



# REGULATORY INFORMATION REPORT

Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 protecting linear joints and gap seals in walls and concrete floors in accordance with AS 1530.4:2014 and AS 4072.1-2005

> Client: Hilti (Aust) Pty Ltd and Hilti New Zealand Limited Report number: RIR 29226700 Reference number: FAS190239 Date: 22 January 2020 Revision: RIR3.0

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### **1** INTRODUCTION

This report contains the minimum information sufficient for regulatory compliance and refers to the assessment report EWFA 29226700.3.

The referenced assessment report presents an assessment of the fire resistance of Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 protecting linear joints and gap seals in walls and concrete floors if tested in accordance with AS 1530.4:2014 and assessed with AS 4072.1-2005. It has been confirmed by the client in writing that the only difference for both sealants is their brand name, with no changes to composition and/or physical properties.

The tested prototypes described in section 2 of the referenced assessment report, when subjected to the proposed variations described in section 3 and tested in accordance with the relevant standards described in section 4, are assessed to achieve performance as summarised in section 5.

The validity of the referenced assessment report is conditional on compliance with Sections 7, 8 and 9 of this report.

### 2 TESTED PROTOTYPES

The referenced assessment report is based on reference tests WARRES No. 71151A/B, FSV 0857, FSP 0692, EWFA 2573100, FSV 0855 and WARRES No. 69754C, being tests of control joints and deflection heads in wall and floor constructions.

Tests FSV 0855, FSV 0857 and FSP 0692 were tested in accordance with AS 1530.4-1997, Tests were sponsored by Hilti (Aust) Pty Ltd and were conducted by CSIRO.

Test EWFA 2573100 was tested in accordance with AS 1530.4:2005. Tests were sponsored by Hilti (Aust) Pty Ltd and were conducted by Warringtonfire Aus Pty Ltd.

Tests WARRES 71151A, 71151B and 69754C were tested in accordance with BS476 Part 20: 1987. Tests were sponsored by Hilti GmbH and were conducted by Warrington Fire Research Centre.

The assessment also references to tests Nr. PB 3.2/14-176-3 and PB 3.2/08-365 were sponsored by Hilti AG and Hilti Entwicklungsgesellschaft mbH respectively and were both conducted by MFPA Leipzig GmbH.

### **3 VARIATION TO TESTED PROTOTYPES**

The proposed construction for deflection heads and control joints in walls and floors shall be as tested in WARRES No. 71151A, 71151B, FSV 0857, FSP 0692, EWFA 2573100, FSV 0855, WARRES No. 69754C, Nr. PB 3.2/14-176-3 and PB 3.2/09/365 subject to the following variations:

#### 3.1 LINEAR JOINT/GAP SEAL IN FLEXIBLE WALL AND RIGID WALL

#### Sealant backed with Mineral Wool Products (B)

Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 backed with mineral wool products as backfilling material shall be used within or between flexible and/or rigid wall constructions. The mineral wool products shall be mineral wool insulation with a density of 100 kg/m<sup>3</sup> and with no aluminum facing.

#### Sealant backed with Backing Rod or Foam (C)

Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 backed with open or closed-cell polyethylene backing rod or CF126 high yield foam shall be used within or between flexible and/or rigid wall constructions.

**RIR3.0** 

#### Size of Polyethylene Rod (C1)

Max. Joint Width W	Diameter of PE rod
(mm)	(mm)
8	10
12	15
16	20
20	25
30	40

#### 3.2

#### WALL SUPPORT CONSTRUCTION OPTIONS

#### Multiple Layer Flexible wall

#### 2-hour wall systems

The wall must have a minimum thickness of 100mm and comprise of steel stud framing lined on both faces with minimum of two layers of 13mm or 16mm thick fire grade plasterboard and be tested to achieve an FRL of -/120/120 or 120/120/120 with or without wall cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above. Plasterboard used in construction shall include but not be limited to USG Boral Firestop, CSR Fyrchek, Knauf Fireshield, Elephant Plasterboard, GIB Fyreline and Midland Fire Resistant plasterboard. FRL of the wall needs to be verified by the wall manufacturer.

