

**Title:**

The Fire Resistance  
Performance of  
Timber/Mineral-Based Doorsets  
Incorporating Mechanical  
Digital Pushbutton Locks

**WF Assessment Report No:**

**432751**

**Prepared for:**

**Securefast Plc.**

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**Date:**

19<sup>th</sup> October 2020

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## Foreword

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This assessment report has been commissioned by Securefast Plc. and relates to the fire resistance of mechanical pushbutton locks.

This assessment is for National Application and has been written in accordance with the general principles outlined in BS EN 15725: 2010; Extended application reports on the fire performance of construction products and building elements, as appropriate.

This assessment uses established empirical methods of extrapolation and experience of fire testing similar products, in order to extend the scope of application by determining the limits for the design based on the tested constructions and performances obtained. The assessment is an evaluation of the potential fire resistance performance, if the elements were to be tested in accordance with EN1634.

This assessment has been written using appropriate test evidence generated at a UKAS accredited laboratory to the relevant test standard. The supporting test evidence has been deemed appropriate to support the manufacturer's products and is summarised within the assessment.

The defined scope presented in this assessment report relates to the behaviour of the proposed locks under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the locks in use.

This assessment has been prepared and checked by product assessors with the necessary competence, who subscribe to the principles outlined in the Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence – 2019. 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 in lieu of fire tests for building control and other purposes.

The PFPF guidelines are produced in association with the major fire testing, certification bodies and trade associations in the UK and are published by the PFPF, the representative body for the passive fire protection industry in the UK.

This report is not intended for use in support of EN 15269-2 and EN 15269-3 (Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware.), or CE Marking of Doorset to EN 16034 (Pedestrian doorsets, industrial, commercial, garage doors and openable windows. Product standard, performance characteristics. Fire resisting and/or smoke control characteristics).

## Executive Summary

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**Objective** This report considers the fire resistance performance of single-acting timber/mineral-based doorsets, when fitted with Securefast Plc. mechanical digital pushbutton locks.

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**Summary of Conclusions** Should the recommendations given in this report be followed, it can be concluded that previously fire tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) timber doorsets which have achieved 30 or 60 minutes integrity in accordance with BS 476: Part 22: 1987 or BS EN 1634-1, as discussed in this report, may be fitted with the SBL300, 310, 315, 320, 330, 350 and 365 Series mechanical digital locks, as detailed within this report, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

Additionally should the recommendations given in this report be followed, it can be concluded that previously fire tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) timber doorsets which have achieved 30 minutes integrity in accordance with BS 476: Part 22: 1987 or BS EN 1634-1, as discussed in this report, may be fitted with the SBL700.SFR mechanical digital locks, as detailed within this report, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

This assessment represents our opinion as to the performance likely to be demonstrated on a test in accordance with EN1634-1 or BS EN 1634-1, on the basis of the evidence referred to herein. We express no opinion as to whether that evidence, and/or this assessment, would be regarded by any Building Control authority as sufficient for that or any other purpose. This assessment is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

**Valid until** 19<sup>th</sup> October 2025

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## Introduction

This report considers the fire resistance performance of single-acting timber/mineral-based doorsets, when fitted with the following Securefast mechanical digital locks:

Reference	Description
<b>Fire Rated Mechanical Digital Push Button Locks - Easy Code Change</b>	
<b>SBL315.SFR</b>	Push Button Digital Lock Easy code change with holdback - Satin Chrome
<b>SBL315.BFR</b>	Push Button Digital Lock Easy code change with holdback - Brass
<b>SBL320.SFR</b>	Push Button Digital Lock Easy code change with holdback - Satin Chrome
<b>SBL320.BFR</b>	Push Button Digital Lock Easy code change with holdback - Brass
<b>SBL330.SFR</b>	Push Button Easy Code Plus with Knob - Satin Chrome
<b>SBL330.SLFR</b>	Push Button Easy Code Plus with Lever - Satin Chrome
<b>SBL365.SFR</b>	Push Button Easy Code with Lever, Passage Mode and Tubular Latch - Satin Chrome
<b>SBL700.SFR</b>	Push Button Easy Code Digital Lock with Passage Mode - Satin Chrome
<b>Fire Rated Mechanical Digital Push Button Locks - Traditional Code Change</b>	
<b>SBL300.SFR</b>	Push Button Digital Lock - Satin Chrome
<b>SBL300.BFR</b>	Push Button Digital Lock - Brass
<b>SBL310.SFR</b>	Push Button Digital Lock with holdback - Satin Chrome
<b>SBL310.BFR</b>	Push Button Digital Lock with holdback - Brass
<b>SBL350.BFR</b>	Push Button Digital Lock with Knob and Key Override - Satin Chrome
<b>Fire Rated Mechanical Digital Push Button Locks - Easy Code Change With 72mm Crs Mortice Lock</b>	
<b>SBL365.SLFR/91</b>	Push Button Easy Code with Lever and Sq. End Sash Lock - Satin Chrome
<b>SBL365.SLFR/94</b>	Push Button Easy Code with Lever and Sq. End Night Latch - Satin Chrome
<b>SBL365.SLFR/95</b>	Push Button Easy Code with Lever and Sq. End Escape Sash Lock - Satin Chrome
<b>SBL365.SLFR/91R</b>	Push Button Easy Code with Lever and Rnd End Sash Lock - Satin Chrome
<b>SBL365.SLFR/94R</b>	Push Button Easy Code with Lever and Rnd End N/Latch - Satin Chrome
<b>SBL365.SLFR/95R</b>	Push Button Easy Code with Lever and Rnd End Escape Sash Lock - Satin Chrome

