

# Regulatory Information Report

**RIRF24011**

**Fire resistance test for control joints in the  
horizontal concrete separating element**

Client: Agnitek Pty Ltd

Test method: AS1530.4-2014

Report Date: 29/06/2024

Test number: PF24011



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## 1.1 Document Revision Schedule

Revision #	Date	Description
1	29/06/2024	Issued to Client

## 1.2 Signatories

Report	Name	Signature	Date
Prepared by:	Alexey Kokorin		29/06/2024
Authorised by:	Andrew Bain (Authorized signatory)		29/06/2024



All tests reported herein  
have been performed in  
accordance with the  
laboratory's scope of  
accreditation

## 2. Report Summary

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Control joints were tested in a 120mm thick concrete slab, with approximately 200mm spacing between each joint. The joints were protected with AGNI-Seal sealant, varying in width and depth of the sealant. Sealant was applied flush with both faces of the concrete slab.

Specimen #	Joint description	Actual Integrity (min)	Actual Insulation (min)	FRL
A	10mm x10mm horizontal joint (AGNI-Seal) Both fire and non-fire sides	183NF	141	-/180/120
B	15mm x10mm horizontal joint (AGNI-Seal) Both fire and non-fire sides	183NF	150	-/180/150
C	20mm x10mm horizontal joint (AGNI-Seal) Both fire and non-fire sides	183NF	129	-/180/120
D	40mm x20mm horizontal joint (AGNI-Seal) Both fire and non-fire sides	183NF	128	-/180/120
E	30mm x15mm horizontal joint (AGNI-Seal) Both fire and non-fire sides	183NF	165	-/180/150

**NF- No failure during the test**

## 3. General Information

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### 3.1 Testing Scope

#### **Applicable Standards:**

AS 1530.4-2014 Section 10: Service penetrations and control joints.

AS 4072.1-2005 (r. 2016) Components for the protection of openings in fire-resistant separating elements. Part 1: Service penetrations and control joints.

#### **Departures from Testing Method:**

There were no departures from the testing method.

#### **Test conditions:**

Conditions complied with the Standard.

### 3.2 Contact Details

#### **Accredited testing laboratory**

Fire TS Lab - Passive Fire Inspection and Test Services Ltd

Accreditation Number - 1335

1/113 Pavilion Drive, Mangere, Auckland, 2022

New Zealand

Contact e-mail: [tests@firelab.co.nz](mailto:tests@firelab.co.nz)

#### **Client/Applicant:**

Agnitek Pty Ltd

8 Clare St, Bayswater, VIC, 3153

Australia

Contact e-mail: [info@agnitek.com.au](mailto:info@agnitek.com.au)

#### **Manufacturer:**

Same as Client/Applicant

### 3.3 Specimen Preparation, Conditioning and Timeline

#### **Specimens conditioning and delivery to Laboratory:**

Separating element was built by the Laboratory in line with Client instructions. Installation of fire stopping system was performed by Laboratory in line with Client instructions. The Laboratory was not involved in sampling of the materials. Laboratory checked materials during construction of the specimen.

#### **Testing date:**

26/03/2024

#### **Installation completion date:**

22/02/2024

#### **Termination of The Test:**

The test was discontinued at 183 minutes.

### 3.4 Use of Reports

A regulatory information report was issued in addition to the full test report PF24011. This provides the minimum information required for regulatory compliance.

This report shall not be reproduced, except in full.

The specimen was an asymmetrical construction. The results of the test apply if exposed to fire as tested.

This report details the methods of construction, test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in AS 1530.4. Any significant variation with respect to size, constructional details, loads, stresses, edge or end conditions, other than that allowed under the field of direct application in the relevant test method, is not covered by this report.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

The test results relate to the specimens of the product in the form in which they were tested. Differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product, which is supplied or used, is fully represented by the specimens, which were tested.