#### Single Layer Flexible wall

#### 1-hour wall systems

The wall must have a minimum thickness of 90mm and comprise of steel stud framing lined on both faces with minimum of one layer of 13mm thick fire grade plasterboard and be tested to achieve an FRL of -/60/60 or 60/60/60 with or without wall cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above.

#### 1.5-hour wall systems

The wall must have a minimum thickness of 96mm and comprise of steel stud framing lined on both faces with minimum of 1 layer of 16mm thick fire grade plasterboard and be tested to achieve an FRL of -/90/90 or 90/90/90 with or without cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above. Plasterboard used in the construction shall include but not be limited to USG Boral Firestop, CSR Fyrchek, Knauf Fireshield, Elephant Plasterboard, GIB Fyreline and Midland Fire Resistant plasterboard. Also including other types and brands of fire-resistant grade plasterboard verified by the wall manufacturer. FRL of the wall needs to be verified by the wall manufacturer.

#### USG Fiberock® lined wall

The wall must have a minimum thickness of 128mm and comprise of steel stud framing lined on both faces with minimum 2 layers of 16mm thick USG Fiberock® Aqua Tough Interior Panels. It is required wall shall be fixed to the concrete slab above.



Figure 1 – Horizontal Joints in Walls abutting a Floor, Ceiling or Roof

Item	Description	ltem	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	tA	Depth of sealant
В	Mineral Backfilling material	t⊨	Thickness of the building element
E E1 E2 E3 E4	E: Support Construction elements (wall, floor) E1: 13mm or 16mm fire grade plasterboard E2: 16mm USG Fiberock® E3: 13mm or 16mm Knauf Fireshield E4: Wall cavity insulation as per plasterboard wall installation detail.	tΒ	Thickness of mineral wool backfilling material
W	Width of Joint	C <sub>1</sub> C <sub>2</sub>	C <sub>1</sub> : Polyethylene foam (Open or closed-cell) rods

ſ		C <sub>2</sub> : CE 126 Foam
l		

Vertical Joints - Front View



Figure 2 – Vertical Joints in Walls

Vertical Joints - Top View

E<sub>4</sub>





C₁ w



Figure 3 - Vertical Joints in Walls -Sealant on Both Sides

 $\dot{\mathsf{E}_4}$ 

 $C_2$ 

W

#### Vertical Joints - Top View









(b) Backed with Polyethylene foam rod

(c) Backed with CF 126 Foam

Figure 4 - Vertical Joints in Walls - Sealant on One Side





Figure 5 – Top View Vertical Joints between Walls

Item	Description	Item	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	tA	Depth of sealant
В	Mineral Backfilling material	t⊨	Thickness of the building element
E E1 E2 E3 E4	E: Support Construction elements (wall, floor) E <sub>1</sub> : 13mm or 16mm fire grade plasterboard E <sub>2</sub> : 16mm USG Fiberock® E <sub>3</sub> : 13mm or 16mm Knauf Fireshield E <sub>4</sub> : Wall cavity insulation as per plasterboard wall installation detail.	tΒ	Thickness of mineral wool backfilling material
W	Width of Joint	$C_1 \\ C_2$	C <sub>1</sub> : Polyethylene foam rod C <sub>2</sub> : CF 126 Foam

#### Rigid Wall, (E)

The wall must have a minimum thickness of 100 mm and comprise of concrete, aerated concrete, autoclaved aerated concrete or masonry with a minimum density of  $550 \text{ kg/m}^3$ . The wall shall be to achieve at least an FRL of -/120/120 or 120/120/120.







(b) Backed with Polyethylene foam rod



Figure 6 – Horizontal Joints including Deflection Heads in Walls abutting a Floor, Ceiling or Roof – Sealant on Both Sides

ltem	Description	Item	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	tA	Depth of sealant
В	Mineral Backfilling material	t⊨	Thickness of the building element
Е	Support Construction elements (wall, floor)	tв	Thickness of mineral wool backfilling material
W	Width of Joint	$\begin{array}{c} C_1 \\ C_2 \end{array}$	C <sub>1</sub> : Polyethylene foam rod C <sub>2</sub> : CF 126 Foam