The proposed doorsets are required to provide a fire resistance performance of 30 or 60 minutes integrity, and where applicable insulation, with respect to BS 476: Part 22: 1987 or BS EN 1634-1 when incorporating the proposed hardware.

### FTSG

The data referred to in the supporting data section has been considered for the purpose of this appraisal which has been prepared in accordance with the Fire Test Study Group Resolution No. 82: 2001.

## Assumptions

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**Supporting wall** It is 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.

**Clearance gaps** 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/assessed doorset. In addition, it is assumed that the door leaves will be in the closed and latched position.

**Installation** It is assumed that the doorsets will be installed in a similar manner to that of the previously tested assembly by competent installers.

The locks/latches shall not be fitted higher than 1500 mm from the centre of the tubular latch to the finished floor level of the surrounding floors.

The Securefast fitting instructions and templates shall be followed. Recessing for locks shall result in a tight fit, allowing for any intumescent protection where required.

**Latching** Where a lock considered by this report does not incorporate a self-latching mechanism e.g. deadlocks, 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.

**Doorset details** It is assumed that the proposed hardware will be fitted to timber/mineral-based doorsets which have previously been shown to be capable of providing 30 or 60 minutes integrity and insulation, where applicable, the critical aspects of the door construction are detailed later in this report.

Doorsets to which the hardware may be fitted shall have been previously proven by fire test (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) when incorporating a similarly sized locks, for the relevant 30 or 60 minute integrity performance.

## Proposals

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It is proposed that previously fire tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) timber doorsets which have achieved 30 or 60 minutes integrity and, where applicable, insulation performance, as discussed later in this report, may be fitted with when fitted with Securefast mechanical digital locks in accordance with recommendations given in this report, without detracting from the overall performance of the doorset.

It is also proposed that the doorsets may be of single or double-leaf configuration.

## Basic Test Evidence

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### WF Test Report No. 322545

The test referenced WF Test Report No. 322545 and briefly described in the supporting data section of this report, describes a test conducted in accordance with BS EN 1634-1:2008 which included 2No. single-action, single-leaf, timber-based doorsets.

The test demonstrated the ability of the doorsets to provide 44 minutes and 63 minutes integrity performances.

### WF Test Report No. 417165

2No. simulated timber doorsets incorporating a range of hardware were subjected to a test which utilised the heating and pressure conditions given in BS EN 1634-1:2014 + A1:2018, to determine its fire resistance performance.

The test demonstrated the ability of the doorsets to provide 43 and 45 minutes integrity and insulation performances for doorsets A and B respectively.

### WF Test Report No. 419607

The test referenced WF Test Report No. 419607 and briefly described in the supporting data section of this report, describes a test conducted in accordance with BS EN 1634-1:2014 + A1:2018 which included 2No. single-action, single-leaf, timber-based doorsets.

The test demonstrated the ability of both doorsets to provide 38 minutes integrity performances.

### WF Test Report No. 422969

The test referenced WF Test Report No. 422969 and briefly described in the supporting data section of this report, describes a test conducted in accordance with BS EN 1634-1:2014 + A1:2018 which included 2No. single-action, single-leaf, timber-based doorsets.

The test demonstrated the ability of the doorsets to provide 48 and 55 minutes integrity performances for doorsets.

### WF Assessment Report No. 432749

This report presents an appraisal of the fire resistance performance of single-action timber/mineral-based, when fitted with SEU1090 Series mortice locks and accessories. The doorset, onto which the proposed hardware is to be fitted, may be of single-leaf or double-leaf configuration.

## Assessed Performance

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### Mechanical Pushbutton locks

#### Tubular Latch

The test detailed in the report referenced WF No. 322545 included timber based doorsets considered typical of 30 minute and 60 minute constructions. Both doorsets were fitted with two examples of the range of SBL digital locks considered by this report, fitted in conjunction with a 60 mm backset tubular mortice latch typical to much of the range.