The specimens were supplied by the sponsor and the Laboratory was not involved in any of selection or sampling procedures.

The results of these fire tests may be used to directly assess fire hazard, but it should be recognized that a single test method will not provide a full assessment of fire hazard under all fire conditions.

## 4. Specimen Description

### 4.1 Supporting Construction

Support Construction		
1.1	Item	120mm Concrete slab
	Dimensions	Width / Length (W/L): 1450mm x 1450mm (Nominal)
		Thickness (T): 120mm

Materials		
1.2	Item	Concrete slab
	Dimensions	Width / Length (W/L): 200mm x 1450mm
		Thickness (T): 120 mm
Installation	Used to construct separating element	
1.3	Item	Concrete slab
	Dimensions	Width / Length (W/L): 350mm x 1200mm
		Thickness (T): 120mm
Installation	Used to construct separating element	

### 4.2 Specimens

Backing		
2.1	Item	PEF Backing Rod
	Dimensions	Diameter (D): 15mm
	Installation	Installed to joint, leaving 10mm spacing on its top for AGNI-Seal
2.2	Item	PEF Backing Rod
	Dimensions	Diameter (D): 20mm
	Installation	Installed to joint, leaving 10mm spacing on its top for AGNI-Seal
2.3	Item	PEF Backing Rod
	Dimensions	Diameter (D): 30mm

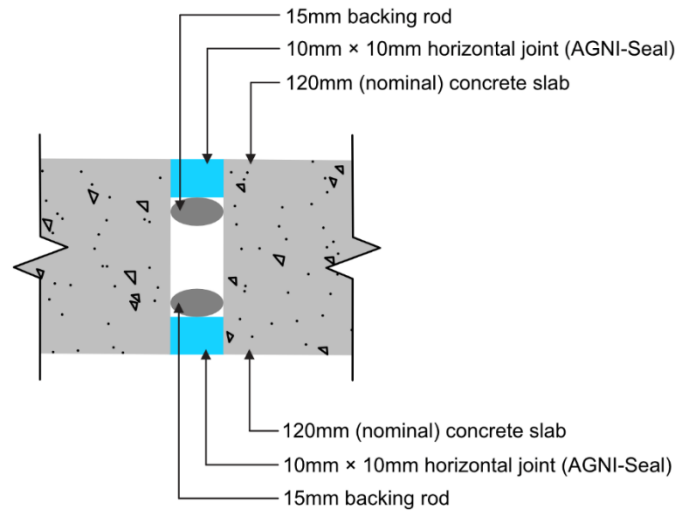


	Installation	Installed to joint, leaving 15mm spacing on its top for AGNI-Seal
2.4	Item	PEF Backing Rod
	Dimensions	Diameter (D): 50mm
	Installation	Installed to joint, leaving 20mm spacing on its top for AGNI-Seal

<b>Sealants</b>		
3.1	Item	AGNI-Seal (Fire-rated Acrylic sealant)
	Dimensions	Capacity: 600ml tube
	Installation	Filled in the joints, varying in thickness and width

## 5. Specimens

### 5.1 Specimen A



**Figure 4 – Cross section of Specimen A**

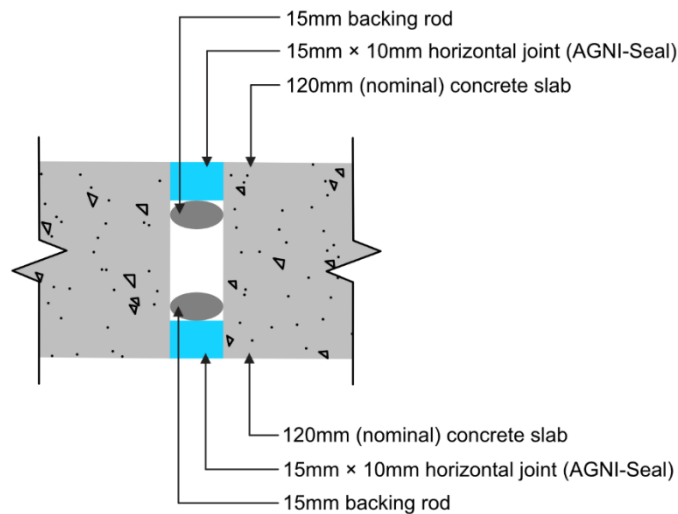
Joint Description	
Dimension	Width 10mm (nominal)
Backing Rod	15mm Diameter Sika White PEF Backing Rod
Sealant Width	10mm
Sealant Depth	10mm

