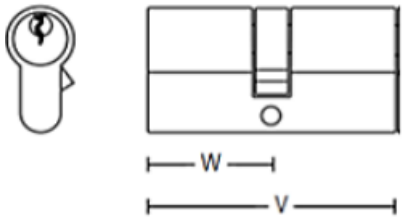
All flush bolts are a steel ‘skeleton’ design with the mechanism exposed at the back and have a 15 mm bolt shoot projection. The flush bolts are recessed into the edge of the door leaf. The hardware is available in a variety of finishes.



Reference	Description
48800	Steel lever action flushbolt with square corners - 203 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48801	Steel lever action flushbolt with square corners - 457 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48802	Steel lever action flushbolt with square corners - 609 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48803	Steel lever action flushbolt with square corners - 914 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48800F	Steel lever action flushbolt with radiused corners - 203 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48801F	Steel lever action flushbolt with radiused corners - 457 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48802F	Steel lever action flushbolt with radiused corners - 609 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate
48803F	Steel lever action flushbolt with radiused corners - 914 mm high x 20 mm wide, with 38 mm deep forend and 38 mm x 20 mm flat strikeplate

3.6 Cylinders

All cylinders have the europrofile shape and are manufactured from steel. They are available in single, doubles, thumbturns etc. The hardware is available in a variety of finishes.



Reference	Description
SN7317AM	Allgood Hardware 'A' length 60mm (30/30) European profile cylinder & Classroom turn,
SN7318AM	Allgood Hardware 'A' length 60mm (30/30) Euro Profile Double Cylinder,
SN7319AM	Allgood Hardware 'A' 60mm (30/30) length Euro Profile Cylinder & turn,
SN7347A	Allgood Hardware 'A' length 40mm (30/10) European profile turn, Satin Nickel finish
SN7320AM	Allgood Hardware 'A' 40mm (30/10) length Euro Profile Single Cylinder,
CS7329AM	Allgood Hardware 'A' 60mm (30/30) length Euro Profile Cylinder and turn,
SN7329AM	Allgood Hardware 'A' 60mm (30/30) length Euro Profile Cylinder & Large turn,
SN7918A	Allgood Euro profile 62mm (31/31) length, Double cylinder with key operation both sides,
SN7919AM	Allgood Hardware Euro profile 62mm (31/31) length, cylinder & turn with key operation one side & turn on the other
SN7920A	Allgood Euro profile 41mm (31/10) length, Single cylinder with anti-pick mushroom type drives,

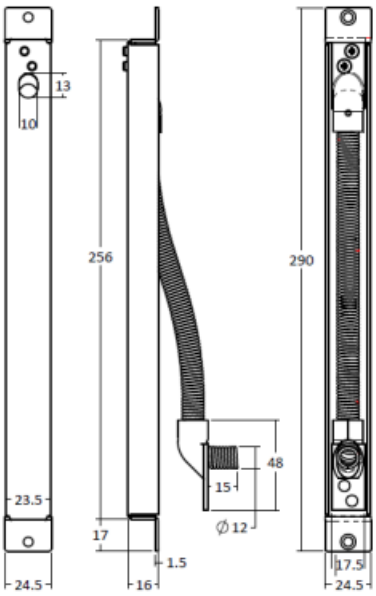
3.7 Escutcheons

All are screw fixed into the face of the door leaf and are supplied in a variety of designs.

The full list of products are listed within the Appendix.

3.8 Door Loops

Both products are manufactured from steel. There are two variants a surface mounted option which is screw fixed to the face of the doorset and a concealed door loop which is typically recessed into the frame jamb and door leaf. The hardware is available in a variety of finishes.



Reference	Description
9471	Surface mounted armoured door loop
79053N	Concealed door loop

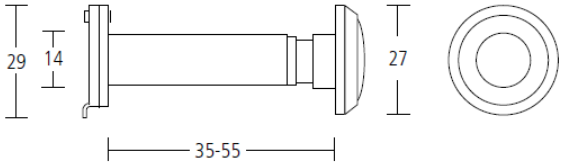
3.9 Door Selector

All of the Door Selectors are entirely surface mounted and is manufactured from Stainless Steel. They do not require any recessing into the face of the door leaf and are screw fixed into the face of the door leaf. The hardware is available in a variety of finishes.

Reference	Description
9149G	Door selector stay with gravity arm
9150G	Door selector stay with 200mm gravity arm

3.10 Door viewer

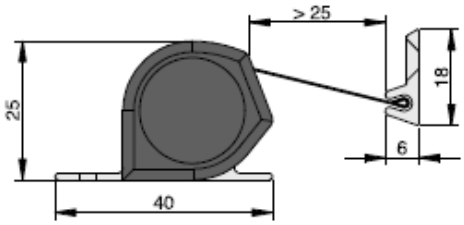
The Door viewer penetrate the door leaf and are thro bolted via the main shaft of the door viewer together and is manufactured from Stainless Steel with a glass lens. The hardware is available in a variety of finishes.



Reference	Description
17015FR	Steel body with glass lens

3.11 Finger protection

All of the finger protection are entirely surface mounted and is manufactured from Aluminium with a stretchable fabric. They do not require any recessing into the face of the door leaf and are secured by screw fixing them into the face of the door leaf and door frame. The hardware is available in a variety of finishes.

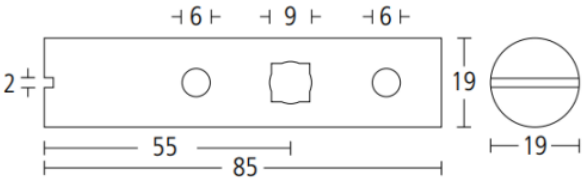


NR-25

Reference	Description
XX7199RA	Secure Roller Blind Protection Guard
XX7199RB	Secure Roller Blind Protection Guard

3.12 Rigidiser

The rigidiser is recessed into the door leaf much like a tubular latch however it has no internal mechcanical components and is connect to the lever handles which become non operational once connected, the rigidiser is manufactured from steel.



Reference	Description
S99053	Fixed lever ridigiser
SS9053N	Fixed lever ridigiser

4. General requirements and assumptions

- It is also assumed that the construction of the wall, which supports the proposed doorsets, will have been the subject of a separate test and the performance of the wall is such that it will not influence the performance of the doorset for the required period.
- It is also assumed that the doorsets will fully comply with any certification scope or assessed modifications, apart from the modifications specified in this report.
- Door leaf to frame clearance gaps can have a significant effect on the overall fire performance of a doorset. It is therefore assumed that the leaf to leaf and leaf to frame clearance gaps will not exceed those measured for the relevant fire tested doorset. The application of increased perimeter gaps in accordance with the Field of Direct application of test results, in accordance with BS EN 1634-1: 2014 + A1: 2018 is therefore not permitted in conjunction with this assessment report. It is assumed that the door leaves will be in the closed position.
- It is assumed that the doorsets will be installed in a similar manner to that of the previously tested assembly by competent installers.
- Recessing of any type that may be required for any of the specified hardware shall result in a tight fit, allowing for any intumescent protection where required.
- Where a lock considered by this report does not incorporate a self-latching mechanism e.g. deadlocks and dead bolts, then either the lock must be engaged or the doorsets must have been proven for the required period without the restraint of a latch/lock.
- The effectiveness and electrical safety of this electrically operated lock is outside the scope of this appraisal.
- All door hardware is subject to the acceptance by the chosen door assembly supplier's tested, assessed, or certificated scope, which generally identifies the types of hardware approved, the required specification/design based on the key materials/ maximum size (e.g. forend, case size, latchbolt, strikeplate, fixing specification, etc.), and the application of any additional intumescent protection. On this basis, approval should be sought from the specific door assembly supplier to ensure compliance based on this assessed/certificated scope.
- An appraisal of the hardware variants detailed in this report is based upon product information supplied by the hardware manufacturer, which is retained in the confidential file relating to this report. Warringtonfire have not inspected the devices being appraised and cannot be held responsible for the accuracy of the information provided.
- EN1634-1 was issued originally in 2000, with amended versions issued in 2008, 2014 and 2018. The differences between each version are mainly procedural and are not considered to have a practical impact on the performance of the samples under test. On this basis this evaluation is consider applicable to all versions of EN1634-1 issued prior to the issue of this assessment.
- It is assumed that the end user will have a full understanding of the tested specification as defined in the relevant test report(s) summarised in the Appendix.
- If a design variation or extension to scope is not explicitly detailed within the assessment it should not be assumed to be acceptable by omission.

5. Assessment of proposed modifications

5.1 Proposal

It is proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the Panic Hardware, for up to 120 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is also proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with signage and protection plates, for up to 120 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

As well as this It is proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the Recessed flush pulls and finger protection for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is also proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with Perko, for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance) and the fire resistance performance of predominately steel based door assemblies for 240 minutes fire resistance performance, if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is further proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with flush bolts, for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is also proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with cylinders, for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is also proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with escutcheons, for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is also proposed to consider the fire resistance performance of predominately steel based door assemblies and timber based door assemblies, when fitted with the surface mounted door loops, for up to 120 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

As well as this It is proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the concealed door loops for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

Furthermore It is proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the door selectors for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

In addition it is proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the door viewers selectors for up to 60 minutes fire resistance integrity performance only (and where appropriate insulation performance) and the fire resistance performance of predominately steel based door assemblies for 120 minutes fire resistance performance, if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

It is further proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the rigidiser for up to 30 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018 or BS476: Part 22:1987.

Detail of the proposed ranges are identified in section 3.

5.1.1 Panic Hardware

Timber based doorsets – 30,60,90 & 120 minutes

The panic hardware discussed within this report are not required to provide any form of restraint, it is a requirement of this report that the doorsets to which the panic hardware is fitted shall have been previously tested unlatched in the configuration required. Therefore the purpose of the appraisal is only to consider the influence of fitting the proposed hardware items to a doorset, and not its ability to provide an essential latching action.

The proposed doorsets shall include surface mounted overhead door closers capable of returning the door leaves to the fully closed position overcoming the latch mechanism.

With insulated timber-based doorsets where the panic/emergency exit device is wholly surface mounted i.e. no components enter the leaf-to-frame gap or require the removal of leaf or frame material, and the materials are non-combustible, no fire test evidence is required as hardware mounted on the exposed face will detach and fall away, and those on the unexposed face will not be subject to any direct heat.

On this basis the Allgood touchbars identified below, are approved for use with 30, 60, 90 and 120 minutes timber-based doorsets.

Outside Exit Devices (OAD's) are not permitted.

5.1.2 Signage and Protection Plates

Timber based doorsets – 30,60,90 & 120 minutes

With insulated timber-based doorsets where the hardware is wholly surface mounted i.e. no components enter the leaf-to-frame gap or require the removal of leaf or frame material, no fire test evidence is required as hardware mounted on the exposed face will detach and fall away, and those on the unexposed face will not be subject to any direct heat.

In this application as the surface of the door will remain at a relatively low temperature, the use of screw-fixed and self-adhesive variants will not have a detrimental impact on the doorsets performance.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

On this basis the full range of signage and protection plates as identified in the Appendix and are approved for use with 30, 60, 90 and 120 minutes timber-based doorsets.

5.1.3 Recessed Flush Pulls

Timber based doorsets – 30 & 60 minutes

Back to Back application

The performances of Doorset A and B during the test referenced WF No. 397887 is cited to display the ability of the 6250 and 6260 back-to-back flush pulls to contribute towards the required fire resistance performance for 30 rated timber based doorsets, and the 6260 only for 60 rated timber based doorsets.