Doorset A included a single acting, single leaf doorset with a 44 mm thick multi-layered chipboard door with 6 mm thick hardwood lippings. The leaf was hung within a softwood frame which incorporated a single 15 x 4 mm perimeter intumescent fire seal and opened towards the heating conditions.

Doorset B included in test WF Report No. 422969 was a single acting, single leaf doorset with a 54 mm thick multi-layered chipboard door with 6 mm thick hardwood lippings. The leaf was hung within a hardwood frame which incorporated 2No. 15 x 4 mm perimeter intumescent fire seals set 9 mm apart. The door opened towards the heating conditions.

Both doorsets were fitted with a Securefast tubular latch with a 57.5 mm high x 30 mm wide square forend, a 70 mm x 22 mm diameter case, with a 70 mm high x 42 mm wide strikeplate, including a 34 x 14 mm latchbolt lip. One set at approximately 1350 mm from the bottom of the door to the latchbolt, and the other approximately 950 mm from the bottom of the door to the latchbolt. The latchbolts was engaged for the test duration.

The pushbutton units and handle models included in the doorsets were the SBL330 SL (top) and the SBL365 (bottom) in both doorsets, with the keypads to the unexposed face and handles to exposed face.

In both doorsets the latch assemblies were provided with intumescent protection in the form of 1 mm thick Interdens sheet wrapping the latch body and backing the latch forend and strike plate. Additionally the perimeter intumescent fire seals within Doorset B by-passed the strikeplate by approximately 5 mm on either side, except at the latchbolt lip.

Review of the observations included in the test report shows that in both cases no instance of integrity failure was attributed to the presence or performance of the locksets fitted to either doorset.

Failure of the 30 minute doorset, Doorset A, occurred after a period of 44 minutes and was attributed to sustained flaming at the base of the door leaf. The doorset was sealed off at this time to allow the continuation of the test for the 60 minute doorset.

Failure of the 60 minute doorset, Doorset B, occurred after a period of 63 minutes and was attributed to sustained flaming at the head of the door leaf. The test was allowed to continue until 68 minutes at which time it was discontinued with no instance of integrity failure at the position of either of the locksets fitted to the door.

The data generated by the test has therefore demonstrated that the tested 60 mm backset tubular latch provide sufficient restraint for doors without self-closing and are capable of being fitted to 30 and 60 minute timber based doorsets without detriment to the performance of the doorset for periods well in excess of the 30 and 60 minute performances required.

The minimum intumescent protection for these locks shall be:

- 30 minutes - 1 mm thickness of Interdens Mono Ammonium Phosphate intumescent to all faces of the lockcase, 1 mm thickness of the same material is provided behind the forend, and behind the strike plate.
- 60 minutes - 1 mm thickness of Interdens Mono Ammonium Phosphate intumescent to all faces of the lockcase, 1 mm thickness of the same material is provided behind the forend, and behind the strike plate.



- 60 minutes - Additionally the perimeter intumescent within the frame/door edge shall by-pass the strike plate or forend by a minimum of 5 mm wide on each side (with the exception of the latchbolt lead where present)

### SBL300, 310, 315, 330 & 350 Series

The SBL330.SL pushbutton units and handles included in test WF No. 322545 had overall unit dimensions of 142 mm high x 41 mm wide x 65 mm deep and a neoprene base seal to both sides, with the keypad to the unexposed face and handles to exposed face.

Additional testing as identified in WF Report No. 417165 was undertaken to evaluate the SBL330.SL with the keypad to the exposed face and handle to unexposed face. The testing was small-scale testing of simulated 30 minute and 60 minute doorsets, with the specification of the simulated doorsets as that tested full-scale under WF Report No. 422969, including the tubular set at an approximate simulated 1500 mm from the bottom of the door.

On reviewing the observations taken from the tests report, it's clear that there were no integrity failures associated with the SBL330.SL locksets fitted:

- Doorset A (E30) – No failure of the SBL330.SL lockset for a test duration of 46 minute, at which time the doorset was blanked off to allow the testing of the Doorset B (E60) to continue.
- Doorset B (E60) – No failure of the SBL330.SL lockset for the test duration of 66 minute, at which time the test was terminated.

Therefore it would be reasonable to conclude that should SBL330 digital mechanical pushbutton units, handles and tubular latches be incorporated within a 30 minute or 60 minute timber/mineral-based doorset it would not have a detrimental impact on the fire resisting performance.

### Alternative models

The SBL330.SL was selected for the test on the basis that it was considered to be representative of the smaller locks to be considered from the SBL range which share overall unit dimensions of 142 mm high x 41 mm wide x 65 mm deep with a neoprene base seal to both sides. The model is a lever operated unit including 'Easy Code' and 'No Feel' functions. Whilst these functions have no bearing on the potential fire performance, the model was chosen as this had the deepest case at 65 mm rather than the 38 mm depth for the rest of this group.

