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Door hardware assessment

Test standard: Section 2 and appendix B11 of AS 1530.4:2014

Report sponsor: Sieper Group

Products: Lockton SGPD250FSS exist device and SGPDXELSS-E lever with escutcheon plate

Report number: 42205600-A Revision: DHAR3.0

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1. Introduction

This report documents the findings of the assessment to determine the likely fire resistance level (FRL) of a E-core maxi door fitted with a Lockton SGPD250FSS global series panic exit device with an SPGDXELSS-E external trim lever with escutcheon tested in accordance with section 2 and appendix B11 of AS 1530.4:2014.

Warringtonfire performed this assessment at the request of the test sponsors listed in Table 1.

Table 1 Test sponsor details

Test sponsor	Address
E Plus Building Products Pty Ltd	12-13 Dansu Court Hallam VIC 3803 Australia
Sieper Group	101 – 109 Deakin Street Silverwater NSW 2128 Australia

2. Variations considered in this report

The variations considered in this report are:

Fitting a Lockton SGPD250FSS global series panic exit device with an SPGDXELSS-E external trim lever with escutcheon instead of the door lockset tested in the referenced test reports listed in Table 2. Table 3 provides additional supporting information about the doorset.

Table 2 Referenced test reports

Test reference	Doorset description	Test standard
FSV 0609	Single leaf plywood faced E-core doorset, nominally 45 mm thick.	AS 1530.4:1997
SI 2271	Two leaf plywood faced E-core doorset, nominally 45 mm thick.	AS 1530.4:1985

Table 3 Additional supporting information

Test report	Doorset description	Test duration	Test standard
EWFA 42205600	Single leaf plywood faced E-core doorset, nominally 45 mm thick.	121 minutes	AS 1530.4:2014
A full scale fire resistance test – in accordance with section 2 and appendix B11 of AS 1530.4:2014 – was done on a full scale doorset on 29 July 2016. It included a Lockton SGPD250FSS global series panic exit device fitted onto the door leaf with an SGPDXELSS-E external trim lever with escutcheon plate.			

3. Description of the tested door hardware

Table 4 describes the tested door hardware specimen. This information was provided by the test sponsor and surveyed by Warringtonfire.

Table 5 describes the pre-test functionality test done on the door system. Photographs of the test specimen are included in Figure 1 to Figure 5. All measurements were done by Warringtonfire – unless indicated otherwise.

Table 4 Specimen description

Item	Description
Door hardware product name	Lockton SGPD250FSS global series panic exit device with an SGPDXELSS-E external trim lever with escutcheon plate
Door system properties	
Door leaf thickness	45 mm

Item	Description
Backset	80 mm
Lockset type	External latchbolt
Location of the exit device	43.5 mm from the edge of the push panic device to the latch edge of the door leaf 1130 mm from the centre of the push panic device to the bottom edge of the door leaf
Location of the lever	1095 mm from the centre base of the lever to the base of the door leaf
Cut out size of lockset	To fit lockset
Door lever turning moment	0.064 Nm

Table 5 Specimen functionality test

Item	Description	
Opening and closing cycles	The doors were subjected to a series of 50 opening and closing cycles of at least 75° for side-hung doorsets and at least 300 mm for sliding doorsets and shutters – in accordance with clause 7.2.5 of AS 1530.4:2014.	
Opening force	4.41 N	
Closing force	2.70 N	
Latching force	29.4 N	
Average clearance measurement	Top edge	2.0 mm
	Latch edge	1.5 mm
	Hinge edge	2.1 mm
	Bottom edge	11.8 mm