#### Horizontal Joints - Side View



(a) Backed with mineral wool

Figure 7 – Horizontal Joints including Deflection Heads in Walls abutting a Floor, Ceiling or Roof – Sealant on One Side





(b) Backed with Polyethylene foam rod

Figure 8 - Vertical Joints in Walls, ie control and side perimeter joint - Sealant on Both Sides

Item	Description	Item	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	tA	Depth of sealant
В	Mineral Backfilling material	t⊨	Thickness of the building element
Е	Support Construction elements (wall, floor)	tв	Thickness of mineral wool backfilling material
W	Width of Joint	$C_1 \\ C_2$	C <sub>1</sub> : Polyethylene foam rod C <sub>2</sub> : CF 126 Foam

#### Vertical Joints - Top View



(a) Backed with mineral wool (b) Bac

(b) Backed with Polyethylene foam rod



Figure 9 - Vertical Joints in Walls, i.e. control and side perimeter joint - Sealant on One Side

Item	Description	Item	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	t <sub>A</sub>	Depth of sealant
В	Mineral Backfilling material	tE	Thickness of the building element
Е	Support Construction elements (wall, floor)	tв	Thickness of mineral wool backfilling material
W	Width of Joint	$\begin{array}{c} C_1 \\ C_2 \end{array}$	C <sub>1</sub> : Polyethylene foam rod C <sub>2</sub> : CF 126 Foam

#### Vertical Joints - Top View





(b) Backed with Polyethylene foam rod

Figure 10 - Top View Perimeter Joints between Walls - Sealant on Both Sides

Item	Description	ltem	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	tA	Depth of sealant
В	Mineral Backfilling material	t⊨	Thickness of the building element
Е	Support Construction elements (wall, floor)	t <sub>B</sub>	Thickness of mineral wool backfilling material
W	Width of Joint	$C_1 \\ C_2$	C <sub>1</sub> : Polyethylene foam rod C <sub>2</sub> : CF 126 Foam

#### 3.3 LINEAR JOINT/GAP SEAL BETWEEN WALLS AND FLOORS WITH METAL DECKING

#### Sealant backed with Mineral Wool Products (B)

Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 backed with mineral wool products as backfilling material shall be used between walls and floors with metal decking. The mineral wool products shall be mineral wool insulation with a density of 100 kg/m<sup>3</sup> and with no aluminum facing.

#### Wall Constructions

### Multiple Layer Flexible wall

#### 2-hour wall systems

The wall must have a minimum thickness of 100mm and comprise of steel stud framing lined on both faces with minimum of 2 layers of 13mm or 16mm thick fire grade plasterboard and be tested to achieve an FRL of -/120/120 or 120/120/120 with or without wall cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above. Plasterboard used in construction shall include but not be limited to USG Boral Firestop, CSR Fyrchek, Knauf Fireshield, Elephant Plasterboard, GIB Fyreline and Midland Fire Resistant plasterboard. FRL of the wall needs to be verified by the wall manufacturer.

#### Single Layer Flexible wall

#### 1-hour wall systems

The wall must have a minimum thickness of 90mm and comprise of steel stud framing lined on both faces with minimum of 1 layer of 13mm thick fire grade plasterboard and be tested to achieve an FRL of -/60/60 or 60/60/60 with or without wall cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above.

#### 1.5-hour wall systems

The wall must have a minimum thickness of 96mm and comprise of steel stud framing lined on both faces with minimum of 1 layer of 16mm thick fire grade plasterboard and be tested to achieve an FRL of -/90/90 or 90/90/90 with or without cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above. Plasterboard used in construction shall include but not be limited to USG Boral Firestop, CSR Fyrchek, Knauf Fireshield, Elephant Plasterboard, GIB Fyreline and Midland Fire Resistant plasterboard. FRL of the wall needs to be verified by the wall manufacturer.

#### or

#### **Rigid Wall**

The wall must have a minimum thickness of 100 mm and comprise of concrete, aerated concrete or masonry with a minimum density of  $550 \text{ kg/m}^3$ . The wall shall be tested to achieve at least an FRL of -/120/120 or 120/120/120.