All models require the same door leaf preparation in terms of through holes in the door leaf comprising a single 10 mm diameter hole for the 8 mm spindle, two 7 mm diameter holes for the lock fixing bolts and a single 6 mm diameter hole for the lock support post, the position of which is determined by the selected handing of the lock.

Given the similarities of the models and that they all share identical fixing and door preparation requirements to that of the tested SBL330 SL, the proposed SBL300, 310, 315, 330 & 350 Series are all positively appraised.

### SBL365.SFR & Tubular Latches

The SBL365.SFR pushbutton units and handles included in test WF No. 322545 had overall unit dimensions of 178 mm high x 48 mm wide x 90 mm deep and a neoprene base seal to both sides, with the keypad to the unexposed face and

handles to exposed face.

The door leaf preparation for this model comprises of a single 19 mm diameter hole for spindle and two 7 mm diameter holes for the lock fixing bolts.

Additional testing as identified in WF Report No. 417165 was undertaken to evaluate the SBL365.SFR with the keypad to the exposed face and handle to unexposed face. The testing was small-scale testing of simulated 30 minute and 60 minute doorsets, with the specification of the simulated doorsets as that tested full-scale under WF Report No. 422969, including the tubular set at an approximate simulated 1500 mm from the bottom of the door.

On reviewing the observations taken from the tests report, it's clear that there were no integrity failures associated with the SBL365.SFR locksets fitted:

- Doorset A (E30) – No failure of the SBL365.SFR lockset for a test duration of 46 minute, at which time the doorset was blanked off to allow the testing of the Doorset B (E60) to continue.
- Doorset B (E60) – Cotton pad failure of the SBL365.SFR lockset was recorded at 61 minute.

Therefore it would be reasonable to conclude that should SBL365.SFR digital mechanical pushbutton units, handles and tubular latches be incorporated within a 30 minute or 60 minute timber/mineral-based doorset it would not have a detrimental impact on the fire resisting performance.

### SBL365.SFR & SEU1090 Series Mortice Locks

It is further proposed that the SBL365.SFR pushbutton units and handles may operate in conjunction with the SEU1090 series mortice locks. The pushbutton units and handles have not previously been tested with an upright mortice lock.

The performance of the SEU1090 series mortice locks within single-action, single-leaf and double-leaf, timber/mineral-based doorsets of up to 60 minutes integrity performance has been assessed previously with Securefast Plc report WF 432749, and this report should be referred to when considering this combination.

WF Assessment Report No. 432749 concluded that should the recommendations given in this report be followed, the SEU1090 Series mortice locks and accessories as detailed within this report may be fitted to previously tested or assessed (by Warringtonfire, BM TRADA or Chiltern International Fire) single-action, single-leaf and double-leaf, timber/mineral-based doorsets to provide up to 60 minutes integrity performance, without detracting from the overall performance of the doorset, with respect to EN 1634-1 or BS 476: Part 22: 1987.

An important requirement of this appraisal identified that the minimum intumescent protection for these locks shall be:

- 30 minutes - 1 mm thickness of Interdens Mono Ammonium Phosphate intumescent to all faces of the lockcase, 1 mm thickness of the same material is provided behind the forend, and behind the strike plate.
- 60 minutes - 2 mm thickness of Interdens Mono Ammonium Phosphate intumescent to all faces of the lockcase, 2 mm thickness of the same material is provided behind the forend, and behind the strike plate.

- 60 minutes - Additionally the perimeter intumescent within the frame/door edge shall by-pass the strike plate or forend by a minimum of 8 mm wide on each side (with the exception of the latchbolt lead where present)

Although the SBL365.SFR pushbutton units and handles have not previously been tested with an upright mortice lock the only difference between the standard door face preparations for the SEU1090 Series with a lever handle and the proposed SBL365.SFR is a slightly larger spindle hole - 19 mm diameter as opposed to a standard 15 mm diameter.

This larger spindle hole would have been tested with the tubular latch, and this can be potentially considered to be a more onerous combination as the interaction between the tubular latch mortice and spindle hole results in the spindle hole being very close to the edges of the latch mortice; whereas with the upright mortice lock only a small additional portion of the lockcase is exposed, and this is fully protected by intumescent sheet material.

It is therefore reasonable to assume that this combination will not have a detrimental impact on the performance of the doorsets.

It is consequently concluded that should SBL365.SFR digital mechanical pushbutton units, handles and the SEU1090 series mortice locks be incorporated within a 30 minute or 60 minute timber/mineral-based doorset it would not have a detrimental impact on the fire resisting performance.

### SBL320 Series

The SBL320 has overall unit dimensions of 158 mm high x 45 mm wide x 44 mm deep with a neoprene base seal to both sides. The door leaf preparation for this model comprises of a single 10 mm diameter hole for the 8 mm spindle, two 7 mm diameter holes for the lock fixing bolts and a single 6 mm diameter hole for the lock support post, the position of which is determined by the selected handing of the lock.

