

Exova Warringtonfire  
Holmesfield Road  
Warrington  
WA1 2DS  
United Kingdom

T : +44 (0) 1925 655 116  
F : +44 (0) 1925 655 419  
E : warrington@exova.com  
W: www.exova.com



Testing. Advising. Assuring.

**Title:**

The Fire Resistance  
Performance of Securefast  
Door Hardware When Fitted to  
Previously Tested Doorsets

**Report No:**

343105

**Prepared for:**

**Securefast Plc**

Unit 6  
The Cedars Business Centre  
Avon Road  
Cannock  
Staffordshire  
WS11 1QJ

**Date:**

**26<sup>th</sup> August 2014**

**TABLE OF CONTENTS**

<b>SECTION</b>	<b>PAGE</b>
<b>Executive Summary .....</b>	<b>3</b>
<b>Introduction .....</b>	<b>4</b>
<b>Assumptions.....</b>	<b>4</b>
<b>Proposals.....</b>	<b>5</b>
<b>Basic Test Evidence.....</b>	<b>5</b>
<b>Assessed Performance .....</b>	<b>6</b>
<b>Conclusions .....</b>	<b>12</b>
<b>Validity .....</b>	<b>12</b>
<b>Summary of Primary Supporting Data .....</b>	<b>13</b>
<b>Declaration by Securefast Plc .....</b>	<b>15</b>
<b>Signatories .....</b>	<b>16</b>
<b>Annex A – Approved Hardware .....</b>	<b>17</b>

## Executive Summary

---

<b>Objective</b>	This report provides a considered opinion regarding the fire resistance performance of single-acting timber and mineral composite based doorsets, when fitted with the various items of Securefast door hardware, as referenced later in this report.
<b>Report Sponsor</b>	<b>Securefast Plc</b>
<b>Address</b>	Unit 6, The Cedars Business Centre, Avon Road, Cannock, Staffordshire, WS11 1QJ.
<b>Summary of Conclusions</b>	<p>Should the recommendations given in this report be followed, it can be concluded that previously fire tested (or assessed by Exova Warringtonfire) timber or mineral composite based doorsets which have achieved up to 60 minutes integrity and insulation in accordance with BS 476: Part 22: 1987 or BS EN 1634-1, as discussed in this report, may be fitted with the various items of Securefast hardware, as detailed in Annex A, without detracting from the overall performance of the doorset.</p> <p>Furthermore, it may also be concluded that, following the recommendations given in this report, previously fire tested (or assessed by Exova Warringtonfire) timber or mineral composite based doorsets which have achieved up to 120 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 AEM0070 surface mounted door closing device.</p>
<b>Valid until</b>	1 <sup>st</sup> September 2019

**This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Exova Warringtonfire.**

## Introduction

---

This report presents an appraisal of the fire resistance performance of single-acting insulated timber or mineral composite based doorsets when fitted with the various items of Securefast door hardware, detailed in Annex A. The doorset, onto which the proposed hardware is to be fitted, may be of single-leaf or double-leaf configuration.

The proposed timber and mineral composite based doorsets are required to provide a fire resistance performance of up to 60 minutes (or up to 120 minutes specifically for the door closing device) integrity and where applicable insulation, with respect to BS 476: Part 22: 1987 or BS EN 1634-1, subject to the requirements and limitations detailed within this report.

### 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

---

### 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 doorset. In addition, it is assumed that the door leaves will be in the closed and latched position.

### Doorset details

It is assumed that the proposed hardware will be fitted to timber or mineral composite based doorsets which have previously been shown to be capable of providing up to 60 minutes, or 120 minutes for the door closer, integrity as detailed in this report, in a single-acting configuration.

Mortice locks and concealed magnetic shear locks shall only be fitted to doorsets which have been previously proven when fitted with similarly sized and positioned items.

The proposed doorsets will include a surface mounted overhead door closer capable of returning the door leaf to the fully closed position overcoming the latch mechanism.

## Proposals

---

It is proposed that previously fire tested (or assessed by Exova Warringtonfire) timber and mineral composite based doorsets which have achieved up to 60 minutes integrity and, where applicable, insulation performance, as discussed later in this report, may be fitted with the various items of Securefast door hardware detailed later, in accordance with recommendations given in this report without detracting from the overall performance of the doorset.