Doorset A within WF Report No. 397887 was a single-action, single-leaf 30 minute doorset incorporating a 44 mm thick multi-layered chipboard door.

The doorset is identified as being fitted with a 6250 back-to-back flush pulls positioned 900 mm from the bottom of the door to the bottom of the handle, and a 6260 back-to-back flush pulls positioned 1250 mm from the bottom of the door to the bottom of the handle.

The handles were bolted to each other in two locations using steel screws. Both handles had 1 mm Therm-A-Strip sheet material to the back face of the plate, and around all sides and base of the recessed portion.

On reviewing the observations taken from the tests report, it's clear that there was no integrity failures associated with either flush pull fitted to Doorset A (E30) for a test duration of 34 minutes, at which time the doorset was blanked off to allow the testing of the Doorset B (E60) to continue.

Doorset B within WF Report No. 397887 was a single-action, single-leaf 60 minute doorset incorporating a 54 mm thick multi-layered chipboard door.

The handles were bolted to each other in two locations using steel screws. Both handles had 1 mm Therm-A-Strip sheet material to the back face of the plate, and around all sides and base of the recessed portion.

On reviewing the observations taken from the tests report, a sustained flaming integrity failure was recorded at the 6250 flush pull at 45 minutes. No integrity failures associated with the 6260 flush pulls, for a duration of 60 minutes, at which time the test was discontinued.

On this basis the 6250 and 6260 flush pulls in a back-to-back application are therefore deemed acceptable for use with 30 minute timber-based doorsets.

Additionally the 6260 flush pull in a back-to-back application are therefore deemed acceptable for use with 60 minute timber-based doorsets.

Intumescent protection – Shall include 1 mm Therm-A-Strip sheet material to the back face of the plate, and around all sides and base of the recessed portion.

Single Sided Application

The performances of Doorset A during the test referenced WF No. 397888 is cited to display the ability of the 6260 single flush pulls to contribute towards the required fire resistance performance for 60 minute rated timber based doorsets.

Doorset A within WF Report No. 397888 was a single-action, single-leaf 60 minute doorset incorporating a 54 mm thick multi-layered chipboard door.

The handle was located on the exposed face and included 2 mm Therm-A-Strip sheet material to the back face of the plate, and around all sides and base of the recessed portion.

On reviewing the observations taken from the tests report, no integrity failures associated with the 6260 flush pulls, for a duration of 60 minutes, at which time the test was discontinued.

On this basis the single 6260 flush pulls are therefore deemed acceptable for use on the exposed face of 60 minute timber-based doorsets.

The testing of the flush pulls in back-to back applications is considered to be more onerous than the single pull tested here. Therefore with the combination of the back-to-back testing in 30 and 60 minute applications, and the single plate in a 60 minute door, it is reasonable to assume that single flush pull in 30 minute and 60 minute on either face of timber-based doors would perform in a similar manner.

On this basis the 6260 flush pulls are approved as a single-sided pull handle, on either face of 30 minute and 60 minute timber-based doorsets.

Intumescent protection – Shall include 1 mm Therm-A-Strip sheet material of 2 mm thickness to the back face of the plate, and around all sides and base of the recessed portion.

Other models

The 6210, 6211 & 6215 are manufactured from stainless steel and incorporate a recessed steel pocket within the face plate. They are available as either back-to back or to one face only.

The footprint and recessed elements of these flush pulls are smaller than the tested 6250 and 6260, requiring only a maximum of 14 mm depth recessing into the face of the door, compared to the tested depth of 22 mm.

It is therefore reasonable to assume that providing the same level of intumescent protection is applied as identified above, these smaller pulls will not reduce the performance achieved with the tested products.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

On this basis the 6210, 6211 & 6215 flush pulls in both a back-to-back and single pull application are therefore deemed acceptable for use with 30 and 60 minute timber-based doorsets.

5.1.4 Perko Closer

The main function of a door closer, when used on unlatched timber based doorsets subjected to fire resistance testing is to maintain the door in the fully closed position up until the intumescent in the leaf to frame clearance gaps has been given sufficient time to react. The door closer is not intended to remain in position for the test duration.

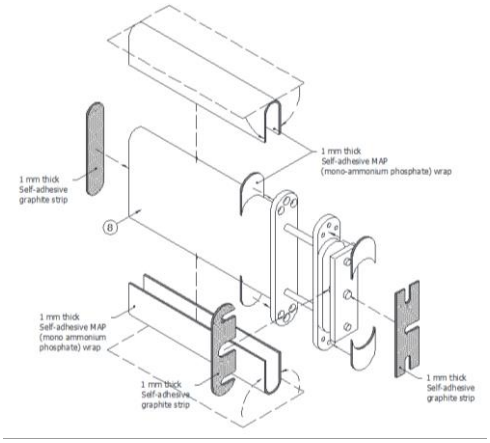
After a period between 10 and 15 minutes of the test, the intumescent seals will have reacted, thereby providing friction between the leaf and frame and inhibiting the tendency of the door leaf to swing open. It is therefore essential that the closer remains operable up until this point.

The critical aspect to the performance of a concealed closer within a doorset is the amount of leaf material which is required to be removed for fitment of both the closer body in the edge of the door and the armature in the hanging jamb. The metal body and arm of the closer also has an effect on heat transfer which can affect charring and burn-through performance.

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF Report No. 397894 is cited to display the ability of the 10508 concealed jamb-mounted closer referenced to contribute towards the required 30 minute fire resistance performance.

The doorset comprised 44 mm thick solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame on three stainless steel hinges. The door leaf was unlatched and the doorset mounted such that it opened towards the heating conditions of the test.



The 10508 main closer body was mounted within the door leaf, 782 mm from the bottom of the jamb to the centre-line of the closers body. The main body and frame armature were protected by and intumescent kit, incorporating both mono ammonium phosphate and graphite-based sheet material as shown:

The single 15 mm wide perimeter intumescent fire seal was fully cut-through by the frame armature.

Doorset A achieved an integrity performance of 42 minutes at which time sustained flaming was reported at the top hanging edge. Doorsets was blanked off at 44 minutes without failure attributed to, or coincident with the 10508 closers, to allow the testing of doorsets B to continue

The test observations do not record any instance during the 30 minute classification period that would indicate that the closer failed to maintain the door leaf in the closed position for the required period.

Based on the performance of the doorset included in the test, it is therefore reasonable to consider that the closer unit may be fitted to other, previously proven, timber-based doorsets required to provide 30 minute fire resistance performances.

Timber based doorsets – 60 minutes

The performance of the doorset during the test referenced WF Report No. 330214 issue 2 is cited to display the ability of the 10508 concealed jamb-mounted closer referenced to contribute towards the required 60 minute fire resistance performance.

The doorset comprised 54 mm thick solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a hardwood frame on three stainless steel hinges. The door leaf was unlatched and the doorset mounted such that it opened towards the heating conditions of the test.

The 10508 main closer body was mounted within the door leaf, 815 mm from the bottom of the jamb to the centre-line of the closers body. The body and frame armature were bedded on intumescent paste. 2No. 15 mm wide perimeter intumescent fire seals were incorporated within the frame, positioned 9 mm apart, consequently approximately 5 mm of perimeter seal by-passed the armature on each side.

The doorset achieved an integrity performance of 66 minutes at which time sustained flaming was reported at the glazing aperture. Further sustained flaming was recorded at the top edge of the door at 58 minutes. The test was discontinued at 62 minutes without failure attributed to, or coincident with the 10508 closers.

The test observations do not record any instance during the 60 minute classification period that would indicate that the closer failed to maintain the door leaf in the closed position for the required period.

Based on the performance of the doorset included in the test, it is therefore reasonable to consider that the closer unit may be fitted to other, previously proven, timber-based doorsets required to provide 60 minute fire resistance performance.

Inumescent Protection for timber based doorsets

It is a requirement of this appraisal that the concealed overhead closers must be installed within the doorsets such that the same level of intumescent protection is provided.

For both 30 and 60 minute timber-based applications, the 10508 closer unit shall either be bedded upon intumescent mastic (all elements, i.e. main body, forend and armature) which shall be provided by the manufacturer. Alternatively, the 10508 may be fitted with the manufacturer's intumescent protection kit which comprises pre-cut, self-adhesive intumescent sheet material, as identified above.

Predominately Steel based doorsets

It is proposed that previously fire tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) steel-based insulated or uninsulated doorsets may be fitted with a 10508 jamb mounted concealed door closer in order to provide up to 240 minutes integrity, without detracting from the performance of the doorset.

In the case of an unlatched steel based doorset, the closer must maintain the door in the fully closed position until such time as the door expands sufficiently to jam within its door frame. Where a concealed closer is fitted to an uninsulated doorset it must additionally prove that it does not present an additional risk to the integrity performance of the doorset whereby the closer's components and hydraulic fluid must demonstrate that they are not ignited by the high levels of heat transfer through the metal doorset.

The performances of Doorset B during the test referenced WF Report No. 397894 is cited to display the ability of the 10508 concealed jamb-mounted closer referenced to contribute towards the required 240 minute fire resistance performance.

Doorset B was a typical 240 minute uninsulated steel doorset construction including a 974 mm x 2051 mm x 45 mm thick hollow steel door leaf hung within a hollow steel frame. The doorset was unlatched and opened away from the heating conditions.

It was fitted with a concealed, edge-mounted, overhead door closer 10508. The main body was located within the door leaf, at a height of 782 mm from the finished floor level to the centre-line of the closer, with the armature element fitted in the frame. The closer was active.

The doorset achieved an integrity rating performance of 243 minutes, and at no time did the doors shows signs of opening.

Based on the performance of the doorset included in the test, it is therefore reasonable to consider that the closer unit may be fitted to other, previously proven, uninsulated or insulated metal based doorsets required to provide up to 240 minute fire resistance performances.

Insulated steel-based doorsets must have been proven with an edge mounted device of at least the same rebate and body size.

All Applications

The closer units shall not be fitted higher than 1000 mm from the centre-line of the closer to the base of the door.

The chosen doorsets must have been proven with an edge mounted device of at least the same rebate and body size.

5.1.5 Flush Bolts

Timber based doorsets – 30 minutes – 48800 and 48803

The doorset within WF Report No. 503268 was of overall dimensions 2080 mm high by 1530 mm wide. The primary door leaf had overall dimensions of 2040 mm high by 932 mm wide by 44 mm thick and the secondary door leaf had overall dimensions of 2040 mm high by 524 mm wide by 44 mm thick both door leaves comprised of graduated density chipboard core and 8 mm thick hardwood lippings. The leaves were hung within a softwood frame on three stainless steel hinges, such that they opened towards the heating conditions of the test. The doorset was unlatched and bolted for the duration of the test.

The 914 mm high 48803 flushbolt was fitted in the door meeting edge at the top of the secondary leaf, with the strikeplate fitted in the frame head rebate. The 203 mm high 48800 flushbolt was fitted in the door meeting edge at the bottom of the secondary leaf, the strike plate was not present at the base of the secondary leaf.

Both flushbolts had 1 mm graphite Therm-A-Flex intumescent sheet material fitted full length in the base of the recess behind the flushbolt and behind the forend and behind strike plate, the kits were referenced “XX48803FP” and “XX48800FP” correspondingly which were supplied by Norseal. The perimeter intumescent fire seals in the leading edge of the primary leaf were uninterrupted at the flushbolt locations, and the strikeplate plate within the frame rebate was fully interrupted.