The SBL320 Series pushbutton units and handles incorporate the same tubular latch included in the 30 minute and 60 minute timber doorsets in test WF No. 322545, therefore the ability of these latches to retain the door has already been established.

Additional testing as identified in WF Report No. 417165 was undertaken to evaluate the SBL320.SFR with the keypad and handle from both directions. The testing was small-scale testing of simulated 30 minute and 60 minute doorsets, with the specification of the simulated doorsets as that tested full-scale under WF Report No. 422969, including the tubular latch set at an approximate simulated 1650 mm from the bottom of the door.

On reviewing the observations taken from the tests report, it's clear that there were no integrity failures associated with the SBL320.SFR locksets fitted:

- Doorset A (E30)
  - Cotton pad failure of the SBL320.SFR lockset with keypad to the exposed face at 46 minute.

- No failure of the SBL320.SFR lockset with keypad to the exposed face for a test duration of 46 minute, at which time the doorset was blanked off to allow the testing of the Doorset B (E60) to continue.
- Doorset B (E60)
  - Sustained flaming failure of the SBL320.SFR lockset with keypad to the exposed face at 63 minute.
  - No failure of the SBL320.SFR lockset with keypad to the unexposed face for the test duration of 66 minute, at which time the test was terminated.

Therefore it would be reasonable to conclude that should SBL320.SFR digital mechanical pushbutton units, handles and tubular latches be incorporated within a 30 minute or 60 minute timber/mineral-based doorset it would not have a detrimental impact on the fire resisting performance.

### SBL700.SFR

The SBL700.SFR has overall unit dimensions of 175 mm high x 65 mm wide x 36 mm deep and neoprene base seal both sides. The door leaf preparation for this model comprises of a single 35 mm high x 25 mm wide hole for the spindle, two 7 mm diameter holes for the lock fixing bolts and a single 6 mm diameter hole for code change rod.

The SBL700.SFR pushbutton units and handles incorporate the same tubular latch included in the 30 minute and 60 minute timber doorsets in test WF No. 322545, therefore the ability of these latches to retain the door has already been established.

Additional testing as identified in WF Report No. 419607 was undertaken to evaluate the SBL700.SFR with the keypad and handle from both directions on 30 minute timber-based doorsets.

Both Doorset A and Doorset B included in test WF Report No. 419607 were single acting, single leaf doorsets with a 44 mm thick multi-layered chipboard doors with 8 mm thick hardwood lippings. Each leaf was hung within a softwood frame which incorporated a single 15 x 4 mm perimeter intumescent fire seal.

Both doorsets were fitted with SBL700.SFR pushbutton units and handles and incorporate the same tubular latch set 1280 mm from the bottom of the door to the centre of the latchbolt. The latchbolt was disengaged in both doorsets for the test duration.

Doorset A opened towards the heating conditions with the keypad on the unexposed face and handle on the exposed face, whilst Doorset B opened away from the heating conditions with the keypad on the exposed face and handle on the unexposed face.

In both doorsets the latch assemblies were provided with intumescent protection in the form of 1 mm thick Interdens sheet wrapping the latch body and backing the latch forend and strike plate.

On reviewing the observations taken from the test report, the test was terminated at 38 minutes with no integrity failures of either doorset.

Therefore it would be reasonable to conclude that should SBL700.SFR digital mechanical pushbutton units, handles and tubular latches be incorporated within a 30 minute timber/mineral-based doorset it would not have a detrimental impact on the fire resisting performance.

### Required Doorset specifications

As stated in this report, the doorset, in the required configuration, will be previously tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) and its performance is therefore not in doubt.

To enable the use of the door hardware discussed on a range of doorsets, it is necessary to address the available information on the proposed doorset. As this appraisal is intended to be used on a general basis and not restricted to any particular manufacturer of fire resisting doorsets, the following points are given to enable the locksets to be used safely:

#### Proposed 30 and 60 Minute Timber/Mineral Based Doorsets

- a) The doorset shall carry valid certification or the doorset, including the door frame and associated ironmongery should have achieved 30 or 60 minutes integrity and where applicable insulation, when tested by a UKAS approved laboratory (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) to EN 1634-1 or BS 476: Part 22: 1987.
- b) If the proposed doorset is to be used in double-leaf configuration the test or assessment evidence should be applicable to double-leaf configuration.
- c) The leaves of the proposed doorset shall be of a minimum thickness of 44 mm for 30 minute doorsets and 54 mm for 60 minute doorsets.
- d) The leaves should incorporate hardwood lippings of a minimum thickness of 6 mm and minimum density  $640\text{kg/m}^3$ .
- e) Door frame density -  $450\text{ kg/m}^3$  for 30 minute doorsets and  $640\text{ kg/m}^3$  for 60 minute doorsets.
- f) Door leaves of solid lignocellulosic construction in the lock, keypad and handle area, encompassing the entire footprint of the lock, keypad and handle.