It is further proposed that previously fire tested (or assessed by Exova Warringtonfire) timber and mineral composite based doorsets which have achieved up to 120 minutes integrity and, where applicable, insulation performance, as discussed later in this report, may be fitted with the Securefast AEM0070 surface mounted overhead door closer, in accordance with recommendations given in this report without detracting from the overall performance of the doorset.

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

Details of the range of items covered are included in Annex A of this report.

## Basic Test Evidence

---

### **WF Test Report No. 341521**

The test referenced WF No. 341521 included two single-acting, single-leaf timber based doorsets. The doorsets were referenced as 'Doorset A' and 'Doorset B' for the purpose of the test.

Doorset A was of a typical 30 minute timber doorset construction and had an overall dimension of 2150 mm high by 1006 mm wide and incorporated a door leaf of overall dimensions of 2050 mm high by 941 mm wide and 44 mm thick. The door leaf comprised of a Chipboard core with 7 mm thick hardwood lippings fixed on the vertical edges.

Doorset B was of a typical 60 minute timber doorset construction and had an overall dimension of 2150 mm high by 1006 mm wide and incorporated a door leaf of overall dimensions of 2050 mm high by 941 mm wide and 54 mm thick. The door leaf comprised of a Chipboard core with 7 mm thick hardwood lippings fixed on the vertical edges.

Each doorsets was fitted with an AEM0070 acoustic door closer fixed on the exposed face of their door leaves, a Securefast ASEL2460 electric escape sashlock complete with lever handles, euro profile cylinder and security escutcheons connecting to an ALP101 wiring loop at mid-height. A concealed AEMSF300 Shear Magnet was fitted at the head of both doorsets. A magnetic lock plate was through bolt fixed at mid-width and three quarter height of both leaves.

The test demonstrated the ability of Doorset A to provide 34 minutes integrity and insulation performance and Doorset B to provide 66 minutes integrity and insulation performance.

## WF Test Report No. 341583

The indicative test referenced WF No. 341583 included two sections of single-acting, single leaf doorsets, typical of 30 and 60 minute timber based fire resistant doorset constructions. Each assembly comprised a section of chipboard based door leaf, nominally 1490 mm high by 703 mm wide, complete with hardwood timber lipping to the leading vertical edge and a corresponding section of timber based door frame (softwood for the 30 minute assembly and hardwood for the 60 minute assembly). The assemblies were referenced as Doorset A and Doorset B for the purpose of the test.

Both assemblies were fitted with a Securefast 'SEU1091.2' electronic mortice sashlock and 'ACTpro eLock' lock trims.

The assemblies were mounted such that they would open towards the heating conditions of the test. In each case the 'ACTpro eLocks' were fitted such that the card reader was on the unexposed face.

The test demonstrated the ability of the lock and electronic trim assemblies to contribute towards the fire performance of the two assemblies for periods of 40 and 66 minutes respectively.

## Assessed Performance

---

### General

It is proposed that previously fire tested (or assessed by Exova Warringtonfire) timber or mineral composite based doorsets may be fitted with the Securefast door hardware products detailed without detracting from the performance of the doorset.

The items covered by this appraisal are:

- AEM0070 acoustic door closer
- ASEL2460 electric escape lock
- ALP101 door loop
- ACTpro eLock trims mounted in conjunction with the Securefast SEU1091.2 mortice case electronic sashlock
- AEMSF300 concealed magnetic shear lock
- Various surface mounted electro-magnetic locks

### AEM0070 door closer

It is proposed that previously fire tested (or assessed by Exova Warringtonfire) timber or mineral composite based insulated doorsets may be fitted with the AEM0070 acoustic door closer in order to provide up to 120 minutes integrity without detracting from the performance of the doorset.

Support for the proposed use of the door closer is taken from the test detailed in the report referenced WF No. 341521. The test included two timber based doorsets each fitted with a closer unit mounted in projecting arm configuration on the exposed side of the doorset. Both doorsets were installed such that their leaves opened towards the heating conditions of the test and were unlatched for the duration of the test.