On reviewing the observations taken from the test report, a sustained flaming integrity failure was recorded at the head of the meeting edge at 33 minutes, this was the only failure associated with the flushbolts. The test was discontinued at 36 minutes.

On this basis the 48800 and 48803 flushbolts are therefore deemed acceptable for use with 30 minute timber-based doorsets.

Timber based doorsets – 60 minutes – 48800, 48800F, 48803 and 48803F

The performances of the doorset during the test referenced WF No. 168037 is cited to display the ability of the 48800 and 48803 flushbolts to contribute towards the required fire resistance performance for 60 rated timber based doorsets when fitted in the leading edge of the secondary leaf.

The doorset within WF Report No. 168037 was of overall dimensions 2080 mm high by 1735 mm wide. Each door leaf had overall dimensions of 2040 mm high by 826 mm wide by 53 mm thick comprising softwood stiles and rails, a flaxboard core, non-combustible board sub-facings, chipboard facings and hardwood lippings on the vertical edges. The leaves were hung within a hardwood frame on three stainless steel hinges, such that they opened towards the heating conditions of the test. The doorset was latched and bolted for the duration of the test.

The 914 mm high 48803 flushbolt was fitted in the door meeting edge at the top of the secondary leaf, with the strikeplate fitted in the frame head rebate. The 203 mm high 48800 flushbolt fitted in the door meeting edge at the bottom of the secondary leaf.

Both flushbolts had 2 mm Therm-A-Flex intumescent sheet material fitted full length in the base of the recess behind of flushbolt and behind the forend and behind strike plate. The perimeter intumescent fire seals in the leading edge of the primary leaf were uninterrupted at the flushbolt locations, and the strikeplate plate within the frame rebate was by-passed by the perimeter intumescent fire seals 9 mm on both sides.

On reviewing the observations taken from the tests report, a sustained flaming integrity failure was recorded at the door lock at 59 minutes. No integrity failures associated with the flushbolts, for a duration of 69 minutes, at which time the top of the doorset ignites.

On this basis the 48800, 48800F, 48803 and 48803F flushbolts are therefore deemed acceptable for use with 60 minute timber-based doorsets.

48800F, 48801, 48801F, 48802 , 48802F and 48803F

For timber doorsets, the critical factor when changing from one bolt to another is the size of the bolt body. A larger flushbolts may require more cellulosic material to be removed from the leaf and frame and therefore may provide an easier route for the passage of flames and/or hot gases leading to premature integrity failure. Similarly, the reduction in flushbolt material present will reduce the level of heat transfer from the flushbolt into the core of the door leaf.

Additionally, the amount of interruption to the intumescent seal specification at the door leaf to frame perimeter clearance gaps should be replicated and not reduced from that originally specified for the tested doorset, ensuring that the amount or perimeter intumescent by-passing the flushbolt originally is retained.

The 48800F, 48801, 48801F, 48802, 48802F and 48803F flushbolts are identical to the tested flushbolts, only varying in height or radiused corners. These flushbolts fall within the heights of the flushbolts tested, radiused corners require less timber material to be removed from the door and frame and represent a slight reduction in metal, this reduces the potential for transferring heat into the door and frame and consequently the risk of flaming and erosion is also slightly reduced. The flushbolts mentioned above are consequently their use is also approved for use with 30 & 60 minute timber-based doorsets.

Doorset Specification

The tested doorset did incorporate a non-combustible sub-face and this would be expected to improve the performance of any recessed door hardware. However, the body of the flushbolt would have only be partially protected, and empirical data suggests failure of flushbolts is typically associated with the door edge and frame rebate rather than through the door thickness, consequently providing the doors are minimum of 44 mm thick for 30 minute applications and 54 mm thick for 60 minute applications, the minimum density of the lipping and frames is as that tested, and the intumescent specification tested is maintained, it is considered reasonable to assume the tested flushbolts will perform in a similar manner in timber-based doors without non-combustible sub-faces.

It is proposed that the flushbolts incorporate either square or radiused corners. All the flushbolts tested incorporated square corners.

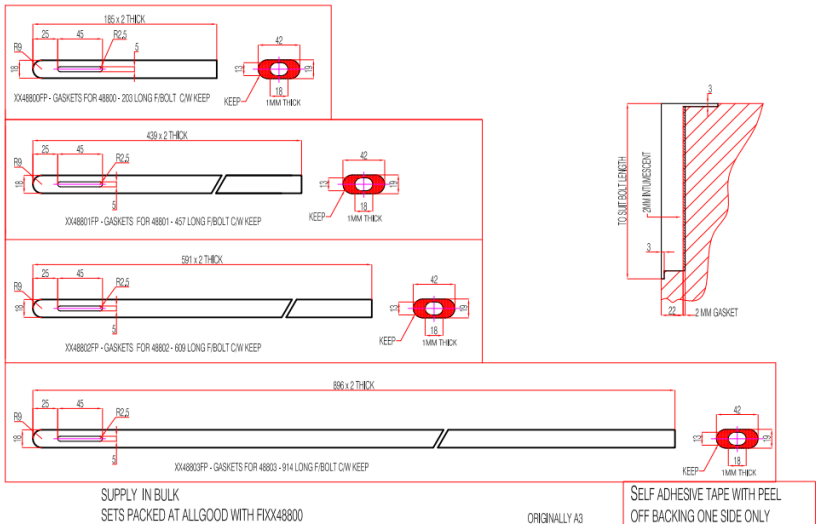
Radiused corners require less timber material to be removed from the door and frame and represent a slight reduction in metal, this reduces the potential for transferring heat into the door and frame and consequently the risk of flaming and erosion is also slightly reduced.

The use of the full range of flushbolts with both square or radiused corners are therefore approved. (the flushbolts with square corners are 48800, 48801, 48802 and 48803), (the flushbolts with radius corners are 48800F, 48801F, 48802F and 48803F)

Intumescent Specification

All flush bolts for 30 minute applications shall have 1 mm graphite Therm-A-Flex intumescent sheet material fitted full length in the base of the recess behind of flushbolt and behind the forend and behind strike plate.

For 60 minute applications all flush bolts shall have 2 mm Therm-A-Flex intumescent sheet material fitted full length in the base of the recess behind of flushbolt and behind the forend and behind strike plate.



Additionally, the perimeter intumescent fire seals in the leading edge of the primary leaf shall remain uninterrupted at the flushbolt locations, and the strikeplate plate within the frame rebate shall be fully

interrupted on 30 minute applications and shall be by-passed 9 mm on both sides by the perimeter intumescent fire seals on 60 minute applications.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

5.1.6 Cylinders

Timber based doorsets – 30 and 60 minute

The performances of both Doorsets A and B during the test referenced WF No. 379807 is cited to display the ability of the Allgood cylinders to contribute towards the required fire resistance performance for 30 and 60 minute rated timber based doorsets.

Doorset A was a simulated single acting, single leaf doorset with a 44 mm thick graduated density chipboard core and 8 mm thick hardwood lippings. The leaf was hung within a softwood frame. The doorset was fitted with a sashlock with 15 mm thick case with 1 mm Interdens intumescent sheet material either side of the lockcase.

Doorset A was fitted with a 70 mm long x 10 – 17 mm wide x 33 mm high cylinder and rectangular shaped thumb turn.

Doorset B was a simulated single acting, single leaf doorset with a 54 mm thick graduated density chipboard core and 8 mm thick hardwood lippings. The leaf was hung within a hardwood frame. The doorset was fitted with a sashlock with 15 mm thick case with 2 mm Interdens intumescent sheet material either side of the lockcase.

Doorset B was fitted with a 70 mm long x 10 – 17 mm wide x 33 mm high cylinder and circular thumb turn.

On reviewing the observations taken from the test report, it's clear that there were no integrity failures to Doorset A (E30), for a test duration of 36 minutes; at which time the door was blanked off to allow the testing of the Doorset B (E60) to continue.

It is also clear that there was no integrity failure of the lock/cylinder fitted in Doorset B (E60) for the test duration of 65 minutes.

All lock installations included Euro profile cylinder and thumbturns and so the performance when fitted with double Euro cylinders, and is considered acceptable.

Single Euro cylinders provide less penetration through the face of the door leaf and so are positively appraised on the basis that they are a less onerous configuration. The single cylinders door preparation shall penetrate through only half the thickness of the door leaf.

The hole in the door face shall follow the shape of the cylinders and be as tight as possible.

This appraisal does not consider the implications of installing a specific lock, within a specific timber fire door construction and only considers the influence of the cylinder, the suitability of the door leaf and latch/lock should be demonstrated by separate test/assessment evidence.

Intumescent protection - included either side of the lockcase shall be a minimum of 1 mm thick sheet material for 30 minute applications, and a minimum of 2 mm thickness for minute applications.

5.1.7 Escutcheons

Timber based doorsets – 30 and 60 minutes

All of the proposed escutcheons and indicators are entirely surface mounted and fixed using wood screws or bolt-through steel fixings supplied by the client, and therefore do not require any further removal of material from the leaf (beyond the spindle/cylinder/key hole tested as part of the latch/lock) or interruption of intumescent seals around the leaf perimeter, these already being a consequence of the inclusion of the door lock or latch.

The introduction of a lock/latch case into a timber-based leaf can increase the risk of localised integrity failure, via either the mortise, cylinder keyhole and spindle holes, removing enough leaf material that premature burn through can occur, or by interruption of the intumescent seals around the leaf perimeter by the strike/forend plate.

This appraisal does not consider the implications of installing a specific lock, or cylinder within a fire door construction and only considers the influence of the surface mounted escutcheon/indicator furniture, the suitability of the door leaf and latch/lock/cylinder or lever key hole should be demonstrated by separate test/assessment evidence. Including any additional intumescent protection included either side of the lock case where applicable.

With insulated timber-based doorsets as the escutcheons and indicators are wholly surface mounted, no fire test evidence is required as hardware mounted on the exposed face will detach and fall away, and those on the unexposed face will not be subject to any direct heat.

On this basis the full range of escutcheons and indicators as identified in the Annex are approved for use with 30 and 60 minutes timber-based doorsets.

The locks shall not be fitted higher than 1050 mm from the centre of lockcase to the finished floor level of the surrounding floors.

The cylinder, keyhole or spindle hole should be as small as possible, following the shape of the cylinders.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

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The proposed model has the same fundamental properties and design as the models as the models previously justified in the section above. The changes in shape and finish are not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material and fixing method does not change. The proposed hardware Is positively appraised based on the evidence previously presented above.

5.1.8 Door Loops

Surface mounted door loops

With insulated timber-based doorsets where the door loop is wholly surface mounted (except the hole in the face for the cable which does not penetrate the door thickness), no fire test evidence is required as hardware mounted on the exposed face will detach and fall away, and those on the unexposed face will not be subject to any direct heat.

The use of surface mounted door loops on uninsulated steel doors requires further specific consideration as where they are fitted to the non-fire exposed face of an uninsulated doorset it must be proven that it does not present an additional risk to the integrity performance of the doorset whereby the material used must demonstrate that they are not ignited by the high levels of heat transfer through the metal doorset, typically 600-700oC at 120 minutes, increasing to approximately 750-800oC at 240 minutes.

The performance of the doorsets included in the test report referenced WF No. 388342 is cited to demonstrate the positive contribution made by the tested 9471 surface-mounted loop towards the performance of the full-scale doorset, when mounted on a 240 minute uninsulated steel-based flush doorset constructions.