Additionally, the amount of interruption to the intumescent seal specification at the door leaf to frame perimeter clearance gaps should be replicated, or less than that that originally specified for the tested doorset.

## Conclusions

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Should the recommendations given in this report be followed, it can be concluded that previously fire tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) timber doorsets which have achieved 30 or 60 minutes integrity in accordance with BS 476: Part 22: 1987 or BS EN 1634-1, as discussed in this report, may be fitted with the SBL300, 310, 315, 320, 330, 350 and 365 Series mechanical digital locks, as detailed within this report, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

Additionally should the recommendations given in this report be followed, it can be concluded that previously fire tested (or assessed by Warringtonfire, BM TRADA or Chiltern International Fire) timber doorsets which have achieved 30 minutes integrity in accordance with BS 476: Part 22: 1987 or BS EN 1634-1, as discussed in this report, may be fitted with the SBL700.SFR mechanical digital locks, as detailed within this report, without detracting from the overall integrity performance (and insulation where relevant) of the doorset.

## Validity

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This assessment is issued on the basis of test data and information available at the time of issue. If contradictory evidence becomes available to Warringtonfire the assessment will be unconditionally withdrawn and Securefast Plc. will be notified in writing. Similarly the assessment is invalidated if the assessed construction is subsequently tested because actual test data is deemed to take precedence over an expressed opinion. The assessment is valid initially for a period of five years i.e. until 19<sup>th</sup> October 2025, after which time it is recommended that it be returned for re-appraisal.

The appraisal is only valid provided that no other modifications are made to the tested construction other than those described in this report.

This assessment represents our opinion as to the performance likely to be demonstrated on a test in accordance with EN1634-1 or BS EN 1634-1, on the basis of the evidence referred to herein. We express no opinion as to whether that evidence, and/or this assessment, would be regarded by any Building Control authority as sufficient for that or any other purpose. This assessment is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

## Summary of Primary Supporting Data

### WF Test Report No. 322545

Test report relating to the performance of two fully insulated, single-acting, single-leaf, timber doorsets incorporating items of building hardware, when subjected to a test in accordance with BS EN 1634-1: 2008 to determine their fire resistance performances.

Doorset A had overall dimensions of 2020 mm high by 1000 mm wide and incorporated a door leaf of overall dimensions 1980 mm high by 931 mm wide by 45 mm thick. The door leaf was hung within a softwood door frame on three stainless steel hinges. The door leaf was formed from a graduated density chipboard core with hardwood lippings to the vertical edges. The doorset was fitted with two Securefast push button digital latchsets, the lower latchset was referenced SBL365 and the upper latchset was referenced SBL330SL The doorset was installed so it opened towards the heating conditions of the test and was latched via the lower latchset for the duration of the test.

Doorset B had overall dimensions of 1994 mm high by 1012 mm wide and incorporated a door leaf of overall dimensions 1946 mm high by 930 mm wide by 54 mm thick. The door leaf was hung within a hardwood door frame on three stainless steel hinges. The door leaf was formed from a graduated density chipboard core with hardwood lippings to the vertical edges. The doorset was fitted with two Securefast push button digital latchsets, the lower latchset was referenced SBL365 and the upper latchset was referenced SBL330SL The doorset was installed so it opened towards the heating conditions of the test and was latched via the lower latchset for the duration of the test.

Warringtonfire Limited was not involved with the sampling of the hardware.

The specimens satisfied the test requirements for the following periods:

		Doorset A	Doorset B
<b>Integrity</b>	Sustained Flames	44 minutes	63 minutes
	Gap Gauge	44 minutes*	68 minutes#
	Cotton Pad	44 minutes	63 minutes
<b>Insulation</b>		44 minutes	44 minutes

\*Doorset blanked off to allow the test to continue.

#The test duration. The test was discontinued after a period of 68 minutes.

Test date : 1<sup>st</sup> October 2012

Test sponsor : Securefast Plc.



**WF Test Report  
No. 419607**

To determine the effects of various building hardware on the fire resistance performance of two single-action, single-leaf timber doorsets within a low density rigid supporting construction, in accordance with BS EN 1634-1:2014 + A1:2018.