Review of the observations taken during the test shows that both closer units remained attached to the respective doorsets for a period in excess of 16 minutes and that at no time did either doorset show any tendency to open, both door leaves remaining closed for their respective durations.

A surface mounted door closer is usually required to restrain a timber based door leaf up until the time at which the intumescent seals react. After a test period of 10 -15 minutes the intumescent seals would be expected to have reacted and as such the restraint offered via the closer is deemed to be superfluous to requirements. The above referenced test therefore provides direct evidence on the ability of the proposed closer to be capable of restraining the door leaf for the required test period.

It is also considered that should the proposed closer be fitted to other timber or composite material based doorsets designed to provide 30 minutes, 60 minutes, 90 minutes or 120 minutes fire resistance, it would remain in place for a similar period, enabling the intumescent seals to effectively react.

The tested closers were installed in a projecting arm (Figure 1) configuration, therefore the appraisal of the closer is restricted to its use in this same, door mounted body, projecting arm configuration.

## **Alternative Doorsets**

To enable the use of the door closer 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 closer to be used safely:

- a) The doorset, including the door frame and associated ironmongery should have achieved up to 30, 60, 90 or 120 minutes integrity and insulation performance, when tested by a UKAS approved laboratory (or assessed by Exova Warringtonfire) to BS 476: Part 22 or BS EN 1634-1.
- b) If the proposed doorset is to be used in double-leaf configurations, the test or assessment evidence should be applicable to double-leaf configurations.
- c) Likewise, if the proposed doorset is to be used in unlatched configurations then the available test evidence should be applicable to unlatched doorsets.
- d) The size and weight of the proposed doorset's leaf should be compatible with the power rating of the closer.

The fitting of the door closer onto alternative doorsets, on the basis of compliance with the conditions given above, is therefore considered to be acceptable.

**ASEL2460 electric  
escape lock &  
ALP101 door loop**

The performance of the locks included in the tested doorsets detailed in the report referenced WF No. 341521 is cited in support of the appraisal of the ASEL2460 lock. The doorsets were each fitted with the proposed lock complete with stainless steel lever handles referenced AR361/60 (Doorset A) & AR461/0 (Doorset B), SEU6702 stainless steel euro profile lock cylinders and SEU 1090.2 stainless steel security escutcheons.

The lock cases were installed with a representative section of power cable mounted within the door leaf and, although not connected, an ALP101 door loop power connection and similar section of cable mounted into the door leaf trailing edge/door frame jamb.

Review of the observations taken during the test shows that in both instances the complete lockset assembly and its associated accessories including the door loop assembly contributed positively towards the fire resistance performance of the respective doorset for periods of 34 minutes and 66 minutes.

In both doorsets the lock assemblies were provided with intumescent protection in the form of 2 mm thick Interdens sheet wrapping the lock body and backing the forend and strike plate. Similarly the ALP101 door loop was mounted within mortises cut into the trailing edge of the door leaf and door frame jamb; both mortises were fully lined with a 2 mm thickness of Interdens intumescent sheet material.

It is therefore a requirement of this appraisal that in all installations, this same level and type of intumescent protection is provided to the lockset and to the door loop.

Based on the above discussion and requirements, a positive appraisal can be made of the lockset, its associated components and the door loop assembly for use with other, previously proven, timber based doorsets required to provide fire resistance performances of 30 and 60 minutes.

Whilst the above discussion considers the performance of the ASEL2460 electric lock and the ALP101 door loop when fitted in conjunction with each other, this appraisal does not restrict their use exclusively to be fitted together and they may be installed with other suitable items, subject to confirmation of appropriate fire resistance performance of the relevant item.

**ACTpro eLock  
trims**

The indicative test referenced WF No. 341583 was conducted on representative sections of 30 and 60 minute timber doorset constructions. The Securefast SEU1091.2 electronic mortice sashlock is a previously tested and proven product, therefore, it was considered reasonable to evaluate the performance of the lockset, when combined with the ACTpro eLock trims, on a small scale, indicative test basis.