Local fire-stopping system	
Application	Symmetrical - both fire and non-fire sides
System description	Install backing rod into the joint, leaving a 10mm space on top of the backing rod for the sealant. Apply AGNI-Seal into the joint, pressing firmly on top of the backing rod. Smooth the sealant surface, ensuring it is flush with the concrete surface.

### Test results

Structural adequacy	Not applicable
Integrity	No Failure at 183 minutes
Insulation	141 minutes

## 5.2 Specimen B



**Figure 6 – Cross section of Specimen B**

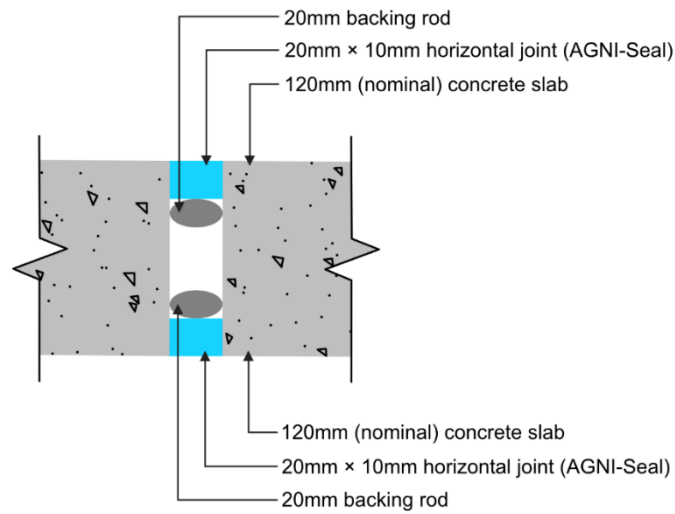
Joint Description	
Dimension	Width 15mm (nominal)
Backing Rod	15mm PEF Backing Rod
Sealant Width	15mm
Sealant Depth	10mm

Local fire-stopping system	
Application	Symmetrical - both fire and non-fire sides
System description	Install backing rod into the joint, leaving a 10mm space on top of the backing rod for the sealant. Apply AGNI-Seal into the joint, pressing firmly on top of the backing rod. Smooth the sealant surface, ensuring it is flush with the concrete surface.

### Test results

Structural adequacy	Not applicable
Integrity	No Failure at 183 minutes
Insulation	150 minutes

### 5.3 Specimen C



**Figure 8 – Cross section of Specimen C**

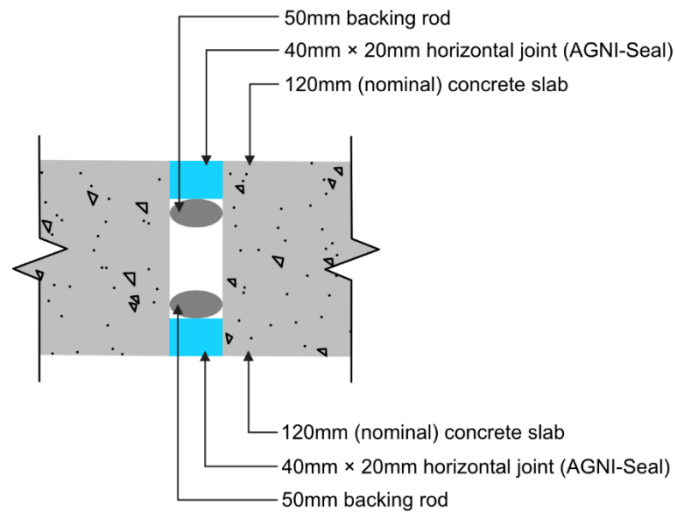
Joint Description	
Dimension	Width 20mm (nominal)
Backing Rod	20mm PEF Backing Rod
Sealant Width	20mm
Sealant Depth	10mm

