



EFFECTIS ERA AVRASYA

Fire Test Laboratory

Accredited Body
No: AB-0556-T



CLASSIFICATION OF FIRE RESISTANCE PERFORMANCE IN ACCORDANCE WITH EN 13501-2:2016

Sponsor	: PROMAST KİMYA SAN. TİC. A.Ş. Ovacık Mah. Hacıoğlu Sk. No:21 B/0, Başiskele, Kocaeli / TURKEY
Prepared by	: EFFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş. Dilovası OSB 5. Kısım Fırat Caddesi No:18 Dilovası, Kocaeli / TURKEY
Product name	: Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1)
Classification report No.	: EEA - 21 - 176
Issue number	: 1/2
Date of issue	: 10.12.2021

This classification report consists of 14 pages and may only be used or reproduced in its entirety.

1. INTRODUCTION

This classification report defines the classification in accordance with the procedures given in EN 13501-2:2016, assigned to Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1).

2. DETAILS OF CLASSIFIED PRODUCT

2.1. General:

The elements, Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1) are defined as a type of product.

2.2. Description:

Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1) are fully described below.

2.2.1. General

Product identification	: Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1)
Manufacturer of product	: PROMAST KİMYA SAN. TİC. A.Ş. Ovacık Mah. Hacıoğlu Sk. No:21 B/0, Başiskele, Kocaeli / TURKEY
Sponsor of test	: PROMAST KİMYA SAN. TİC. A.Ş. Ovacık Mah. Hacıoğlu Sk. No:21 B/0, Başiskele, Kocaeli / TURKEY

2.2.2. Construction

Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1) were filled into the joints of aerated concrete-aerated concrete wall system.

The supporting construction was supplied by the test laboratory (Efectis Era Avrasya) and consisted of aerated concrete blocks which have a nominal gross dry density of 450 kg/m³ and thickness of 200 mm.

➤ Joints:

- Aerated concrete – horizontal joints:
 - Joint width: 20 mm, 20 mm, 20 mm, 10 mm.
- Aerated concrete – vertical joints:
 - Joint width: 30 mm, 20 mm, 20 mm, 20 mm, 10 mm, 10 mm, 10 mm, 10 mm, 20 mm, 30 mm, 10 mm, 30 mm, 20 mm.

2.2.3. Components**2.2.3.1. Specimen 1**

Joint was filled with "Fireseal B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at exposed side, "Fireseal B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at unexposed side and with "Fire Foam B1" a depth of 120 mm between these products.

2.2.3.2. Specimen 2

Joint was filled with "Acryseal-FR B1" a depth of 20 mm at exposed side, "Acryseal-FR B1" a depth of 20 mm at unexposed side and with "Fire Foam B1" a depth of 160 mm between two products.

2.2.3.3. Specimen 3

Joint was filled with "Fireseal B1" a depth of 20 mm at exposed side, "Fireseal B1" a depth of 20 mm at unexposed side and with "Fire Foam B1" a depth of 160 mm between two products.

2.2.3.4. Specimen 4

Joint was fully filled with "Fire Foam B1".

2.2.3.5. Specimen 5

Joint was filled with "Fireseal B1" a depth of 20 mm and "Stone wool" a depth of 30 mm at exposed side, "Fireseal B1" a depth of 20 mm and "Stone wool" a depth of 30 mm at unexposed side and with "Fire Foam B1" a depth of 100 mm between these products.

2.2.3.6. Specimen 6

Joint was filled with "Acryseal-FR B1" a depth of 20 mm at exposed side, "Acryseal-FR B1" a depth of 20 mm at unexposed side and with "Fire Foam B1" a depth of 160 mm between two products.

2.2.3.7. Specimen 7

Joint was filled with "Fireseal B1" a depth of 20 mm at expose side, "Fireseal B1" a depth of 20mm at unexposed side and with "Fire Foam B1" a depth of 160 mm between two products.