#### **Floor Constructions**

The floor must have a minimum thickness of 150 mm and comprise of aerated concrete or concrete with a minimum density of 550 kg/m<sup>3</sup>. The floor shall be tested to achieve at least an FRL of -/120/120 or 120/120/120. The floor incorporates metal decking similar to that tested in WARRES 71151A.

#### Wall Parallel with Metal Floor Ribs

Wall Perpendicular with Metal Floor Ribs



Figure 11 – Deflection Head in a Wall abutting a Floor with Voids parallel to Flexible Wall – Option 1



Figure 12 - Deflection Head in a Wall abutting a Floor with Voids parallel to Flexible Wall - Option 2



Figure 13 - Deflection Head in a Wall abutting a Floor with Voids crossing Rigid Wall



Figure 14– Deflection Head in a Wall abutting a Floor with Voids crossing Rigid Wall

Item	Description	Item	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	tA	Depth of sealant
В	Mineral Backfilling material	t⊨	Thickness of the building element
E E1 E2 E3 E4	E: Support Construction elements (wall, floor) E <sub>1</sub> : 13mm or 16mm fire grade plasterboard E <sub>2</sub> : 16mm USG Fiberock® E <sub>3</sub> : 13mm or 16mm Knauf Fireshield E <sub>4</sub> : Wall cavity insulation as per plasterboard wall installation detail.	tΒ	Thickness of mineral wool backfilling material
W	Width of Joint	C1 C2	C <sub>1</sub> : Polyethylene foam rod C <sub>2</sub> : CF 126 Foam

#### 3.4 LINEAR JOINT/GAP SEAL WITHIN FLOOR SUPPORT CONSTRUCTION

#### Sealant backed with Mineral Wool Products (B)

Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 backed with mineral wool products as backfilling material shall be used within rigid floor constructions. The mineral wool products shall be mineral wool insulation with a density of 100kg/m<sup>3</sup> and with no aluminum facing.

#### Sealant backed with Backing Rod (C)

Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606 backed with open or closed-cell polyethylene rod or CF 126 high yield foam shall be used within or between flexible wall constructions.

### Size of Polyethylene Rod (C1)

Max. Joint Width W	Diameter of PE rod
(mm)	(mm)
8	10
12	15
16	20
20	25
30	40

#### Rigid floor, (E)

The floor must have a minimum thickness of 150 mm (t<sub>E</sub>) and comprise of aerated concrete or concrete with a minimum density of  $550 \text{ kg/m}^3$ . The floor shall be tested or otherwise assessed to achieve at least an FRL of -/120/120 or 120/120/120.



(a) Backed with mineral wool



(c) Backed with CF 126 Foam

Figure 15 – Control Joints in Floors

Item	Description	Item	Description
А	Hilti Firestop Acrylic Sealant CFS-S ACR or CP 606	t <sub>A</sub>	Depth of sealant
В	Mineral Backfilling material	t <sub>E</sub>	Thickness of the building element
Е	Support Construction elements (wall, floor)	t <sub>B</sub>	Thickness of mineral wool backfilling material
W	Width of Joint	C <sub>1</sub> C <sub>2</sub>	C <sub>1</sub> : Polyethylene foam rod/strip C <sub>2</sub> : CF 126 Foam

#### 3.5 LINEAR JOINT/GAP SEAL BETWEEN SINGLE OF DOUBLE LAYER PLASTERBOARD AND FLOORS WITH METAL DECKING

#### CP 606 Sealant

Hilti Firestop Acrylic Sealant CP 606 shall be used between floors with metal decking. If the width of the joint is less than 10 mm, a sealant fillet of 20\*20 mm shall be applied if the sealant cannot be properly applied to the required 13 mm depth. For both steel track goes parallel and perpendicular to the Bondek profile, all cavity needs to be filled with Hilti Firestop Acrylic Sealant CP 606. The Metal deck profile shall not be limited to Bondek, however, all alternative metal decks will need to have an FRL greater than 60/60/60 with similar metal deck profile.