Local fire-stopping system	
Application	Symmetrical - both fire and non-fire sides
System description	Install backing rod into the joint, leaving a 10mm space on top of the backing rod for the sealant. Apply AGNI-Seal into the joint, pressing firmly on top of the backing rod. Smooth the sealant surface, ensuring it is flush with the concrete surface.

### Test results

Structural adequacy	Not applicable
Integrity	No Failure at 183 minutes
Insulation	129 minutes

## 5.4 Specimen D



**Figure 10 – Cross section of Specimen D**

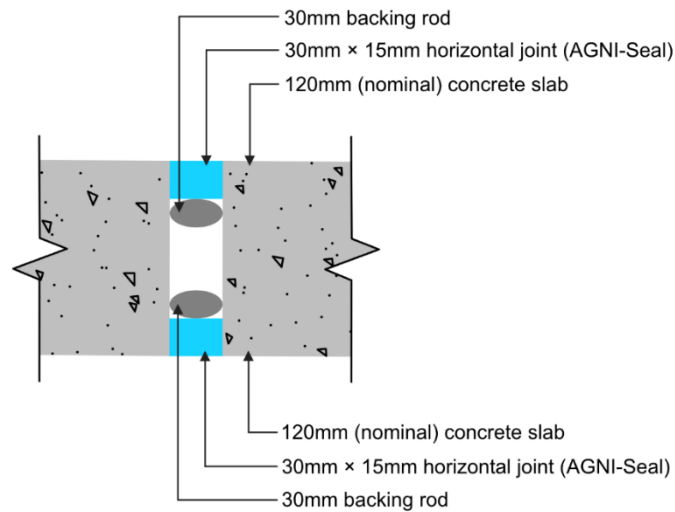
Joint Description	
Dimension	Width 40mm (nominal)
Backing Rod	50mm PEF Backing Rod
Sealant Width	40mm
Sealant Depth	20mm

Local fire-stopping system	
Application	Symmetrical - both fire and non-fire sides
System description	Install backing rod into the joint, leaving a 20mm space on top of the backing rod for the sealant. Apply AGNI-Seal into the joint, pressing firmly on top of the backing rod. Smooth the sealant surface, ensuring it is flush with the concrete surface and overlaps the concrete slab by 5mm on each side of the joint.

### Test results

Structural adequacy	Not applicable
Integrity	No Failure at 183 minutes
Insulation	128 minutes

## 5.5 Specimen E



**Figure 12 – Cross section of Specimen E**

Joint Description	
Dimension	Width 30mm (nominal)
Backing Rod	30mm PEF Backing Rod
Sealant Width	30mm
Sealant Depth	15mm

Local fire-stopping system	
Application	Symmetrical - both fire and non-fire sides
System description	Install backing rod into the joint, leaving a 15mm space on top of the backing rod for the sealant. Apply AGNI-Seal into the joint, pressing firmly on top of the backing rod. Smooth the sealant surface, ensuring it is flush with the concrete surface.

### Test results

Structural adequacy	Not applicable
Integrity	No Failure at 183 minutes
Insulation	165 minutes

## 6. Observations during the test

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Time min	Test face	SP#	OBSERVATIONS/REMARKS
			No significant behaviour to report
183			Test Discontinued

**NOTE:** E - Exposed Face (inside furnace)  
U - Unexposed Face (outside furnace)  
SE - Separating element