



# Door hardware assessment

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

Report sponsor: E+ Building Products and Davcor Group Pty Ltd

Product: Davcor Carbine CDC-5-S Slide Track

Report number: FRT210369

Revision: DHAR2.0

## Contents

1. Introduction	3
2. Variations considered in this report	3
3. Description of the tested door hardware	4
4. Assessment	5
5. Conclusion	5

## 1. Introduction

This report documents the findings of the assessment undertaken to determine the expected fire resistance level (FRL) of a Davcor Carbine CDC-5-S Slide Track if tested in accordance with section 2 and appendix B11 of AS 1530.4:2014<sup>1</sup> and assessed in accordance with AS 1905.1:2015<sup>2</sup>.

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
Davcor Group Pty Ltd	14 John Hines Avenue Minchinbury NSW 2270 Australia

## 2. Variations considered in this report

The variations considered in this report are:

Fitting a Davcor Carbine CDC-5-S Slide Track as an additional item of hardware to the doorsets referenced in test reports listed in Table 2. Table 3 provides additional supporting information about the tested hardware.

**Table 2 Referenced test reports**

Test reference	Doorset description	Test standard
FSV 0608	Single leaf plywood faced E-core mini doorset, nominally 35 mm thick	AS 1530.4:1997
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	Test date	Doorset description	Test duration	Test standard
FRT210369 R1.0	15 November 2021	Single leaf plywood faced E-core mini doorset, nominally 35 mm thick	121 minutes	AS 1530.4:2014

<sup>1</sup> Standards Australia, 2014, Methods for fire tests on building materials, components and structures – Part 4: Fire-resistance tests for elements of construction, AS 1530.4:2014, Standards Australia, NSW.

<sup>2</sup> Standards Australia, 2015, Components for the protection of openings in fire-resistant walls Fire-resistant doorsets, AS 1905.1:2015, Standards Australia, NSW.

### 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 2.

All measurements were done by Warringtonfire – unless indicated otherwise.

**Table 4 Specimen description**

Item	Description
Door hardware product name	Davcor Carbine CDC-5-S Slide Track
Size	420 mm (max) x 20 mm tall x 30 mm deep
Material	Aluminium alloy, with plastic slide with stainless steel component.
Installation	Screw fixed on the side of the door stop located 140 mm from the hinge side door stop.
Door leaf thickness	38 mm

**Table 5 Specimen functionality test**

Item	Description	
Opening and closing cycles	The door was subjected to a series of 50 opening and closing cycles of at least 75° for side-hung doorsets in accordance with clause 7.2.5 of AS 1530.4:2014.	
Opening force (doorsets) – with closer	19.6 N	
Opening force (doorsets) – without closer	4.4 N	
Closing force (doorsets) – without closer	2.9 N	
Latching force (doorsets) – without closer	Lockset	8.3
	Rim latch	18.6 N
	Both together	11.8 N
Average clearance measurement (door leaf to frame)	Top edge	1.2 mm
	Latch edge	2.3 mm
	Hinge edge	1.7 mm
Average clearance measurement (door leaf to doorstop)	Top edge	3.1 mm
	Latch edge	1.0 mm
	Hinge edge	2.3 mm



**Figure 1 Unexposed side view of the tested hardware**



Figure 2 View of the tested hardware from below.

## 4. Assessment

Section 4 of AS 1905.1:2015 requires some variations from tested prototypes to be subjected to a pilot scale test for assignment of FRL. As such, in addition to the full-scale tests listed in Table 2, a pilot scale test listed in Table 3 forms the basis of this assessment.

A pilot scale fire resistance test – in accordance with section 2 and Appendix B11 of AS 1530.4:2014 – was done on a pilot scale doorset under the test reference - FRT210369. It included a Davcor Carbine CDC-5-S Slide Track fitted onto the door frame.

AS 1530.4:2014 states that either sustained flaming on the surface of the unexposed face for 10 seconds or longer, ignition of a cotton pad or gap gauge failure constitute integrity failure. During the test – FRT210369 – the Davcor Carbine CDC-5-S Slide Track did not initiate failure of the doorset for the duration of the test.

As the proposed Davcor Carbine CDC-5-S Slide Track did not cause failure in FRT210369, then adding the proposed hardware to the referenced doorsets is not expected to affect their performance.

## 5. Conclusion

It is the opinion of Warringtonfire’s accredited fire testing laboratory in Australia that the proposed doorsets are expected to achieve the FRLs shown in Table 6 if fitted with the listed hardware

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 Davcor Carbine CDC-5-S Slide Track is the same as the field of application for the doorset that the Davcor Carbine CDC-5-S Slide Track is installed on.




Table 6 Conclusion

Test reference	Description	Assessed hardware	FRL
FSV 0608	Single leaf plywood faced E-core mini doorset, nominally 35 mm thick	Davcor Carbine CDC-5-S Slide Track	-/120/30
FSV 0609	Single leaf plywood faced E-core doorset, nominally 45 mm thick	Davcor Carbine CDC-5-S Slide Track	-/120/30
SI 2271	Two leaf plywood faced E-core doorset, nominally 45 mm thick	Davcor Carbine CDC-5-S Slide Track	-/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.
- 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	Issue date	Expiry date	Information about the report			
			Description	Initial issue		
DHAR2.0	3 December 2021	3 December 2026				
			<b>Name</b>	<b>Prepared by</b> Anthony Rosamilia	<b>Reviewed by</b> Mandeep Kamal	<b>Authorised by</b> Mandeep Kamal
			<b>Signature</b>			

# 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

#### 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