Doorset B in Test report WF No. 383342 was a typical 240 minute uninsulated steel-based single-acting, single-leaf doorset which was unlatched, incorporated the 9471 armoured loop on to the unexposed face.

The test was terminated at 145 minutes with no failure recorded against the armoured loop.

On this basis the use of the surface mounted armoured loop is approved for use on single-acting timber-based doorsets with an integrity and insulation performance of up to 120 minutes, and single-acting, insulated and uninsulated steel-based doorset with an integrity performance of up to 120 minutes integrity.

Concealed door loops

The performances of Doorset A during the test referenced WF No. 341521 is cited to display the ability of the 79053N loops to contribute towards the required fire resistance performance for 30 and 60 minute rated timber based doorsets.

Doorset A within WF Report No. 341521 was a 2095 mm high by 995 mm wide unlatched single-action, single-leaf 30 minute doorset incorporating a door leaf of dimensions 2055 mm high by 925 mm wide by 44 mm thick multi-layered chipboard door, lipped on the vertical edges with 7 mm hardwood, hung within a softwood frame, incorporating a single 15 x 4 mm perimeter intumescent fire seal positioned centrally within the frame rebate. The door opened towards the heating conditions.

Doorset B within WF Report No. 341521 was a 2085 mm high by 1010 mm wide unlatched single-action, single-leaf 60 minute doorset incorporating a door leaf of dimensions 2040 mm high by 935 mm wide by 55 mm thick multi-layered chipboard door, lipped on the vertical edges with 7 mm hardwood, hung within a hardwood frame, incorporating 2No. 15 x 4 mm perimeter intumescent fire seal positioned centrally within the frame rebate, set 10 mm apart. The door opened towards the heating conditions.

Both doorsets were identified as being fitted with a 79053N loop with a 290 mm x 20 mm forend and 255 high x 18 mm deep case fitted to the edge of the door leaf, with the flexible spring tube attached to the bottom inside of the case and the opposite end attached to a 6 mm dia. hole within the frame rebate. An electrical cable was fed through the spring tube and the 6 mm dia. holes in the door and frame with approximately 150 mm extending out into the door leaf. The loop was positioned 1300 mm from the bottom of the door to the centreline of the loop case.

2 mm thick pad of Interdens intumescent was fitted behind the surface mounted end cap on the frame and the flexible tube fitting into the case within the door leaf. The recessed forends and channel case was covered with 2 mm thick Interdens intumescent. The perimeter intumescent fire seals within the frame were not breached, except by the 6 mm hole for the cable.

On reviewing the observations taken from the test report, it's clear that there were no integrity failures associated with the 79053N loop fitted to Doorset A (E30), for a test duration of 34 minutes, at which time the doorset was blanked off to allow the testing of the Doorset B (E60) to continue.

For Doorset B no integrity failures associated with the 79053N loop for a period of 66 minutes, at which time the test was discontinued.

On this basis the 79053N jamb-mounted concealed door loops are therefore deemed acceptable for use with 30 minute and 60 minute single-action, timber-based doorsets.

The loops shall be positioned a maximum of 1400 mm from the bottom of the door to the centreline of the case.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

Intumescent protection - The loop in both 30 and 60 minute applications shall be protected by 2 mm Interdens intumescent sheet material behind the surface mounted end cap, and the morticed channel within the door leaf shall incorporate 2 mm thick Interdens intumescent sheet material behind the forend and around the case.

To ensure the perimeter intumescent fire seals are not interrupted the case shall only be fitted in the opposite face to the perimeter intumescent fireseals, i.e. if the fire seals are in the frame rebate the morticed channel shall be recessed in the door edge; if the fireseals are in the edge of the door, the morticed channel shall be recessed in the frame rebate.

5.1.9 Door Selector

Timber based doorsets – 30,60,90 & 120 minutes

With insulated timber-based doorsets where the hardware is wholly surface mounted i.e. no components enter the leaf-to-frame gap or require the removal of leaf or frame material, no fire test evidence is required as hardware mounted on the exposed face will detach and fall away, and those on the unexposed face will not be subject to any direct heat.

In this application as the surface of the door will remain at a relatively low temperature, the use of screw-fixed variants will not have a detrimental impact on the doorsets performance.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

On this basis the full range of Door selectors as identified in section 3 are approved for use with 30, 60, 90 and 120 minutes timber-based doorsets.

5.1.10 Door viewer

The performances of the doorset during the test referenced WF No. 383341 is cited to display the ability of the 17015FR door viewer to contribute towards the required fire resistance performance for 30 and 60 minute, timber based doors, and 120 minute uninsulated predominately steel based doorsets.

All 3 doors were fitted with 2No. 17015FR door viewers – one with the lens on the exposed face and the other with the lens on the unexposed face. The viewers were all positioned to simulate an approximate heights of 1450 to 1650 mm. The viewers to the 30 and 60 minute timber door incorporated 2 mm Interdens material around the body of the viewer.

Doorset A included a typical 30 minute 44 mm thick graduated density chipboard core, Doorset B a typical 60 minute 54 mm thick graduated density chipboard core and Doorset C a typical 46 mm thick paper honeycomb cored, uninsulated steel-based flush door.

On reviewing the observations taken from the tests report, there were no integrity failures associated with the door viewers for the following durations:

- Door A – 36 minutes (no failure – sampled blanked off)
- Door B – 65 minutes (sustained flaming failure of viewer with lens to the unexposed face)
- Door C – 136 minutes (no failure – test discontinued)

On this basis the 17015FR door viewer is therefore deemed acceptable for use with 30 and 60 minute, timber based doors provided that the same level of intumescention protection is maintained (2 mm Interdens material around the body of the viewer), and up to 120 minute uninsulated predominately steel based doorsets.

5.1.11 Finger Protection

Timber based doorsets – 30,60,90 & 120 minutes

With insulated timber-based doorsets where the hardware is wholly surface mounted i.e. no components enter the leaf-to-frame gap or require the removal of leaf or frame material, no fire test evidence is required as hardware mounted on the exposed face will detach and fall away, and those on the unexposed face will not be subject to any direct heat.

In this application as the surface of the door will remain at a relatively low temperature, the use of screw-fixed will not have a detrimental impact on the doorsets performance.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

On this basis the full range of finger protection as identified in the Appendix and are approved for use with 30, 60, 90 and 120 minutes timber-based doorsets.

5.1.12 Rigidiser

Timber based doorsets – 30 minutes

The doorset within WF Report No. 503268 was of overall dimensions 2080 mm high by 1530 mm wide. The primary door leaf had overall dimensions of 2040 mm high by 932 mm wide by 44 mm thick and the secondary door leaf had overall dimensions of 2040 mm high by 524 mm wide by 44 mm thick both door leaves comprised of graduated density chipboard core and 8 mm thick hardwood lippings. The leaves were hung within a softwood frame on three stainless steel hinges, such that they opened towards the heating conditions of the test. The doorset was unlatched and bolted for the duration of the test.

The 914 mm high 48803 flushbolt was fitted in the door meeting edge at the top of the secondary leaf, with the strikeplate fitted in the frame head rebate. The 203 mm high 48800 flushbolt was fitted in the door meeting edge at the bottom of the secondary leaf, the strike plate was not present at the base of the secondary leaf. Door leaf B was fitted with a 9053 rigidiser which connected to the lever handles, the rigidiser was not fitted with any intumescent protection not did it interrupt any intumescent protection.

On reviewing the observations taken from the test report, a sustained flaming integrity failure was recorded at the head of the meeting edge at 33 minutes, at 34 minutes there was also a sustained flaming failure at right side of the head of door leaf B. There were no other failures during the test duration of 36 minutes.

On this basis as no failures were associated with the rigidiser and is therefore is deemed for use with 30 minute timber based doorsets.

5.1.13 Proposed Doorsets – All Hardware

As stated in this report, the doorset, in the required configuration, will be previously tested and its performance is therefore not in doubt.

All door hardware is subject to the acceptance by the chosen door assembly supplier's tested, assessed or certificated scope, which generally identifies the types of hardware approved, the required specification/design based on the key materials/ maximum size (e.g. hinge blade size, cut out dimensions), and the application of any additional intumescent protection.

On this basis approval should be sought from the specific door assembly supplier to ensure compliance based on this assessed/certificated scope.

The hardware is supplied in a range of applied finishes e.g., Satin Stainless Steel, Brushed Stainless Steel and PVD. The change of finish is not considered to have any negative influence on the performance of the hardware when used in the proposed applications because the fundamental material does not change. The proposed hardware with an alternative finished are positively appraised.

5.1.14 Alternative Doorsets – All Hardware

As this appraisal is intended to be used on a general basis and not restricted to any particular manufacturer of fire doors, the following points are given to enable the hinges to be used safely:

The timber based doorset, including door frame, intumescent seals and associated ironmongery should have achieved up to 60 minutes integrity and, where applicable, insulation when tested by a UKAS approved laboratory to BS EN 1634-1:2014 +A1:2018 or BS476: Part 22:1987.

The critical aspects of the doorset construction are considered to be the material of the door frame, the leaf to frame clearance gaps and the lipping material. Attention should be paid to these details, and these should not be amended from that previously fire tested. Where this information is not known the following minimum specification will be followed:

- 30 Minute timber-based doorsets
    - Door frame minimum density - 460 kg/m^3
    - Door leaves shall have a minimum thickness of 44 mm for 30 minute applications.
    - Leaf to frame clearance gaps not to exceed 3 mm maximum.
    - Lipping density - 640 kg/m^3.

- 60 Minute timber-based doorsets
    - Door frame minimum density - 640 kg/m^3
    - Door leaves shall have a minimum thickness of 54 mm for 60 minute applications.
    - Leaf to frame clearance gaps not to exceed 3 mm maximum.
    - Lipping density - 640 kg/m^3.

- Predominately Steel based doorsets
    - The leaves of the proposed doorset shall be of a minimum thickness of 44 mm.
    - No additional intumescent protection is required.

6. Conclusions

Should the recommendations given in this report be followed, it can be concluded that timber doorsets, which have previously been successfully fire tested to EN 1634-1 or BS476: Part 22 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved up to 120 minutes, as discussed in this report, may be fitted with the panic hardware, signage and protection plates, door selectors and finger protection, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

Should the recommendations given in this report be followed, it can be concluded that timber doorsets, which have previously been successfully fire tested to EN 1634-1 or BS476: Part 22 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved up to 60 minutes, as discussed in this report, may be fitted with the recessed flush pulls, perko closer, flush bolts, cylinders, escutcheons, concealed door loops, door viewers, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

Should the recommendations given in this report be followed, it can be concluded that predominately steel based door assemblies, which have previously been successfully fire tested to EN 1634-1 or BS476: Part 22 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved 240 minutes, as discussed in this report, may be fitted with perko closer, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

Should the recommendations given in this report be followed, it can be concluded that predominately steel based door assemblies, which have previously been successfully fire tested to EN 1634-1 or BS476: Part 22 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved 120 minutes, as discussed in this report, may be fitted with surface mounted door loops or door viewers, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

Should the recommendations given in this report be followed, it can be concluded that timber doorsets, which have previously been successfully fire tested to EN 1634-1 or BS476: Part 22 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved up to 30 minutes, as discussed in this report, may be fitted with the rigidiser without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

7. Declaration

We the undersigned confirm that we have read and comply with obligations placed on us by the Passive Fire Protection Forum (PFPF) Guide to undertaking technical assessments and engineering evaluations based on fire test evidence 2021 Industry Standard Procedure

We confirm that any changes to a component or element of structure which are the subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.