#### Multiple Layer Flexible wall

#### 2-hour wall systems

The wall must have a minimum thickness of 100mm and comprise of steel stud framing lined on both faces with minimum of 2 layers of 13mm or 16mm thick fire grade plasterboard and be tested

(b) Backed with Polyethylene foam rod

to achieve an FRL of -/120/120 or 120/120/120 with or without wall cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above. Plasterboard used in construction shall include but not be limited to USG Boral Firestop, CSR Fyrecheck and Knauf Fireshield. FRL of the wall needs to be verified by the wall manufacturer.

#### Single Layer Flexible wall

#### 1-hour wall systems

The wall must have a minimum thickness of 90mm and comprise of steel stud framing lined on both faces with minimum of 1 layer of 13mm thick fire grade plasterboard and be tested to achieve an FRL of -/60/60 or 60/60/60 with or without wall cavity insulation as per plasterboard wall installation detail. It is required wall shall be fixed to the concrete slab above.

#### **Floor Constructions**

The floor must have a minimum thickness of 150 mm and comprise of aerated concrete or concrete with a minimum density of 550 kg/m<sup>3</sup>. The floor shall be tested to achieve at least an FRL of -/120/120 or 120/120/120. The floor incorporates metal decking similar to that tested in WARRES 71151A.

#### Wall Parallel with Metal deck profile







Figure 16 – Single layer plasterboard wall parallel to metal decking profile



Figure 17 – Single/Double layer plasterboard wall perpendicular to metal decking profile[Height of the space in the metal deck profile maximum 30mm (h)× 15mm(w)]

#### 3.6 PRONTO PANEL TOP, EDGE AND BOTTOM JOINT SEAL WITH CP 606 SEALANT

Pronto panels with a thickness of 60mm and a density of 744 kg/m<sup>3</sup> incorporated tongue and groove butt joints shall be joined together and sealed with Hilti CP 606 sealant. The maximum sealant gap shall be 20mm and the sealant depth shall be a minimum of 15mm controlled by a 16mm diameter IBS backing rod.

The wall system shall be tested to achieve a minimum performance resistance level of up to -/60/60.



Figure 18 – Pronto wall top detail



Figure 19 – Pronto wall base detail

### 4 REFERENCED TEST PROCEDURES

The referenced assessment report is prepared with reference to the requirements of AS 1530.4:2014 and AS 4072.1-2005.

### 5 FORMAL ASSESSMENT SUMMARY

Based on the discussion presented in the referenced assessment report, it is the opinion of this testing authority that if the specimen described in section 1 had been modified within the scope of section 3, it will achieve the performance as stated below if tested in accordance with the test method referenced in Section 4 and subject to the requirements of Section 7:

	Wall Lining Thickness	Backfilling Material	Seal Type	Max. Joint Width W (mm)	Min. Depth of Sealant t <sub>A</sub> (mm)	Min. Wall Depth t⊧ (mm)	Refer Figure	FRL
	1 x min. 13mm (E₁ and E₃)	Nil	Deflection head	20	depth of wall lining	90mm	Eiguro 1 C	-/60/60
т	1 x min. 16mm (E₁ and E₃)	Nil	or Wall to Floor	20	depth of wall lining	96mm	rigure r o	-/90/90
NIOI			Deflection	30	20		Fig 1 A, B	-/120/120
HORIZONTAL J	2 x min. 13mm or	PE rod (C <sub>1</sub> ) or Mineral	head	30	depth of wall linings	100mm	Fig 1 C	-/120/120
	16mm (E₁ and E₃)	m wool (B) I E <sub>3</sub> ) or CF 126 (C <sub>2</sub> )		30	20	TOOIIIII	Fig 1 A, B	-/120/120
			Floor	30	depth of wall linings		Fig 1 C	-/120/120
	2 x min. 16mm (E2)	Nil	Deflection head	27	32	100mm	Fig 1C	-/180/180
VERTICAL JOINT	1 x min. 13mm (E₁ and E₃)	Mineral wool (B)		30	depth of wall lining	90mm	Figure 2	-/60/60
	1 x min. 16mm (E₁ and E₃)	Mineral wool (B)	I Wall to Wall C1) C1) Control joints C2)	30	depth of wall lining	96mm	Figure 3 A	-/90/90
	2 x min. 13mm or 16mm (E <sub>1</sub> , E <sub>2</sub> and E <sub>3</sub> )	$\begin{array}{c c} & \text{PE rod } (C_1) \\ 2 \text{ x min.} & \text{ or } \\ 13 \text{mm or } & \text{Mineral} \\ 16 \text{mm} & \text{wool } (B) \\ (E_1, E_2 \text{ and } & \text{ or } \\ E_3) & \text{ CF } 126 \ (C_2) \end{array}$		30	20	100mm	Figure 2 Fig 3 A, B, C Fig 5 A, B, C	-/120/120
				30	40		Fig 4 A,B,C (one side)	-/120/120

