warringtonfire
Proud to be part of element

Door hardware assessment

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

Report sponsor: Sieper Group

Products: Lockton SGPD250VRFSS exist device and SGPDX55LL1 lever

Report number: 42205600-C Revision: DHAR3.0

Reference number: FAS210360

Contents

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 SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever 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 SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever 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 SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever fitted onto the door leaf.			

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 SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever
Door system properties	
Door leaf thickness	47 mm

Item		Description
Backset		70 mm
Lockset type		External latchbolt at both top and bottom
Location	Top latch	46 mm from the edge of the latch box to the top of the door leaf 30 mm from the edge of the latch box to the latch edge of the door leaf
	Bottom latch	10 mm from the edge of the latch box to the top of the door leaf 29 mm from the edge of the latch box to the latch edge of the door leaf
	Push bar	1080 mm from the centre of the push bar to the bottom of the door leaf 31 mm from the edge of the push bar to the latch edge of the door leaf
	Lockset	1080 mm from the centre of the lockset to the bottom of the door leaf
Cut out size of lockset		To fit lockset
Door lever turning moment		0.076 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	3.68 N	
Latching force	6.37 N	
Average clearance measurement	Top edge	0.9 mm
	Latch edge	2.0 mm
	Hinge edge	1.1 mm
	Bottom edge	12.2 mm

Figure 1 Top latch

Figure 2 Bottom latch

Figure 3 Latch edge view

Figure 4 Unexposed side

Figure 5 Exposed side view

4. Discussion

It is expected that if the Lockton SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever 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 – EWFA 42205600 – the Lockton SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever initiated failure of the doorset at 117 minutes.

Results from full scale test EWFA 42205600 show that the the Lockton SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever 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 the Lockton SGPD250VRFSS global series panic exit device surface vertical type with an SPGDX55LL1 external trim lever 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 surface vertical type with an SPGDX55LL1 external trim lever is the same as the field of application for the doorset that the door lockset is installed on.

Table 6 Conclusion

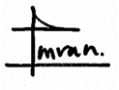
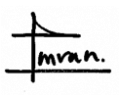
Test reference	Description	FRL
FSV 0609	Single leaf plywood faced E-core doorset, nominally 45 mm thick.	**-/90/30**
SI 2271	Two leaf plywood faced E-core doorset, nominally 45 mm thick.	**-/90/30**

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.
- All work and services carried out by Warringtonfire are subject to, and conducted in accordance with, our standard terms and conditions. These are available on request or at https://www.element.com/terms/terms-and-conditions.

Quality management

Revision	Date	Expiry date	Information about the report			
462205600c.1	6 September 2016	2 September 2021	Description	Initial issue		
			Name	Prepared by	Reviewed by	
				Anthony Rosamilia	Steve Halliday	
462205600c.2	18 December 2017	2 December 2021	Description	Report updated to revise the sponsor and product name.		
			Name	Prepared by	Reviewed by	
				Anthony Rosamilia	Steve Halliday	

Revision	Date	Expiry date	Information about the report			
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			

warringtonfire

Proud to be part of element

Warringtonfire Australia Pty Ltd
ABN 81 050 241 524

Perth

Unit 22, 22 Railway Road
Subiaco WA 6008
Australia
T: +61 8 9382 3844

Canberra

Unit 10, Leichhardt Street
Kingston ACT 2604
Australia
T: +61 2 6260 8488

Melbourne

Level 9, 401 Collins Street
Melbourne VIC 3000
Australia
T: +61 3 9767 1000

Sydney

Suite 802, Level 8, 383 Kent Street
Sydney NSW 2000
Australia
T: +61 2 9211 4333

Brisbane

Suite 6, Level 12, 133 Mary Street
Brisbane QLD 4000
Australia
T: +61 7 3238 1700

Melbourne – NATA accredited laboratory

409-411 Hammond Road
Dandenong South VIC 3175
Australia
T: +61 3 9767 1000