**Doorset A** had overall nominal dimensions of 1010 mm wide by 2080 mm high, incorporating a single door leaf with overall dimensions of 936 mm wide by 2040 mm high by 44 mm thick. The door leaf was formed from a 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 and was orientated so that the door leaf opened towards the heating conditions. The Doorset was latched via both of the locksets for the duration of the test. The Doorset was fitted with the following hardware:

Item No	Description	Reference
3	Push latch device	SED993
4	Digital push button lockset	SBL700.SFR
5	Mortice sash lock	SEU1092.2
6	Lever handleset	SH-0203
7	Escutcheon	SDC-P-02
8	Cylinder	SEU6702/T
9	Lever handle access device	SED900/SE/LE
11	Strike plate – fail secure	AL900M

**Doorset B** had overall nominal dimensions of 1010 mm wide by 2080 mm high, incorporating a single door leaf with overall dimensions of 936 mm wide by 2040 mm high by 44 mm thick. The door leaf was formed from a 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 and was orientated so that the door leaf opened away from the heating conditions. The Doorset was latched via both of the locksets for the duration of the test. The Doorset was fitted with the following hardware:

Item No	Description	Reference
3	Push latch device	SED993
4	Digital push button lockset	SBL700.SFR
5	Mortice sash lock	SEU1092.2
6	Lever handleset	SH-0203
7	Escutcheon	SDC-P-02
8	Cylinder	SEU6702/T
9	Lever handle access device	SED900/SE/LE
11	Strike plate – fail secure	AL900M

The hardware was selected and sampled by Warringtonfire Certification on the 14<sup>th</sup> October 2019.

The specimen satisfied the test requirements for the following periods:

Integrity	Doorset A	Doorset B
<b>Sustained flaming</b>	38 minutes*	38 minutes*
<b>Gap gauge</b>	38 minutes*	38 minutes*
<b>Cotton Pad</b>	38 minutes*	38 minutes*
<b>Insulation</b>	38 minutes*	38 minutes*



\*Test was discontinued after a period of 38 minutes.

Test date : 29<sup>th</sup> October 2019

Test Sponsors : Securefast Plc.

**WF Test Report  
No. 422969**

To determine the effects of various building hardware on the fire resistance performance of two single-action, single-leaf timber doorsets within a low density rigid supporting construction, in accordance with BS EN 1634-1:2014 + A1:2018.

For the purposes of the test the doorsets were referenced as A and B.

**Doorset A** incorporated a single door leaf with overall dimensions of 928 mm wide by 2042 mm high by 44 mm thick. The door leaf was formed from a chipboard core with 6 mm thick hardwood lippings to the vertical edges and was hung in a softwood frame with a single 15 x 4 mm intumescent perimeter seal within the frame rebate, and hung on three stainless steel hinges. The Doorset was installed so that the leaf opened towards the heating conditions of the test. The Doorset was latched for the duration of the test.

**Doorset B** incorporated a single door leaf with overall dimensions of 928 mm wide by 2042 mm high by 54 mm thick. The door leaf was formed from a chipboard core with 6 mm thick hardwood lippings to the vertical edges and was hung in a hardwood frame with 2No. 15 x 4 mm intumescent perimeter seal within the frame rebate, and hung on three stainless steel hinges. The doorset was installed so that the leaf opened towards the heating conditions of the test. The Doorset was latched for the duration of the test.

Both doorsets were fitted with the following hardware:

Item No	Description	Reference
11	Hinges	H101
12	Mortice Sash Lock	SEU1091.2
14	Lever Handleset	SDP-0203
12	Euro double cylinder	SSC3535-NI
16	Emergency push pad actuator	SED996/SE
17	Mortice nightlatch	SEU777/1
18	Euro single cylinder	SSC45-SN

The hardware was selected and sampled by Warringtonfire Certification on the 7<sup>th</sup> January 2020.

The specimen satisfied the test requirements for the following periods:

Integrity	Doorset A	Doorset B
<b>Sustained flaming</b>	48 minutes*	62 minutes
<b>Gap gauge</b>	48 minutes*	55 minutes
<b>Cotton Pad</b>	48 minutes*	66 minutes <sup>#</sup>
<b>Insulation</b>	48 minutes*	55 minutes

\* No failure. Doorset blanked off to allow Doorset B to continue

# The test duration. The test was discontinued after a period of 63 minutes

Test date : 14<sup>th</sup> January 2020

Test Sponsors : Securefast Plc.

## WF Test Report No. 417165

Test report relating to an investigation which utilised the heating and pressure conditions given in BS EN 1634-1:2014 + A1:2018 the full requirements of the Standard were not, however, complied with. The information is provided for the test sponsor's information only and should not be used to demonstrate performance against the Standard nor compliance with a regulatory requirement.

The purpose of the test was to provide an indication of the performance of the following Securefast hardware under fire test conditions, when fitted to 30 and 60 minute fire rated timber based doorsets. Both doorsets were fitted with the following:

1No. SBL320 Digital Locks with tubular latch/strike (engaged) – with pushbutton key pad on the exposed face and handle/turn on the unexposed face (Key to figures: 12).

1No. SBL320 Digital Locks with tubular latch/strike (engaged) – with pushbutton key pad on the unexposed face and handle/turn on both faces (Key to figures: 13).

1No. SBL330 Digital Locks with tubular latch/strike (engaged) – with pushbutton key pad on the exposed face (Key to figures: 14).