We agree to withdraw this assessment from circulation should the component or element of structure, or any of its component parts be the subject of a failed fire resistance test to the standard against which this assessment is being made.

We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.

We are not aware of any information that could affect the conclusions of this assessment. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

(in accordance with the principles of FTSG Resolution No. 82: 2001)

Signed: Signed by: Robert Noon 23B2BC92A9AE4E2...

Name: Robert Noon

Position: Technical & Product Coordinator

Date: 14-Apr-2026

For and on behalf of:

8. Limitations

This assessment report:

- Does not provide an endorsement by Warringtonfire of actual products supplied.
- Has been prepared based on information provided by the Applicant. Warringtonfire has not verified the accuracy or completeness of that information and will not be responsible for any errors or omissions that might be incorporated into this report as a result.
- Any figures included in this report are provided for illustrative purposes only and may not fully reflect the actual scope being assessed. Warringtonfire cannot guarantee the accuracy of the drawings against the scope being assessed. The scope of this report is limited to assessments of the modifications to the tested systems as described in Section 3.
- This report addresses itself solely to the elements and subjects discussed and do not cover any other criteria or modifications. All other details not specifically referred to should remain as tested or assessed.
- This report is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to Warringtonfire, the assessment will be unconditionally withdrawn, and the applicant will be notified in writing. Similarly, the assessment should be re-evaluated if the assessed construction is subsequently tested since actual test data is deemed to take precedence.
- This assessment has been carried out in accordance with Fire Test Study Group Resolution No. 82: 2001.
- Opinions and interpretation expressed herein are outside the scope of UKAS accreditation.
- This assessment report relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions that are stipulated in the standard this assessment concludes to. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.
- This report represents our opinion as to the performance likely to be demonstrated on a test in accordance with the standard to which this assessment concludes, on the basis of the test evidence referred to in this report. We express no opinion as to whether that evidence, and/or this report would be regarded by any Building Control authorities or any other third parties as sufficient for that or any other purpose.
- This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Warringtonfire. All work and services carried out by Warringtonfire Testing and Certification Limited are subject to, and conducted in accordance with, the Standard Terms and Conditions of Warringtonfire Testing and Certification Limited, which are available at https://www.element.com/terms/terms-and-conditions or upon request.
- Previous versions of the report(s), if applicable, are withdrawn from the date of the up-issued assessment report with immediate effect. That means that they may no longer be relied upon in support of any products being placed on the market (or for the stated project/address where applicable) from the issue date stated on the front cover of this report. The withdrawal of an assessment report does not affect any reliance placed on the report up to the issue date stated on the front cover of this assessment; however, going forward, the up-issued report must be referenced in any literature or product specifications in place of the previous versions of the assessment.

9. Validity

This assessment report is not valid unless signed by all signatories identified within the Signatories and Revision History section of this report.

This assessment report is not valid unless it incorporates the declaration given in Section 7 duly signed by the applicant.

The assessment is valid initially for a period of five years after which time it is recommended that it be submitted to the assessing authority for re-evaluation.

Appendix A
Summary of supporting data

The summaries in this section are for information only. It is assumed that the end user will have a full understanding of the tested specification as defined in the relevant test report.

Where of the test evidence used in the evaluation is over 5 years old. In accordance with industry guidance, the evidence has been reviewed to consider its suitability. Warringtonfire are satisfied that there have been no significant revisions to the relevant test standards which would render the evidence irrelevant.

A.1 Primary Evidence

<table>
<tr><th colspan="2">Test Report Reference WF 397887</th></tr>
<tr><td>Report sponsor</td><td>Allgood</td></tr>
<tr><td>Test laboratory</td><td>Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom</td></tr>
<tr><td>Test date</td><td>20th April 2018</td></tr>
<tr><td>Test standard</td><td>BS EN 1634-1:2014</td></tr>
<tr><td>Specimen summary</td><td>For the purpose of the test the doorsets were referenced Doorset A and Doorset B.

Doorset A had overall dimensions of 2080 mm high by 990 mm wide incorporating a door leaf with overall dimensions 2036 mm high by 925 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to all four edges and was hung within a softwood frame. The doorset was installed so that it opened away from the heating conditions of the test and was latched for the duration of the test. The Doorset incorporated the following hardware
<table>
<tr><th>Item Number</th><th>Description</th><th>Reference</th></tr>
<tr><td>6</td><td>Phoenix Cooke Brothers Hinges</td><td>8068</td></tr>
<tr><td>7</td><td>Phoenix Cooke Brothers Hinges</td><td>8066T8</td></tr>
<tr><td>8</td><td>Allgood Recessed Pull Handle</td><td>6250 F/PULL</td></tr>
<tr><td>9</td><td>Allgood Recessed Pull Handle</td><td>6260 F/PULL</td></tr>
<tr><td>10</td><td>Allgood Back To Back Pull Handle</td><td>6598BB</td></tr>
<tr><td>11</td><td>Allgood access panel lock</td><td>MP8397-45</td></tr>
<tr><td>12</td><td>Allgood Sashlock</td><td>SS7279.80</td></tr>
<tr><td>13</td><td>Allgood Lever Handle</td><td>MP3510</td></tr>
<tr><td>14</td><td>Allgood Cylinder</td><td>SN7418NA 796Q</td></tr>
</table>
Doorset B had overall dimensions of 2080 mm high by 990 mm wide incorporating a door leaf with overall dimensions 2036 mm high by 925 mm wide by 53 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to all four edges and was hung within a hardwood frame. The doorset was installed so that it opened towards the heating conditions of the test and was latched for the duration of the test. The Doorset incorporated the following hardware:
<table>
<tr><th>Item Number</th><th>Description</th><th>Reference</th></tr>
<tr><td>6</td><td>Phoenix Cooke Brothers Hinges</td><td>8068</td></tr>
</table></td></tr>
</table>

Test Report Reference WF 397887

7	Phoenix Cooke Brothers Hinges	8066T8
8	Allgood Recessed Pull Handle	6250 F/PULL
9	Allgood Recessed Pull Handle	6260 F/PULL
10	Allgood Back To Back Pull Handle	6598BB
12	Allgood Sashlock	SS7279.80
13	Allgood Lever Handle	MP3510
14	Allgood Cylinder	SN7418NA 796Q

The test was discontinued after a period of 60 minutes.

Warrington Fire Research Centre was not involved in any selection or sampling procedures of the specimen or any of the components.

Test results

	Doorset A	Doorset B
Integrity	33 minutes	41 minutes
Insulation	33 minutes	33 minutes

Test Report Reference 397888

Report sponsor	Allgood
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	18th June 2018
Test standard	BS EN 1634-1:2014

Specimen summary

The purposes of the test, the doorsets were referenced Doorset A and Doorset B.

Doorset A had overall dimensions of 2083 mm high by 1006 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 931 mm wide by 54 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a hardwood frame. The doorset was installed so that it opened towards the heating conditions of the test and was latched for the duration of the test. The Doorset incorporated the following hardware:

Item Number	Description	Reference
7	Phoenix Cooke Brothers Hinges	8068
8	Phoenix Cooke Brothers Hinges	8066T8
9	Allgood Recessed Pull Handle	6250
10	Allgood Sashlock	SS7279.80
11	Allgood Lever Handle	MP3510
12	Allgood Cylinder and Escutcheon	SN7418NB 796Q

Doorset B had overall nominal dimensions 2080 mm high by 990 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 925 mm wide by 54 mm thick. The door leaf was formed from 1.2 mm thick galvanised steel facings with an expanded paper honeycomb core. The leaf was hung within a 1.5 mm thick profiled steel door frame such that it opened away from the heating conditions of the

Test Report Reference 397888

test. The doorset was unlatched for the duration of the test and incorporated the following hardware:

Item Number	Description / Location	Reference
7	Phoenix Cooke Brothers Hinges	8068
8	Phoenix Cooke Brothers Hinges	8066T8
10	Allgood Sashlock	SS7279.80
11	Allgood Lever Handle	MP3510
12	Allgood Cylinder	SN7418NB
13	Allgood Back To Back Pull Handle	6598BB
14	Allgood Back To Back Pull Handle	1729BB
15	Allgood Shearlock	XX75581NCH

The test was discontinued after a period of 133 minutes. Warringtonfire was not involved in any selection or sampling procedures of the specimen or any of the components.

Test results

	Doorset A	Doorset B
Integrity	62 minutes	42 minutes
Insulation	37 minutes	42 minutes

Test Report Reference 397894

Report sponsor	Confidential – Full details of the original test sponsor are held on file by Warringtonfire. The original report owner has given formal permission for the use of this data in support of this assessment for Allgood.
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	2nd May 2018
Test standard	BS EN 1634-1:2014
Specimen summary	For the purposes of the test, the doorsets were referenced Doorset A and Doorset B. Doorset A had overall dimensions of 2080 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 933 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges. The leaf was hung within a softwood frame on three steel butt hinges, opening towards the heating conditions of the test. The doorset was fitted with a '10508' concealed closer. The closer was fitted on the hinged edge with the closer body morticed into the leaf. The centre line of the closer was positioned nominally 782 mm from the notional floor level. The doorset was unlatched for the duration of the test. Doorset B had overall nominal dimensions 2090 mm high by 1040 mm wide incorporating a door leaf with overall dimensions 2051 mm high by 974 mm wide by 45 mm thick. The door leaf was formed from 1.5 mm thick galvanised steel facings with a paper honeycomb core. The leaf was hung within a profiled steel door frame such that it opened away from the heating conditions of the test. The doorset was fitted with a '10508' concealed closer. The closer was fitted on the hinged edge with the closer body morticed into the leaf. The centre line of the closer was positioned nominally 782 mm from the notional floor level. The doorset was unlatched for the duration of the test.

Test Report Reference 397894	
	The test was discontinued after a period of 243 minutes. Warrington Fire Research Centre was not involved in any selection or sampling procedures of the specimen or any of the components.
Test results	<table><tr><th></th><th>Doorset A</th><th>Doorset B</th></tr><tr><td>Integrity</td><td>42 minutes</td><td>35 minutes</td></tr><tr><td>Insulation</td><td>42 minutes</td><td>5 minutes</td></tr></table>

Test Report Reference 330214	
Report sponsor	Confidential – Full details of the original test sponsor are held on file by Warringtonfire. The original report owner has given formal permission for the use of this data in support of this assessment for Allgood.
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	19th June 2013
Test standard	BS EN 1634-1:2008
Specimen summary	The doorset had overall dimensions of 2085 mm high by 1013 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 930 mm wide by 54 mm thick. The door leaf was hung within a hardwood door frame on three steel hinges. The door leaf comprised a three layer particle board Halspan core with hardwood lippings to the vertical edges. The doorset incorporated a concealed door closer referenced '10508 Perko-Powermatic controlled door closer' which was fitted within the trailing edge of the door leaf with approximately 10 mm clearance between the door closer and the glazed aperture. The door leaf incorporated an aperture of overall cut out dimensions 216 mm wide by 1016 mm high. The aperture was glazed with a pane of 6 mm thick 'Pyran® S' glass of overall nominal dimensions 200 mm wide by 1000 mm high. The glazed pane was protected via a CF291 glazing system and retained in place via screw fixed hardwood glazing beads. The doorset was orientated such that the doorset opened towards the heating conditions of the test and was rendered unlatched for the duration of the test. The test was discontinued after a period of 62 minutes. Warrington Fire Research Centre was not involved in any selection or sampling procedures of the specimen or any of the components.
Test results	<table><tr><th></th><th>Doorset</th></tr><tr><td>Integrity</td><td>17 minutes</td></tr><tr><td>Insulation</td><td>3 minutes</td></tr></table>