Review of the test observations shows that the assemblies achieved performances (when evaluated against the performance criteria used for formal testing) of 40 minutes and 66 minutes respectively. In both instances no detriment to the performance of the sections of timber doorset assemblies was noted during the test duration (30 minute assembly blanked off after 40 minutes to allow continuation of the test).

In both assemblies the locksets were provided with intumescent protection in the form of 2 mm thick Interdens sheet wrapping the lock body and backing the forend and strike plate.

It is therefore a requirement of this appraisal that in all installations, this same level and type of intumescent protection is provided to the lockset.

Based on the above discussion the use of the ACTpro eLock trims, in conjunction with the Securefast SEU1091.2 electronic mortice sashlock, is positively appraised. The lock and trim arrangement may therefore be fitted to previously proven timber based doorsets for 30 and 60 minute fire resistance periods, subject to installation with the same level of intumescent protection detailed above, without detracting from the performance of the doorset.

#### **Suitable doorsets**

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 hardware to be used safely.

The following requirements of the doorset are however considered to be essential:

- The doorset shall be of a timber construction and must have provided the required 30 or 60 minute integrity performance when fitted with a mortice cased lock and tested at a UKAS accredited laboratory in accordance with BS 476: Part 22: 1987 or EN 1634-1, be assessed for the required period by Exova Warringtonfire or be CERTIFIRE approved for the required period.
- The tested/assessed doorset as described above must have been tested or assessed in the required configuration i.e. number of leaves and action.

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 shall be followed:

- a) Door frame density - 450kg/m<sup>3</sup> for 30 minute doorsets and 650kg/m<sup>3</sup> for 60 minute doorsets.
- b) The minimum thickness of door leaves shall be 44 mm for 30 minute doorsets and 54 mm for 60 minute doorsets.
- c) Lipping density - 650kg/m<sup>3</sup>.

In all cases the locksets and door loop shall be fitted with the additional intumescent protection detailed in the relevant section of this report.

### **AEMSF300 concealed magnetic shear lock**

The test referenced WF No. 341521 is cited to demonstrate the ability of the proposed AEMSF300 concealed magnetic shear lock to contribute to the performance of previously test 30 and 60 minute fully insulated timber or mineral composite based doorsets.

The test comprised two single-leaf, single-acting timber based doorsets. Doorset A was of a typical 30 minute construction comprising a chipboard based door leaf, 44 mm thick with hardwood lippings to its vertical edges only and a softwood timber door frame. Doorset B was of a typical 60 minute construction comprising a chipboard based door leaf, 54 mm thick with hardwood lippings to its vertical edges only and a hardwood timber door frame.

Both doorsets were provided with an AEMSF300 concealed magnetic shear lock mounted in the head of the door leaf and frame towards the leading edge of the door leaf.

In both instances mortises were cut into the door leaf to accommodate the armature plate and in the door frame top jamb to accommodate the lock body. For both doorsets, the mortises were fully lined with a 2 mm thickness of Interdens intumescent sheet material.

Review of the test observations shows that the doorsets achieved integrity performances of 34 and 66 minutes respectively with no indication of possible integrity failure in the vicinity of either of the concealed shear lock assemblies.

Based on the performance of the tested assemblies, a high level of confidence can be taken from the proposal that the AEMSF300 may therefore be installed within other, previously proven timber or mineral composite based doorset constructions without detriment to the performance of the doorset for fire resistance performances of 30 and 60 minutes, subject to the locks being provided with the same level of intumescent protection as the tested assemblies.

It should be noted that this appraisal does not make any assumptions regarding the ability of the lock to provide an essential latching function to the doorset and so it is a requirement of this appraisal that the AEMSF300 is only fitted to doorsets that are previously proven unlatched, when fitted with a suitable door closer, or where any required essentially latching is provided by another means.

Based on the above discussion and limitations, the performance of the AEMSF300 concealed magnetic shear lock is positively appraised for use with previously proven 30 and 60 minute timber based doorsets.

### **Suitable doorsets**

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 hardware to be used safely.

The following requirements of the doorset are however considered to be essential:

- The doorset shall be of a timber construction and must have provided the required 30 or 60 minute integrity performance and tested at a UKAS accredited laboratory in accordance with BS 476: Part 22: 1987 or EN 1634-1, be assessed for the required period by Exova Warringtonfire or be CERTIFIRE approved for the required period.
- The tested/assessed doorset as described above must have been tested or assessed in the required configuration i.e. number of leaves and action.