2.2.3.8. Specimen 8

Joint was filled with "Acryseal-FR B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at exposed side, "Acryseal-FR B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at unexposed side and with "Fire Foam B1" a depth of 120 mm between these products.

2.2.3.9. Specimen 9

Joint was filled with "Acryseal-FR B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at exposed side, "Acryseal-FR B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at unexposed side.

2.2.3.10. Specimen 10

Joint was filled with "Fireseal B1" a depth of 10 mm at exposed side, "Fireseal B1" a depth of 10 mm at unexposed side and with "Fire Foam B1" a depth of 180 mm between two products.

2.2.3.11. Specimen 11

Joint was filled with "Acryseal-FR B1" a depth of 10 mm at exposed side, " Acryseal-FR B1" a depth of 10 mm at unexposed side and with "Fire Foam B1" a depth of 180 mm between two products.

2.2.3.12. Specimen 12

Joint was filled with "Fireseal B1" a depth of 10 mm at exposed side, "Fireseal B1" a depth of 10 mm at unexposed side and "Polyethylene seal" a depth of 15 mm placed at both sides.

2.2.3.13. Specimen 13

Joint was fully filled with "Fire Foam B1".

2.2.3.14. Specimen 14

Joint was fully filled with "Fire Foam B1".

2.2.3.15. Specimen 15

Joint was fully filled with "Fire Foam B1".

2.2.3.16. Specimen 16

Joint was filled with "Acryseal-FR B1" a depth of 10 mm at exposed side, "Acryseal-FR B1" a depth of 10 mm at unexposed side and "Polyethylene seal" a depth of 15 mm placed at both sides.

2.2.3.17. Specimen 17

Joint was filled with "Acryseal-FR B1" a depth of 20 mm at exposed side, "Acryseal-FR B1" a depth of 20 mm at unexposed side and with "Fire Foam B1" a depth of 160 mm between two products.

2.2.3.18. Specimen 18

Joint was filled with "Fireseal B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at exposed side, "Fireseal B1" a depth of 20 mm and "Stone wool" a depth of 20 mm at unexposed side.

- Type: Fire Foam B1 Fire resistant polyurethane based B1 foam

- Density: 28-32 kg/m³

- Type: Fireseal B1 notral based silicone

- Density: 1,26 g/lit

- Type: Acryseal-FR B1 acrylic based sealent

- Density: 1,52 g/ml

- Type: Stone wool

- Density: 70 kg/m³

- Type: Polyethylene seal

- Density: 25-30 kg/m³

Length of joints: 900 mm.

Specimen Ref.	Gap width/depth	Orientation
1	20/200 mm	Horizontal
2	20/200 mm	Horizontal
3	20/200 mm	Horizontal
4	10/200 mm	Horizontal
5	30/200 mm	Vertical
6	20/200 mm	Vertical
7	20/200 mm	Vertical
8	20/200 mm	Vertical
9	20/200 mm	Vertical
10	10/200 mm	Vertical
11	10/200 mm	Vertical
12	10/200 mm	Vertical
13	10/200 mm	Vertical
14	20/200 mm	Vertical
15	30/200 mm	Vertical
16	10/200 mm	Vertical
17	30/200 mm	Vertical
18	20/200 mm	Vertical

See figure 1-9 for joint locations.

3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Reports

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
EFFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş.	PROMAST KİMYA SAN. TİC. A.Ş.	RFTR21254	EN 1366-4:2021

3.2. Results

Specimen No.	Criteria	
	Integrity, (E) – Cotton pad – Flames longer than 10 sec.	Insulation, (I) – Maximum temperature
Specimen 1	N.A-N.	N
Specimen 2	N.A-N.	N
Specimen 3	N.A-N.	N
Specimen 4	N.A-N.	N
Specimen 5	N.A-N.	N
Specimen 6	N.A-N.	N
Specimen 7	N.A-N.	N
Specimen 8	N.A-N.	N
Specimen 9	N.A-N.	N
Specimen 10	N.A-N.	N
Specimen 11	N.A-N.	N
Specimen 12	N.A-N.	N
Specimen 13	N.A-N.	N
Specimen 14	249 th minute	*
Specimen 15	138 th minute	*
Specimen 17	N.A-N.	N
Specimen 18	N.A-N.	N
*: Insulation criteria was failed due to failure of Integrity.		
The heating was terminated at 360 th minute after consulted a sponsor.		