<table>
<tr><th colspan="2">Test Report Reference 397894</th></tr>
<tr><td>Report sponsor</td><td>Confidential – Full details of the original test sponsor are held on file by Warringtonfire. The original report owner has given formal permission for the use of this data in support of this assessment for Allgood.</td></tr>
<tr><td>Test laboratory</td><td>Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom</td></tr>
<tr><td>Test date</td><td>22nd June 2021</td></tr>
<tr><td>Test standard</td><td>BS EN 1634-1:2014+A1:2018</td></tr>
<tr><td>Specimen summary</td><td>The doorset had overall nominal dimensions of 2080 mm high by 1530 mm wide, incorporating two unequal leaves. Leaf A had overall dimensions of 2040 mm high by 524 mm wide and Leaf B had 2040 mm high by 932 mm wide by 44 mm thick. The door leaves were formed from a chipboard core with 8mm hardwood lippings to the vertical edges only. Both leaves were hung in a soft wood frame using Allgood satin stainless steel hinges referenced ‘SS8066’

Leaf A had flush bolts which remained engaged during the test and was installed with the hardware shown in the table below.
<table>
<tr><th>Item Number</th><th>Description</th><th>Reference</th><th>Manufacturer</th></tr>
<tr><td>4</td><td>Hinges</td><td>SS8066</td><td>Allgood</td></tr>
<tr><td>8</td><td>Pull handle set</td><td>CS6599BB</td><td>Allgood</td></tr>
<tr><td>9</td><td>Flush Bolt Top</td><td>SS48803</td><td>Allgood</td></tr>
<tr><td>9</td><td>Flush Bolt Bottom</td><td>SS48800</td><td>Allgood</td></tr>
</table>
Leaf B was unlatched during the test and was installed with the hardware shown in the table below.
<table>
<tr><th>Item Number</th><th>Description</th><th>Reference</th><th>Manufacturer</th></tr>
<tr><td>4</td><td>Hinges</td><td>SS8066</td><td>Allgood</td></tr>
<tr><td>5</td><td>Lever handleset</td><td>CS3510</td><td>Allgood</td></tr>
<tr><td>6</td><td>Rigidiser</td><td>SS9053</td><td>Allgood</td></tr>
<tr><td>7</td><td>Surface mounted closer</td><td>XX9151ASS</td><td>Allgood</td></tr>
</table>
For the purpose of the test the doorset was orientated such that it opened towards to heating conditions.
The test was discontinued after a period of 36 minutes.
Warrington Fire Research Centre was not involved in any selection or sampling procedures of the specimen or any of the components.</td></tr>
<tr><td>Test results</td><td>
<table>
<tr><th></th><th>Doorset A</th><th>Doorset B</th></tr>
<tr><td>Integrity</td><td>33 minutes</td><td>33 minutes</td></tr>
<tr><td>Insulation</td><td>33 minutes</td><td>33 minutes</td></tr>
</table>
</td></tr>
</table>

Test Report Reference 168037	
Report sponsor	Allgood.
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	29th Nov 2007
Test standard	BS EN 1634-1:2000
Specimen summary	The doorset was of overall dimensions 2080 mm high by 1735 mm wide. Each door leaf had overall dimensions of 2040 mm high by 826 mm wide by 53 mm thick comprising softwood stiles and rails, a flaxboard core, non-combustible board sub-facings, chipboard facings and hardwood lippings on the vertical edges. The leaves were hung within a hardwood frame on three stainless steel hinges referenced 'SS8069CB' (Leaf A) and 'SS97001' (Leaf B), such that they opened towards the heating conditions of the test. The doorset was latched for the duration of the test. The test was discontinued after a period of 70 minutes. Warrington Fire Research Centre was not involved in any selection or sampling procedures of the specimen or any of the components.
Test results	

	Doorset
Integrity	59 minutes
Insulation	59 minutes

Test Report Reference 379807	
Report sponsor	Confidential – Full details of the original test sponsor are held on file by Warringtonfire. The original report owner has given formal permission for the use of this data in support of this assessment for Allgood.
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	16th Feb 2017
Test standard	BS EN 1634-1:2014
Specimen summary	For the purpose of the test the doorsets were referenced Doorset A and Doorset B. **Doorset A** had overall dimensions of 2080 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 932 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges. The leaf was mounted in a softwood frame on three steel hinges, such that it opened towards the heating conditions of the test. The doorset was latched for the duration of the test and incorporated the following hardware:

Item Number	Description	Reference
7	Mortice sashlock	SL27024S728
9	Cylinder with thumb turn	333K1

Doorset B: had overall dimensions of 2085 mm high by 1010 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 932 mm wide by 54 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges. The leaf was mounted in a hardwood frame on three steel hinges, such that it opened towards the heating conditions of the test. The doorset was latched for the duration of the test and incorporated the following hardware:

Test Report Reference 379807

Item Number	Description	Reference
7	Mortice sashlock	SL27024S728
10	Cylinder with thumb turn	333K2C

The test was discontinued after a period of 65 minutes.

Warrington Fire Research Centre sample selected the locksets on the 16th Jan 2017.

Test results

	Doorset A	Doorset B
Integrity	36 minutes	61 minutes
Insulation	36 minutes	61 minutes

Test Report Reference WF 383342

Report sponsor	Allgood.
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	30th May 2017
Test standard	BS EN 1634-1:2014

Specimen summary

For the purpose of the test the doorsets were referenced **Doorset A** and **Doorset B**.

Doorset A had overall dimensions of 2080 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 932 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame. The doorset was installed so that it opened away from the heating conditions of the test and was unlatched for the duration of the test. The Doorset incorporated the following hardware:

Item Number	Description	Reference
6	Allgood mortice latch	FIXX9990
9	Allgood Lever Handleset	SS3510
8 or 7	Allgood Cylinder with thumbturn	XX7419NA/XX7418NA
10	Allgood Hinges	SS97502N
11	Allgood surface mount overhead door closer fitted to the exposed face in parallel arm configuration	9156ADC

Doorset B had overall nominal dimensions 2090 mm high by 1080 mm wide incorporating a door leaf with overall dimensions 2050 mm high by 1024 mm wide by 46 mm thick. The door leaf was formed from 1.5 mm thick galvanised steel facings with a cardboard honeycomb core. The leaf was hung within a profiled steel door frame such that it opened away from the heating conditions of the test. The doorset was unlatched for the duration of the test and incorporated the following hardware:

Item Number	Description	Reference
6	Allgood mortice latch	FIXX9990
9	Allgood Lever Handleset	SS3510
8 or 7	Allgood Cylinder with	XX7419NA/XX7418NA

Test Report Reference WF 383342

	thumbturn	
10	Allgood Hinges	SS97502N
11	Allgood surface mount overhead door closer fitted to the exposed face in parallel arm configuration. Inactive closer also fitted to unexposed face	9156ADC
12	Inactive Allgood closer with projecting arm fitted to unexposed face	9451
13	Inactive Allgood closer with parallel arm fitted to unexposed face	9466
15	Armoured Cable Loop fitted to unexposed face	9471
14	Inactive Allgood Floor Spring	Floor spring: 9431 Cover plate: 9231C

The test was discontinued after a period of 145 minutes.

Warrington Fire Research Centre sample selected the closer on the 23rd March 2017.

Test results

	Doorset A	**Doorset B**
Integrity	36 minutes	22 minutes
Insulation	36 minutes	9 minutes

Test Report Reference 341521

Report sponsor	Confidential – Full details of the original test sponsor are held on file by Warringtonfire. The original report owner has given formal permission for the use of this data in support of this assessment for Allgood.
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	14th July 2014
Test standard	BS EN 1634-1:2014
Specimen summary	For the purposes of the test the doorsets were referenced Doorset A and Doorset B. Doorset A – 30 Minute The Doorset had an overall dimension of 2095 mm high by 995 mm wide and incorporated a door leaf of overall dimensions of 2055 mm high by 925 mm wide and 45 mm thick. The door leaf comprised of a Chipboard core with 7 mm thick hardwood lippings fixed on the vertical edges. The doorset was fitted with lever handles. The door leaf was hung within a softwood door frame on three zinc plated steel hinges. Doorset B – 60 Minute The Doorset had an overall dimension of 2085 mm high by 1010 mm wide and

Test Report Reference 341521

incorporated a door leaf of overall dimensions of 2040 mm high by 935 mm wide and 55 mm thick. The door leaf comprised of a Chipboard core with 7 mm thick hardwood lippings fixed on the vertical edges. The doorset was fitted with a pair of lever handles. The door leaf was hung within a hardwood door frame on three zinc plated steel hinges.

Both doorsets were equipped with "acoustic door closers" fixed on the exposed face, an electric escape sashlock lockset connecting to an concealed wiring loop at mid-height. At the head of both leaves a concealed Shear Magnet was fitted. A magnetic lock plate was also fitted at mid-width and three quarter height of both leaves.

The test was discontinued after a period of 66 minutes.

Warrington Fire Research Centre was not involved in any selection or sampling procedures of the specimen or any of the components.

Test results

	Doorset A	**Doorset B**
Integrity	31 minutes	66 minutes
Insulation	31 minutes	66 minutes