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:

- d) Door frame density - 450kg/m<sup>3</sup> for 30 minute doorsets and 650kg/m<sup>3</sup> for 60 minute doorsets.
- e) The minimum thickness of door leaves shall be 44 mm for 30 minute doorsets and 54 mm for 60 minute doorsets.

In all cases the unit shall be fitted with the additional intumescent protection detailed in the relevant section of this report.

#### **Surface mounted magnetic locks**

The proposed surface mounted electro-magnetic locks comprise a magnet body mounted directly to the door frame or via a transom housing mounted to the door frame and an armature plate which is either surface mounted within an armature housing or directly fixed by through bolted to the door leaf.

In terms of their influence on the fire resistance performance of a fully insulated 30 or 60 minute timber or mineral composite based doorset, it is reasonable to consider that the magnet body and transom housing, being wholly surface mounted items, are unlikely to have any effect on the doorset's performance. It is only the mounting method of the armature plate, where it is directly fixed and requires through bolting to the door leaf, that requires further evaluation.

In consideration of the mounting method, the doorsets included in the test referenced WF No. 341521 were each fitted with an armature plate mounted directly on the face of the door leaf in what was considered to be the most onerous installation method. The hole drilled through the door leaf to allow the installation of the dome head fixing bolt was provided with a lining of 2 mm Interdens which wrapped around the bolt within the thickness of the door leaf.

In each case the installation of the armature plate and its method of fixing was not detrimental to the integrity performance of the doorset and the doorsets achieved integrity performances of 34 and 66 minutes.

Based on the confirmatory evidence taken from the test, it is considered that the proposed range of surface mounted magnetic locks detailed in Annex A may therefore be fitted to other, previously proven, fully insulated timber or mineral composite based doorsets required to provide fire resistance performances of 30 or 60 minutes without detriment to the performance of the doorset.

It shall be a requirement of this appraisal that, where magnetic locks are mounted with armature plates required to be through bolt fixed to the door leaf, the same 2 mm thickness of Interdens intumescent material wrapping is provided to the bolt through the full thickness of the door leaf.

This appraisal does not make any assumptions regarding the ability of the locks to provide an essential latching function to the doorset and so it is a requirement of this appraisal that the surface mounted electro-magnetic locks are only fitted to doorsets that are previously proven unlatched, when fitted with a suitable door closer, or where any required essentially latching is provided by another means.

## Conclusions

---

Timber or mineral composite based doorsets that have previously been successfully fire tested by a UKAS accredited laboratory (or assessed by Exova warringtonfire) which have achieved up to 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 various items of Securefast hardware, as detailed in Annex A, without detracting from the overall performance of the doorset.

Furthermore, it may also be concluded that, following the recommendations given in this report, previously fire tested (or assessed by Exova Warringtonfire) timber or mineral composite based doorsets which have achieved up to 120 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 AEM0070 surface mounted door closing device.

## Validity

---

This assessment is issued on the basis of test data and information available at the time of issue. If contradictory evidence becomes available to Exova 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 1<sup>st</sup> September 2019, 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.

## Summary of Primary Supporting Data

### WF Test Report No. 341521

The test referenced WF No. 341521 included two single-acting, single-leaf timber based doorsets. The doorsets were referenced as 'Doorset A' and 'Doorset B' for the purpose of the test.

Doorset A was of a typical 30 minute timber doorset construction and had an overall dimension of 2150 mm high by 1006 mm wide and incorporated a door leaf of overall dimensions of 2050 mm high by 941 mm wide and 44 mm thick. The door leaf comprised of a Chipboard core with 7 mm thick hardwood lippings fixed on the vertical edges.

Doorset B was of a typical 60 minute timber doorset construction and had an overall dimension of 2150 mm high by 1006 mm wide and incorporated a door leaf of overall dimensions of 2050 mm high by 941 mm wide and 54 mm thick. The door leaf comprised of a Chipboard core with 7 mm thick hardwood lippings fixed on the vertical edges.