Figure 1 Unexposed view of the tested hardware

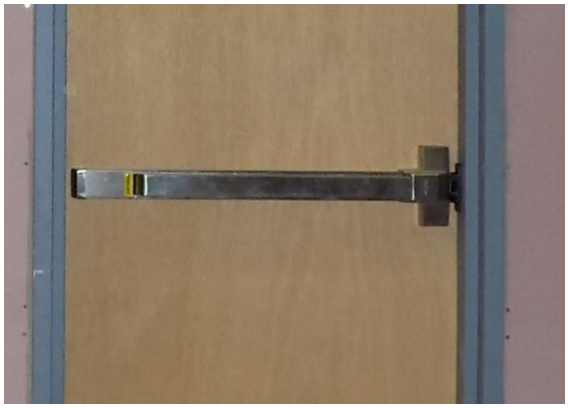

Figure 2 Exposed view of the tested hardware

Figure 3 Exposed side detail

Figure 4 Latch edge view of the tested hardware

Figure 5 Frame view

4. Discussion

It is expected that if the proposed Lockton SGPD250VRFSS global series panic exit device with an SGPDXELSS-E external trim lever with escutcheon does not initiate failure of the full scale doorset before failure occurred on the referenced doorsets, then substituting the proposed door lockset with the one tested on the reference doorsets will not be detrimental to the performance of the reference doorsets.

AS 1530.4:2014 states that either sustained flaming on the surface of the unexposed face for 10 seconds or longer, ignition of the cotton, or the latching mechanism being disengaged at the end of the test constitutes integrity failure. During the test – 42205600 – the Lockton SGPD250VRFSS global series panic exit device with an SGPDXELSS-E external trim lever with escutcheon did not initiate failure of the doorset for the duration of the test.

Results from full scale test EWFA 42205600 show that the Lockton SGPD250VRFSS global series panic exit device with an SGPDXELSS-E external trim lever with escutcheon is positively assessed for the test periods as indicated in Table 6.

5. Conclusions

It is the opinion of Warringtonfire's accredited fire testing laboratory in Australia that the doorsets listed in Table 6 will achieve the FRL shown in Table 6 if they are fitted with a Lockton SGPD250VRFSS global series panic exit device with an SGPDXELSS-E external trim lever with escutcheon on the doorsets. This opinion is based on the full scale test done.

This assessment report has been prepared in accordance with section 4.5 of AS 1905.1:2015 and is conditional on the operational characteristics and materials of the doorset complying with section 2 of AS 1905.1:2015. The field of application for the Lockton SGPD250VRFSS global series panic exit device with an SGPDXELSS-E external trim lever with escutcheon is the same as the field of application for the doorset that the door lockset is installed on.

Table 6 Conclusion

Test reference	Description	FRL
FSV 0609	Single leaf plywood faced E-core doorset, nominally 45 mm thick.	**-/120/30**
SI 2271	Two leaf plywood faced E-core doorset, nominally 45 mm thick.	**-/120/30**

Conditions and validity

- The conclusions of this assessment may be used to directly assess the fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.
- Because of the nature of fire resistance testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy of the result. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.
- The assessment can therefore only relate to the actual prototype test specimens, testing conditions and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.
- This assessment is based on information and experience available at the time of preparing this report. The published procedures for the conduct of tests and the assessment of the test results are the subject of constant review and improvement and it is recommended that this report be reviewed by Warringtonfire before the end of the validity date.
- The information in this report must not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in this report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.
- The data, methodologies, calculations and results documented in this report specifically relate to the tested specimen/s and must not be used for any other purpose. This report may only be reproduced in full. Extracts or abridgements must not be published without permission from Warringtonfire.
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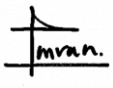
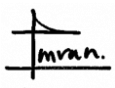
Quality management

Revision	Date	Expiry date	Information about the report			
462205600a.1	6 September 2016	2 September 2021	Description	Initial issue		
				Prepared by	**Reviewed by**	
			Name	Anthony Rosamilia	Steve Halliday	
462205600a.2	18 December 2017	2 December 2021	Description	Report updated to revise the sponsor and product name.		
				Prepared by	**Reviewed by**	
			Name	Anthony Rosamilia	Steve Halliday	
DHAR3.0	14 December 2021	31 December 2026	Description	Report revalidated and expiry date is extended for 5 years.		
				Prepared by	**Reviewed by**	**Authorised by**
			Name	Kevin Feng	Imran Ahamed	Imran Ahamed
			Signature			

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