Appendix B - Products not listed within section 3

Signage and Protection Plates

Reference	Description
97947	Allgood Alite® ADFKC 76øx1.2mm 'Automatic Fire Door Keep Clear' Symbol Disc, with screw fixings, stainless steel
97948	Allgood Alite® FDKLS 76øx1.2mm 'Fire Door Keep Locked Shut' Symbol Disc, with screw fixings, stainless steel
97949	Allgood Alite® FDKS 76øx1.2mm 'Fire Door Keep Shut' Symbol Disc, with screw fixings, stainless steel
97950	Allgood Alite® FEKC 76øx1.2mm 'Fire Exit Keep Clear' Symbol Disc, with screw fixings, stainless steel
98947	Allgood Alite® AFDKC 76ø x 1.2mm 'Automatic Fire Door Keep Clear' Symbol Disc, with self adhesive fixing, stainless steel
98948	Allgood Alite® FDKLS 76øx1.2mm 'Fire Door Keep Locked Shut' Symbol Disc, with self adhesive fixing, stainless steel
98949	Allgood Alite® FDKS 76øx1.2mm 'Fire Door Keep Shut' Symbol Disc, stainless steel
98950	Allgood Alite® FEKC 76ø x1.2mm 'Fire Exit Keep Clear' Symbol Disc, with self adhesive fixing, stainless steel
CF8547	Allgood Hardware 76mm circular 'Automatic fire door keep clear' symbol, self adhesive signage, carbon fibre
CF8548	Allgood Hardware 76mm circular 'Fire door keep locked' symbol, self adhesive signage, carbon fibre
CF8549	Allgood Hardware 76mm circular 'Fire door keep shut' symbol, self adhesive signage, carbon fibre
CF8550	Allgood Hardware 76ømmx2.5mm 'Fire exit keep clear' pictogram self adhesive signage, carbon fibre
8447	Allgood Hardware 76mm circular 'Automatic fire door keep clear' symbol, stainless steel
8448	Allgood Hardware 76mm circular 'Fire door keep locked' symbol, stainless steel
8449	Allgood Hardware 76mm circular 'Fire door keep shut' symbol, stainless steel
8450	Allgood Hardware 76ømmx2.5mm 'Fire exit keep clear' signage with torx screw fixings, stainless steel
8547	Allgood Hardware 76mm circular 'Automatic fire door keep clear' symbol, self adhesive, stainless steel
8548	Allgood Hardware 76mm circular 'Fire door keep locked' symbol, self adhesive, stainless steel
8549	Allgood Hardware 76mm circular 'Fire door keep shut' symbol, self adhesive, stainless steel
8550	Allgood Hardware 76ømmx2.5mm 'Fire exit keep clear' pictogram self adhesive signage, stainless steel
8447S	Allgood Hardware AFDKC 50mm diameter circular 'Automatic fire door keep clear' symbol, self adhesive fixed, stainless steel
8448S	Allgood Hardware FDKL 50mm diameter Circular 'Fire Door Keep Locked' symbol, 1.2mm thickness, self adhesive fixed, Stainless Steel
8449S	Allgood Hardware FDKS 50mm diameter Circular 'Fire Door Keep Shut' symbol, 1.2mm thickness, self adhesive fixed, stainless steel
FB-FDKS500	Allgood Hardware 'Fire Door Keep Shut' sign. Grade 316 Satin Stainless Steel. -Torx screw fixing, stainless steel
HO8847	Allgood Holt® 76øx2mm 'Automatic fire door keep clear' signage disc with self-adhesive fixing. Crafted in the UK from oak
HO8848	Allgood Holt® 76øx2mm 'Fire door keep locked' signage disc with self-adhesive fixing. Crafted in the UK from oak
HO8849	Allgood Holt® 76øx2mm 'Fire door keep shut' signage disc with self-adhesive fixing. Crafted in the UK from oak
97665	Allgood Alite® Kick plate Stainless steel (Grade 304)
98665	Allgood Alite® Kick plate Stainless steel (Grade 430)
6851	Allgood Hardware kicking plate - Stainless Steel (Grade 304)
6854	Allgood Hardware Satin Stainless Kick plate (Grade 316)
2910	Allgood Hardware 75x36x1.2mm self adhesive numeral '0', stainless steel
2911	Allgood Hardware 75x36x1.2mm self adhesive numeral '1', stainless steel
2912	Allgood Hardware 75x36x1.2mm self adhesive numeral '2', stainless steel

2913	Allgood Hardware 75x36x1.2mm self adhesive numeral '3', stainless steel
2914	Allgood Hardware 75x36x1.2mm self adhesive numeral '4', stainless steel
2915	Allgood Hardware 75x36x1.2mm self adhesive numeral '5', stainless steel
2916	Allgood Hardware 75x36x1.2mm self adhesive numeral '6', stainless steel
2917	Allgood Hardware 75x36x1.2mm self adhesive numeral '7', stainless steel
2918	Allgood Hardware 75x36x1.2mm self adhesive numeral '8', stainless steel
2919	Allgood Hardware 75x36x1.2mm self adhesive numeral '9', stainless steel
97663	Allgood Alite® 330x76x1.6mm Push Plate, with radiused corners (Grade 304) stainless steel
97664	Allgood Alite® 450x76x1.6mm Push Plate, with radius corners (Grade 304) stainless steel
97666	Allgood Alite® 700x76x1.6mm Push Plate, with radiused corners (Grade 304) stainless steel
CF6801G	Allgood Hardware 450x76x1mm Push Plate, self adhesive fixing, Carbon Fibre
CF6801GX	Allgood Hardware 450x100x1mm Push Plate, self adhesive fixing, Carbon Fibre
CF6801K	Allgood Hardware 700x100x1mm Push Plate, self adhesive fixing, Carbon Fibre
CS6805G	Allgood Contego® 450x76x0.7mm self adhesive push plate formed from Contego® anti-microbial material
CS6806K	Allgood Contego® 700x100x0.7mm self adhesive push plate formed from Contego® anti-microbial material
FB-PP501	Allgood Contego® 700x100x0.7mm self adhesive push plate formed from Contego® anti-microbial material
XX6801A	Continental 330mm x 75mm x 2mm Push Plate, brass
XX6801G	Continental 430mm x 75mm x 2mm Push Plate, brass
6801G	Allgood Modric® 450x76x1.5mm Push Plate (Grade 316) stainless steel
6801K	Allgood Modric® 700x100x1.5mm Push Plate (Grade 316) stainless steel
6801M	Allgood Modric® 1000x100x1.5mm Push Plate, (Grade 316) stainless steel
6801S	Allgood Modric® 1300x100x1.5mm Push Plate. (Grade 316) stainless steel
6801X	Allgood Modric® Push Plate. Grade 316 satin stainless steel
6802G	Allgood Modric® 450x100x2.5mm push plate with 6mm radiused corners (Grade 316) stainless steel
6802K	Allgood Modric® 700x100x2.5mm push plate with 6mm radiused corners (Grade 316) stainless steel
6802M	Allgood Modric® 1,000x100x2.5mm push plate with 6mm radiused corners (Grade 316) stainless steel
6802S	Allgood Modric® 1300x100x2.5mm Push Plate, with 6mm radiused corners (Grade 316) stainless steel
97932	Allgood Alite® 76øx1.2mm 'Male' Symbol Disc, with screw fixings, stainless steel
97933	Allgood Alite® 76øx1.2mm 'Female' Symbol Disc, with screw fixings, stainless steel
97934	Allgood Alite® 76øx1.2mm 'Unisex' Symbol Disc, with screw fixings, stainless steel
97935	Allgood Alite® 76øx1.2mm 'Disabled' Symbol Disc, with screw fixings, stainless steel
97936	Allgood Alite® 76ø x1.2mm 'Ambulant' Symbol Disc, with screw fixings, stainless steel
97951	Allgood Alite® 76øx1.2mm 'WC' Symbol Disc, with screw fixings, stainless steel
97952	Allgood Alite® 76øx1.2mm 'PUSH' Symbol Disc, with screw fixings, stainless steel
97953	Allgood Alite® 76øx1.2mm 'PULL' Symbol Disc, with screw fixings, stainless steel
97954	Allgood Alite® 76øx1.2mm 'Staff' Symbol Disc, with screw fixings, stainless steel
97955	Allgood Alite® 76øx1.2mm 'Cleaners' Symbol Disc, with screw fixings, stainless steel
97956	Allgood Alite® 76øx1.2mm 'Shower' Symbol disc, with screw fixings, stainless steel
97957	Allgood Alite® 76øx1.2mm 'Baby Change' Symbol Disc, with screw fixings, stainless steel
97959	Allgood Alite® 76ø x1.2mm 'First Aid' Symbol Disc, with screw fixings, stainless steel
97961	Allgood Alite® 76øx1.2mm circular 'Gender Neutral' symbol, with screw fixings, stainless steel

97962	Allgood Alite® 76øx1.2mm 'Multi Faith & Prayer Room' signage with screw fixings, stainless steel
98932	Allgood Alite® 76øx1.2mm 'Male' Symbol Disc, with self adhesive fixing, stainless steel
98933	Allgood Alite® 76øx1.2mm 'Female' Symbol Disc, with self adhesive fixing, stainless steel
98934	Allgood Alite® 76øx1.2mm 'Unisex' Symbol Disc, with self adhesive fixing, stainless steel
98935	Allgood Alite® 76øx1.2mm 'Disabled' Symbol Disc, with self adhesive fixing, stainless steel
98936	Allgood Alite® 76øx1.2mm 'Ambulant' Symbol Disc, with self adhesive fixing, stainless steel
98951	Allgood Alite® 76mmø x 1.2mm 'WC' Symbol Disc, with self adhesive fixing, stainless steel
98952	Allgood Alite® 76mmø x 1.2mm 'PUSH' Symbol Disc, with self adhesive fixing, stainless steel
98953	Allgood Alite® 76mmø x 1.2mm 'PULL' Symbol Disc, with self adhesive fixing, stainless steel
98954	Allgood Alite® 76ø x1.2mm 'Staff' Symbol Disc, with self adhesive fixing, stainless steel
98955	Allgood Alite® 76ø x 1.2mm 'Cleaners' Symbol Disc, with self adhesive fixing, stainless steel
98956	Allgood Alite® 76ø x 1.2mm 'Shower' Symbol Disc, with self adhesive fixing, stainless steel
98957	Allgood Alite® 76ø x 1.2mm 'Baby Change' Symbol Disc, with self adhesive fixing, stainless steel
98959	Allgood Alite® 76ø x 1.2mm 'First Aid' Symbol Disc, with self adhesive fixing, stainless steel
98962	Allgood Alite® 76øx1.2mm 'Multi faith & prayer room' signage, self adhesive fixed, stainless steel
CF8532	Allgood Hardware 76mm circular 'Male' self adhesive symbol, carbon fibre
CF8533	Allgood Hardware 76mm circular 'Female' self adhesive symbol, carbon fibre
CF8534	Allgood Hardware 76mm circular 'Unisex' self adhesive symbol, carbon fibre
CF8535	Allgood Hardware 76mm circular 'Disabled' symbol, self adhesive, carbon fibre
CF8536	Allgood Hardware 76ømmx2.5mm 'Ambulant' pictogram self adhesive signage, carbon fibre
CF8552	Allgood Hardware 76ømmx2.5mm 'Multi faith & prayer room' signage, self adhesive fixed, carbon fibre
CF8554	Allgood Hardware 76ømmx2.5mm 'Staff', self adhesive signage, carbon fibre
CF8555	Allgood Hardware 76ømmx2.5mm 'Cleaners - Mop & Bucket graphic', sign self adhesive signage, carbon fibre
CF8556	Allgood Hardware 76ømmx2.5mm 'Shower' pictogram signage, sign self adhesive signage, carbon fibre
CF8557	Allgood Hardware 76ømmx2.5mm 'Baby Change' pictogram sign, self adhesive signage, carbon fibre
CF8558	Allgood Hardware 76ømmx2.5mm 'Cloakroom' pictogram self adhesive signage, carbon fibre
HO8832	Allgood Holt® 76øx2mm 'male' pictogram signage disc with self-adhesive fixing. Crafted in the UK from oak
HO8833	Allgood Holt® 76øx2mm 'female' pictogram signage disc with self-adhesive fixing. Crafted in the UK from oak
HO8834	Allgood Holt® 76øx2mm 'disabled' pictogram signage disc with self-adhesive fixing. Crafted in the UK from oak
HO8835	Allgood Holt® 76øx2mm 'unisex' pictogram signage disc with self-adhesive fixing. Crafted in the UK from oak
HO8857	Allgood Holt® 76øx2mm 'baby change' pictogram signage disc with self-adhesive fixing. Crafted in the UK from oak
8431	Allgood Modric® 76mmx2mm circular Gender Neutral symbol with torx screw fixings, stainless steel
8432	Allgood Modric® 76mmx2mm circular Male symbol, stainless steel
8433	Allgood Modric® 76mm circular Female symbol, stainless steel
8434	Allgood Modric® 76mm circular Unisex symbol, stainless steel
8435	Allgood Modric® 76mm circular wheelchair accessible toilet symbol, stainless steel
8436	Allgood Modric® 76mm Circular 'Ambulant' symbol, stainless steel
8451	Allgood Modric® 76ømmx2.5mm 'WC' signage with torx screw fixings, stainless steel
8452	Allgood Modric® 76ømmx2.5mm 'Multi Faith & Prayer Room' signage with torx screw fixings, stainless steel
8454	Allgood Modric® 76ømmx2.5mm 'Staff' signage with torx screw fixings, stainless steel
8455	Allgood Modric® 76ømmx2.5mm 'Cleaners - Mop & Bucket graphic' sign with torx screw fixings, stainless steel