Each doorsets was fitted with an Agrippa 3-80-0070 acoustic door closer fixed on the exposed face of their door leaves, a Securefast ASEL2460 electric escape sashlock complete with lever handles, euro profile cylinder and security escutcheons connecting to an ALP101 wiring loop at mid-height. A concealed AEMSF300 shear magnet was fitted at the head of both doorsets. A magnetic lock armature plate was through bolt fixed at mid-width and three quarter height of both leaves.

The specimens satisfied the test requirements for the following periods:

		Doorset A	Doorset B
<b>Integrity</b>	Sustained Flames	34 minutes*	66 minutes#
	Gap Gauge	34 minutes*	66 minutes#
	Cotton Pad	34 minutes*	66 minutes#
<b>Insulation</b>		34 minutes*	66 minutes#

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

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

Test date : 14<sup>th</sup> July 2014

Test Sponsor: Securefast Plc

**WF Test Report  
No. 341583**

The indicative test referenced WF No. 341583 included two sections of single-acting, single leaf doorsets, typical of 30 and 60 minute timber based fire resistant doorset constructions. Each assembly comprised a section of chipboard based door leaf, nominally 1490 mm high by 703 mm wide, complete with hardwood timber lipping to the leading vertical edge and a corresponding section of timber based door frame (softwood for the 30 minute assembly and hardwood for the 60 minute assembly). The assemblies were referenced as Doorset A and Doorset B for the purpose of the test.

Both assemblies were fitted with a Securefast 'SEU1091.2' electronic mortice sashlock and 'ACTpro eLock' lock trims.

The assemblies were mounted such that they would open towards the heating conditions of the test. In each case the 'ACTpro eLocks' were fitted such that the card reader was on the unexposed face.

The test was discontinued after a period of 66 minutes.

Test date : 14<sup>th</sup> July 2014

Test Sponsor: Securefast Plc

## Declaration by Securefast Plc

---

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 Exova Warringtonfire to withdraw the assessment.


Signed:


.....  
For and on behalf of:

.....

## Signatories

---


Responsible Officer
D. Forshaw* - Principal Certification Engineer


Approved
A Kearns* - Technical Manager

\* For and on behalf of Exova Warringtonfire.

Report Issued: 26 <sup>th</sup> August 2014
---

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

This copy has been produced from a .pdf format electronic file that has been provided by Exova Warringtonfire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of Exova Warringtonfire. The pdf copy supplied is the sole authentic version of this document. All pdf versions of this report bear authentic signatures of the responsible Exova Warringtonfire staff.



## Annex A – Approved Hardware

Hardware approved for use with timber and mineral composite based doorsets for up to 60 minutes.

Model	Description
ASEL2460	Mortice case electric escape lock
SEU6702	Stainless steel euro profile lock cylinder
SEU1090.2	Stainless steel security escutcheons
AR361/60	Stainless steel lever handles
AR461/0	Stainless steel lever handles
ALP101	Door loop
AEMSF300	Concealed magnetic shear lock
ACTpro eLock	Surface mounted lock trims for SEU1091.2 lock case

Face to face surface mounted electro-magnetic locks	
AEM10001	AEM80002
AEM10002	AEM10010
AEM10002/DS	AEM10020
AEM10003	AEM10020/DS
AEM10004	AEM10030
AEM10004/DS	AEM10040
AEM10001T	AEM10040/DS
AEM10002T	AEM10050
AEM10003T	AEM10060
AEM10004T	AEM10010T
AEM80001	AEM10020T

Mortice magnets in transom housings (surface mounted)	
AMG201/AT	AMG205/UM
AMG201/UM	AMG206/AT
AMG202/AT	AMG207/AT
AMG202/UM	AMG207/UM
AMG203/AT	AMG211/AT
AMG203/UM	AMG215/AT
AMG204/AT	AEM10000
AMG204/UM	AEM10000R
AMG205/AT	

Note: The above product approvals are subject to their installation with the specified intumescent protection (where relevant) as detailed in the report.

Hardware approved for use with timber or mineral composite based doorsets for up to 120 minutes.

Model	Description
AEM 0070	Surface mounted overhead acoustic door closer