Table 1 – Control Joints and Gap Seals in Flexible Walls specified in Section 3.2

Note: Joints and gaps less than 20mm can have a minimum depth of sealant equal to the total thickness of plasterboard lining.

Table 2 – Linear Joints and Gap Seals in Rigid Walls. $t_F \ge 100$ mm thick and specified in
Section 3.2

	Backfilling Material	Seal Type	Max. Joint Width W (mm)	Min. Depth of Sealant t₄ (mm)	Refer Figure	FRL								
NT		Deflection	30	20	Figure 6 A,B,C	-/120/120								
	PE rod (C <sub>1</sub> ) or	head	30	40	Figure 7 A (one side)	-/120/120								
RIZONT,	Mineral wool (B) or CF 126 (C <sub>2</sub> )	Wall To	30	20	Figure 6 A,B,C	-/120/120								
ЮН	ЮН	Ceiling	Ceiling	Celling	Celling	Ceiling	Cening	Ceiling	Ceiling	Ceiling	30	40	Figure 7 A (one side)	-/120/120
AL JOINT	PE rod (C <sub>1</sub> ) or Mineral wool (B)	Wall To Wall	30	20	Figure 8 A.B.C Figure 10 A.B.C	-/120/120								
VERTICA	or CF 126 (C <sub>2</sub> )	or And CF 126 (C <sub>2</sub> ) Control Joints	30	40	Figure 9 A B C (one side)	-/120/120								

Note: For Joints and gaps where sealant fixed on both sides, Joints and gaps less than 20mm must have a minimum depth of sealant at least equal to the gap width

	Backfilling Material	Seal Type	Max. Joint Width W (mm)	Min. Depth of Sealant t <sub>A</sub> (mm)	Refer Figure	FRL	
NT		Deflection	30	20	Figure 6 A, B, C	-/240/240	
AL JOI	PE rod (C <sub>1</sub> ) or	head	30	40	Figure 7 A, (one side)	-/240/180	
IZONT,	Mineral wool (B) or CF 126 (C <sub>2</sub> )	Wall to	30	20	Figure 6 A, B,C	-/240/240	
HORI	0. 120 (02)	Cei	Ceiling	30	40	Figure 7 A (one side)	-/240/180
RTICAL JOINT	PE rod (C <sub>1</sub> ) or Mineral wool (B) or	Wall to Wall And Control	30	20	Figure 8 A.B.C Figure 10 A.B.C	-/240/240	
, ve	CF 126 (C <sub>2</sub> )	Joints	30	40	Figure 9 A (one side)	-/240/180	

Table 3– Linear Joints and Gap Seals in Rigid Walls,  $t_{\text{E}} \geq 230\,\text{mm}$  thick and specified in Section 3.2

Note: For Joints and gaps where sealant fixed on both sides, Joints and gaps less than 20mm must have a minimum depth of sealant at least equal to the gap width

	Wall Lining	Backfilling Material	Seal Type	Max. Joint Width W (mm)	Min. Depth of Sealant t₄ (mm)	Min. Wall Depth t <sub>E</sub> (mm)	Refer Figure	FRL
<b>UNT</b>	1 x min. 13mm (E₁ and E₃)		Wall Parallel	65	5	90mm	Figure 11 and 12 or	-/60/60
ZONTAL JO	1 x min. 16mm (E <sub>1</sub> and E <sub>3</sub> )	Mineral wool (B)	with deck profile or Wall Across The deck	65	5	96mm	Figure 13 and 14	-/90/90
HOR	2 x min. 13mm or 16mm (E <sub>1</sub> and E <sub>3</sub> )		profile	65	5	100mm	Figure 11 and 12 or Figure 13 and 14	-/120/120