8456	Allgood Modric® 76mm circular 'shower' symbol, stainless steel
8457	Allgood Modric® 76mm circular 'Baby Change' symbol, stainless steel
8458	Allgood Modric® 76mm circular 'Cloakroom' symbol, stainless steel
8459	Allgood Modric® 76mm 'First Aid' circular symbol, stainless steel
8532	Allgood Modric® 76mm circular 'Male' self adhesive symbol, stainless steel
8533	Allgood Modric® 76mm circular 'Female' self adhesive symbol, stainless steel
8534	Allgood Modric® 76mm circular 'Unisex' self adhesive symbol, stainless steel
8535	Allgood Modric® 76mm circular 'Disabled' symbol, self adhesive signage, stainless steel
8536	Allgood Modric® 76ømmx2.5mm 'Ambulant' pictogram self adhesive signage, stainless steel
8552	Allgood Modric® 76ømmx2.5mm 'Multi faith & prayer room' signage, self adhesive fixed, stainless steel
8554	Allgood Modric® 76ømmx2.5mm 'Staff' self adhesive signage, stainless steel
8555	Allgood Modric® 76ømmx2.5mm 'Cleaners - Mop & Bucket graphic' sign self adhesive signage, stainless steel
8556	Allgood Modric® 76ømmx2.5mm 'Shower' pictogram self adhesive signage, stainless steel
8557	Allgood Modric® 76ømmx2.5mm 'Baby Change' pictogram self adhesive signage, stainless steel
8558	Allgood Modric® 76ømmx2.5mm 'Cloakroom' pictogram self adhesive signage, stainless steel

Escutcheons, indicators & WC sets

Reference	Description
5001A	Allgood Hardware 75x45x35mm indicating bolt inside only, satin stainless
8	Allgood Modric® 76x38x3mm rectangular cylinder pull for euro profile cylinder, grade 316, satin stainless
98008SSN	Allgood Alite® Cylinder Pull, for euro profile cylinder, satin stainless
CS8	Allgood Contego® 76x38x3mm rectangular cylinder pull for euro profile cylinder, formed from Contego® anti-bacterial copper alloy
796	Allgood Modric® 47x3mm circular escutcheon for euro profile cylinder, grade 316, satin stainless
797	Allgood Mode® 50 x 50 x 4mm square escutcheon for Euro profile cylinders, grade 316, satin stainless
97876	Allgood Alite® Cylinder Rose, 50mm diameter concealed with screw fixings, satin stainless steel
97879	Allgood Hardware 62x32.5x4mm Narrow Stile Euro Profile Cylinder Escutcheon with, concealed fixings, satin stainless steel
2155Q	Allgood Hardware 50mm diameter Escutcheon, concealed fixing, for lever locks, satin stainless steel
2157Q	Allgood Hardware 50mm diameter Circular Covered Escutcheon, with swing cover, suitable for lever key locks, satin stainless steel
761Q	Allgood Modric® 50x3mm circular covered disc - multi purpose, satin stainless
796Q	Allgood Modric® 50x4mm Circular Escutcheon for Euro Profile Cylinder, grade 316, satin stainless steel
796QT	Allgood Modric® 50x2.5mm Circular Escutcheon for Euro Profile Cylinder, face fixed with visible torx fixings, satin stainless steel
798Q	Allgood Hardware 65x30x4mm Narrow Stile Rose for Cylinders, grade 316, satin stainless steel
CS761Q	Allgood Modric® 50x3mm circular covered disc - multi purpose, formed from Contego® anti-microbial material
CS796Q	Allgood Contego® 50x4mm Circular Escutcheon for Euro Profile Cylinder, formed from Contego® anti-microbial material
FB-ESC501	Allgood Contego® 50x4mm Circular Escutcheon for Euro Profile Cylinder, formed from Contego® anti-microbial material
XX796Q	Allgood Continental® 50x4mm Circular Escutcheon for Euro Profile Cylinder
779Q	Allgood Modric® 50x4mm Circular Indicator rose, with emergency release, satin stainless steel
786Q	Allgood Modric® 50x3mm Circular Covered rose, with emergency release only, satin stainless steel
CS779ASS	Allgood Modric® 50x3mm Circular Indicator rose, with emergency release, for use with Lift to lock assemblies only, formed from Contego® anti-bacterial copper alloy
CS779Q	Allgood Contego® 50x3mm Circular Indicator rose, with emergency release, formed from Contego® anti-bacterial copper alloy

SS779ASS	Allgood Modric® 50x3mm Circular Indicator rose, with emergency release, for use with Lift to lock assemblies only, satin stainless steel
786	Allgood Modric® 47x3mm circular covered rose with emergency release only, grade 316, satin stainless steel
13010	Allgood Hardware 50mm diameter toilet door set with inside grip handle for accessible use, satin stainless steel
97873	Allgood Alite® 'easy operation' Turn & Indicator Release Set, on covered 50mm diameter roses with 8mm spindle & back to back fixings, satin stainless steel
97874	Allgood Alite® W/C turn, easy operation large turn & indicator release set, on 50mm diameter concealed fixing rose, satin stainless steel
771/2570	Allgood Mode® 50 x 50mm Square rose and disabled WC Turn for bathroom locks, c/w external release/indicator, grade 316, satin stainless steel
771/2579	Allgood Mode® 50 x 50mm Square Rose and WC turn for bathroom locks, c/w external release/indicator, grade 316, satin stainless steel
771Q2529	Allgood Modric® 37x17x18mm WC Turn on 50mmø x 4mm rose, complete with emergency release rose with indicator, satin stainless steel
771Q2529NI	Allgood Modric® 37x17x18mm WC Turn on 50mmø x 4mm rose, complete with emergency release rose without indicator satin stainless steel, NO INDICATOR
771Q2529S	Allgood Modric® 37x17x18mm WC Turn on 50mmø x 4mm rose, complete with emergency release rose with hexagon socket emergency release indicator, satin stainless steel
771Q2529T	Allgood Modric® 50mm dia x 3mm rose and WC turn for bathroom locks, complete with external release/indicator, face fixed with visible torx fixings, satin stainless steel
771Q2530	Allgood Modric® 50mm dia x 4mm rose and disabled WC turn for bathroom locks, complete with external release/indicator, grade 316, satin stainless steel
771Q2530NI	Allgood Modric® 67x17x18mm WC Disabled Turn, on 50mmø x 4mm rose, complete with emergency release rose without indicator, grade 316, satin stainless steel, NO INDICATOR
771Q2530S	Allgood Modric® 50mm dia x 4mm Rose and disabled WC turn for bathroom locks, complete with hexagon socket emergency release external release/indicator, grade 316, satin stainless steel
771Q2530T	Allgood Modric® 50mm dia x 3mm Rose and disabled WC turn for bathroom locks, complete with external release/indicator, face fixed with visible torx fixings, grade 316, satin stainless steel
771Q2531	Allgood Sembla® 50mm dia x 4mm rose and WC turn for bathroom locks, complete with external release/indicator, satin stainless steel
771Q2531NI	Allgood Sembla® 50øx4mm Inside Turn on concealed fixing rose, complete with external release/no indicator, grade 316, satin stainless steel
771Q2532	Allgood Sembla® 50mm dia x 4mm rose and WC turn for bathroom locks, complete with external release/indicator, satin stainless steel
771Q2532CF	Allgood Sembla® 50mm dia x 4mm rose and WC turn for bathroom locks, complete with external release/indicator, carbon fibre & satin stainless steel
771Q2532CFNI	Allgood Sembla® 45x50x4mm Inside Turn on concealed fixing rose, complete with external release/no indicator, grade 316, carbon fibre & satin stainless steel
771Q2532NI	Allgood Sembla® 45x50x4mm Inside Turn on concealed fixing rose, complete with external release/no indicator, grade 316, satin stainless steel
771Q2533K	Allgood Mode® 50mm dia x 4mm rose and WC turn for bathroom locks, complete with external knurled turn release/indicator, grade 316, satin stainless steel
771Q2533KNI	Allgood Mode® 50mm dia x 4mm rose and WC turn for bathroom locks, complete with external knurled turn release/no indicator, grade 316, satin stainless steel
771Q2533KS	Allgood Mode® 50mm dia x 4mm rose and WC turn for bathroom locks, complete with external knurled turn release / complete with emergency release rose with hexagon socket emergency release indicator, grade 316, satin stainless steel
771Q2533KT	Allgood Mode® 50mm dia x 3mm rose and WC turn for bathroom locks, complete with external knurled release/indicator, face fixed with visible torx fixings, satin stainless steel
771Q2534K	Allgood Mode® 50mm dia x 4mm rose and disabled WC turn for bathroom locks, complete with external knurled turn release/indicator, grade 316, satin stainless steel
771Q2534KNI	Allgood Mode® 50mm dia x 4mm rose and disabled WC turn for bathroom locks, complete with external knurled turn release/no indicator, grade 316, satin stainless steel
771Q2534KS	Allgood Mode® 50mm dia x 4mm rose and disabled WC turn for bathroom locks, complete with external knurled turn release / complete with emergency release rose with hexagon socket emergency release indicator, grade 316, satin stainless steel
771Q2534KT	Allgood Mode® 50mm dia x 3mm rose and disabled WC turn for bathroom locks, complete with external knurled release/indicator, face fixed with visible torx fixings, satin stainless steel
97873SSNI	Allgood Alite®37x17x18mm WC turn on 50mmø x 4mm rose, complete with emergency release rose without indicator, satin stainless steel
CS97873S	Allgood Contego® W/C turn, easy operation turn & indicator release set, on 50mm diameter concealed fixing rose, formed from Contego® anti-microbial material
CS97873SNI	Allgood Contego® W/C turn, easy operation turn & 'without indicator' release set, on 50mm diameter concealed fixing rose, formed from Contego® anti-microbial material
CS97874	Allgood Contego® W/C turn, easy operation large turn & indicator release set, on 50mm diameter concealed fixing rose, formed from Contego® anti-microbial material
CS97874D	Allgood Contego® W/C turn, easy operation large turn & indicator release set, on 50mm diameter concealed fixing rose, formed from Contego® anti-microbial material
CS97874DNI	Allgood Contego® W/C turn, easy operation large turn & 'without indicator' release set, on 50mm diameter concealed fixing rose, formed from Contego® anti-microbial material

HO771Q2538	Allgood Holt® 40x22x20mm WC turn, on 50øx4mm satin stainless steel rose, complete with emergency release indicator manufactured from Grade 316 satin stainless steel, crafted in the UK from oak
HO771Q2538NI	Allgood Holt® 40x22x20mm Oak WC turn, on 50mmø x 4mm satin stainless steel rose, complete with emergency release rose without indicator, NO INDICATOR, crafted in the UK from oak
HO771Q2539	Allgood Holt® 68x22x20mm WC disabled turn, on 50øx4mm satin stainless steel rose, complete with emergency release indicator manufactured from Grade 316 satin stainless steel, crafted in the UK from oak
HO771Q2539NI	Allgood Holt® 67x22x20mm Oak WC Disabled turn, on 50mmø x 4mm satin stainless steel rose, complete with emergency release rose without indicator, NO INDICATOR
XX771Q2538	Allgood Continental® Bathroom WC Turn & Emergency Release Set without Indictor
XX771Q2539	Allgood Continental® Bathroom WC Turn & Emergency Release Set with Indictor
AA701	WC Set