1No. SBL365 Digital Locks with tubular latch/strike (engaged) – with pushbutton key pad on the exposed face (Key to figures: 15).

1No. Electromagnetic lock AEM10001 Armature on the exposed face (Key to figures: 16).

1No. Electromagnetic lock AEM10001 Armature on the unexposed face (Key to figures: 17).

1No. Electromagnetic lock AEM12100 Armature on the exposed face (Key to figures: 18).

1No. Electromagnetic lock AEM12100 Armature on the unexposed face (Key to figures: 19).

1No. SED993/SE Push Pad Emergency fitted on the exposed face with 1No.SED990/SEKNC OAD fitted on the unexposed face (Key to figures: 20).

1No. SED993/SE Push Pad Emergency fitted on the unexposed face with 1No.SED990/SEKNC OAD fitted on the exposed face (Key to figures: 21).

The test assembly consisted of two small scale single leaf timber doorsets which for test purposes were referenced as Doorsets A and B.

Doorset A had overall dimensions of 1440 mm high by 700 mm wide incorporating a door leaf with overall dimensions 1400mm high x 613mm wide x 44mm thick. The leaf comprised a solid graduated density chipboard construction, with 6 mm hardwood lippings to the vertical edges. The leaf was mounted in a softwood frame.

Doorset B had overall dimensions of 1440 mm high by 700 mm wide incorporating a door leaf with overall dimensions 1400mm high x 613mm wide x 54mm thick. The leaf comprised a solid graduated density chipboard construction, with 6 mm hardwood lippings to the vertical edges. The leaf was mounted in a hardwood frame.

The test assembly formed the front vertical face of a 1.5 metre wide by 1.5 metre high by 2 metre deep gas fired furnace chamber, the temperature rise of which was controlled to conform to the relationship given in BS EN 1363-1: 2012. The furnace atmospheric pressure was controlled so that it simulated a pressure of 13 Pa 1m up from the furnace floor.

The specimen satisfied the test requirements for the following periods:

Integrity	Doorset A	Doorset B
Sustained flaming	43 minutes	46 minutes
Gap gauge	46 minutes*	66 minutes#
Cotton Pad	43 minutes	45 minutes

\*Doorset blanked off to allow the test to continue.

#The test duration. The test was discontinued after a period of 66 minutes.

The hardware was selected and sampled by Warringtonfire Certification on the 30<sup>th</sup> July 2019.

Test date : 23<sup>rd</sup> August 2019

Test Sponsors : Securefast Plc.

**WF Assessment  
Report No.  
419607**

This report presents an appraisal of the fire resistance performance of single-action timber/mineral-based, when fitted with SEU1090 Series mortice locks and accessories. The doorset, onto which the proposed hardware is to be fitted, may be of single-leaf or double-leaf configuration.

The proposed doorsets are required to provide a fire resistance performance of up to 60 minutes integrity performance for timber/mineral-based doorsets, with respect to EN 1634-1 or BS 476: Part 22: 1987.

The approval applies to the following products:

<b>Reference</b>	<b>Description</b>
<b>SEU1091.2</b>	Euro Profile Mortice Sash Lock
<b>SEU1092.2</b>	Euro Profile Mortice Latch
<b>SEU1093.2</b>	Euro Profile Mortice Dead Lock
<b>SEU1094.2</b>	Euro Profile Mortice Night Latch
<b>SEU1095.2</b>	Euro Profile Mortice Escape Lock
<b>SEU1096.2</b>	Euro Profile Mortice Bathroom Lock

WF Assessment Report No. 432749 concluded that should the recommendations given in this report be followed, the SEU1090 Series mortice locks and accessories as detailed within this report may be fitted to previously tested or assessed (by Warringtonfire, BM TRADA or Chiltern International Fire) single-action, single-leaf and double-leaf, timber/mineral-based doorsets to provide up to 60 minutes integrity performance, without detracting from the overall performance of the doorset, with respect to EN 1634-1 or BS 476: Part 22: 1987.

Report date : 14<sup>th</sup> October 2020

Report Sponsor : Securefast Plc.

## Declaration by Securefast Plc.

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We the undersigned confirm that we have read and complied with the obligations placed on us by the UK Fire Test Study Group Resolution No. 82: 2001.

We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which the assessment is being made.

We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.

We are not aware of any information that could adversely affect the conclusions of this assessment.

If we subsequently become aware of any such information we agree to cease using the assessment and ask Warringtonfire to withdraw the assessment.

Signed:

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For and on behalf of:  
  
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## Signatories

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Responsible Officer

R. Anning\* - Principal Certification Engineer



Approved

M Tolan\* - Certification Engineer

\* For and on behalf of Warringtonfire.

Report Issued: 19<sup>th</sup> October 2020

The assessment report is not valid unless it incorporates the declaration duly signed by the applicant.

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