Table 4– Gap Seals between Walls and Floors with Metal Decks specified in Section 3.3

Table 5 – Linear Joints and Gap Seals in Rigid Floors,  $t_{\text{E}} \geq$  150 mm thick specified in Section 3.4

	Backfilling Material	Min. Depth of Backfilling Material t <sub>B</sub>	Max. Joint Width W	Min. Depth of Sealant t <sub>A</sub>	Refer Figure	FRL
	PE Rod (C1)	-	20mm	10mm	Figure 15B	-/240/120
JOINT	CF 126 foam (C <sub>2</sub> )	135mm	20mm	15mm	Figure 15C	-/240/180
FLOOR	Mineral wool (B)	70mm	30mm	15mm	Figure 15A	-/240/180
	Mineral wool (B)	144mm	15mm	6mm	Figure 15A	-/240/240

Table 6 – Linear Joints and Gap Seals in Rigid Metal deck Floors,  $t_{\text{E}} \ge 150 \, \text{mm}$  thick specified in Section 3.5

Metal deck floor thickness	Plasterboard wall	Max. Sealant Width W	Min. Depth of Sealant t <sub>A</sub>	Backing	Refer Figure	FRL
≥ 155	13 or 16 mm fire rated plasterboard single plasterboard layer wall with minimum 64 mm steel track	30mm	13mm	Wall steel track	Figures 16 and 17	-/60/60
≥ 155	13 or 16 mm fire rated plasterboard double plasterboard layer wall with minimum 64 mm steel track	30mm	13mm	Wall steel track	Figures 15 and 17	-/120/120

Table 7 – Linear Joints and Gap Seals in Pronto panel wall system,  $t_{\text{E}} \ge 60 \text{ mm}$  thick specified in Section 3.6

Wall system	Max. Sealant Gap	Min. Depth of Sealant	Backing	Refer Figure	FRL
Pronto panel wall with a minimum density of 744 kg/m <sup>3</sup>	20mm	15mm	IBS backing rod	Figure 18 and Figure 19	-/60/60

### 6 DIRECT FIELD OF APPLICATION

The referenced assessment report assessment applies to penetrations in walls exposed to fire from either side or from the side stated (see drawings in section 3) and applies to penetrations in floors exposed to fire from underside only.

### 7 REQUIREMENTS

The referenced assessment report details the methods of construction, test conditions and assessed results that would have been expected had the specific elements of construction described herein been tested in accordance with AS 1530.4:2014.

Any further variations with respect to size, constructional details, loads, stresses, edge or end conditions, other than those identified in the referenced assessment report, may invalidate the conclusions drawn in this report.

It is required that the top track of wall construction be fixed to the structure in a manner representative of the tested construction. The details of these fixings have been omitted for clarity.

It is required that the supporting construction be otherwise tested to achieve the FRL in section 5.

### 8 VALIDITY

The referenced assessment report does not provide an endorsement by Warringtonfire Aus Pty Ltd of the actual products supplied.

The conclusions of this assessment may be used to directly assess the fire resistance performance under such conditions, but it should be recognised that a single test method will not provide a full assessment of the fire hazard under all fire 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. 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 only 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.

The referenced assessment report is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that the referenced assessment report be reviewed on or, before, the stated expiry date.

The information contained in the referenced assessment report shall 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 the referenced assessment report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.

### 9 AUTHORITY

#### 9.1 APPLICANT UNDERTAKINGS AND CONDITIONS OF USE

By using the referenced assessment report as evidence of compliance or performance, the applicant(s) confirms that:

 to their knowledge the component or element of structure, which is the subject of this assessment, has not been subjected to a fire test to the Standard against which this assessment is being made, and

- they agree to withdraw the referenced assessment report from circulation should the component or element of structure be the subject of a fire test by a test authority in accordance with the Standard against which this assessment is being made and the results are not in agreement with this assessment, and
- they are not aware of any information that could adversely affect the conclusions of this assessment and if they subsequently become aware of any such information, agree to ask the assessing authority to withdraw the assessment.

#### 9.2 GENERAL CONDITIONS OF USE

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