"N": No failure/not observed

"N.A.": Not applied

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1. Reference of classification

This classification has been carried out in accordance with clause 7.5.9 of EN 13501-2:2016.

4.2. Classification

Insulated firestop joint system (Fire Foam B1, Fireseal B1 and Acryseal-FR B1) are classified according to the following combinations of performance parameters and classes:

FIRE RESISTANCE CLASSIFICATION	
Specimen reference	Classification
1	E240 –EI240 – T – X – W20
2	E240 –EI240 – T – X – W20
3	E240 –EI240 – T – X – W20
4	E240 –EI240 – T – X – W10
5	E240 –EI240 – V – X – W30
6	E240 –EI240 – V – X – W20 to W30
7	E240 –EI240 – V – X – W20
8	E240 –EI240 – V – X – W20
9	E240 –EI240 – V – X – W20
10	E240 –EI240 – V – X – W10
11	E240 –EI240 – V – X – W10
12	E240 –EI240 – V – X – W10
13	E240 –EI240 – V – X – W10 to W20
14	E240 –EI240 – V – X – W10 to W20
15	E120 –EI120 – V – X – W30
16	E240 –EI240 – V – X – W10
17	E240 –EI240 – V – X – W20 to W30
18	E240 –EI240 – V – X – W20

The classes obtained for the linear joint seals are specified by the letters indicating the test conditions as given in table below:

Test conditions	Designation
Specimen orientation: <ul style="list-style-type: none"> Horizontal supporting construction Vertical supporting construction – vertical joint Vertical supporting construction – horizontal joint 	H V T
Movement capability: No movement Movement induced (in %)	X M000
Type of splices: Manufactured Field Both manufactured and field	M F B
Joint widths range (in mm)	W00 to 99

4.3. Field of application

4.3.1 General

This report details the method of construction, the test conditions and the results obtained when the specific elements of construction described herein was tested following the procedure outlined in EN 1363-1:2020, and when appropriate EN 1363-2:1999. Any significant deviation with respect to size, constructional details, load stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report

4.3.2 Orientation

The possible orientation and the scope of application are defined in EN 1366-4:2021 and Table 3. According to the table the specimens was tested orientation which means the scope of application is B.

Tested Orientation	Application
A	A, C, E ^a
<u>B</u>	<u>B</u>
D	C, D
^a Orientation E will only be covered by test orientation A if shear movement was chosen and one face of the joint was fixed and the other face was moved.	

Key

- A linear joint in a horizontal test construction
- B vertical linear joint in a vertical test construction
- C horizontal linear joint in a vertical test construction
- D horizontal wall joint abutting a floor, ceiling or roof
- E horizontal floor joint abutting a wall

4.3.3 Supporting construction

Aerated concrete blocks with a nominal gross dry density of 450 kg/m³, having a thickness of at least 200 mm.

4.3.4 Seal position

Test results are valid only for the position in which the product was tested.

4.3.5 Mechanically induced movement

The movement capability of the linear joint seal is not allowed to exceed $\pm 7,5$ % due to be tested without mechanically induced movement.

5. LIMITATIONS

This classification report does not represent any type approval or certification of the product. This report is initially valid until **10th December 2022** providing that no significant modifications are made in technical specification of the specimen and related test and classification standards.

Signed:

Approved:



.....
e-signed
Yiğitcan KEPİR
Person in the charge of tests

.....
e-signed
Ali BAYRAKTAR
Laboratory Manager

6. DRAWINGS

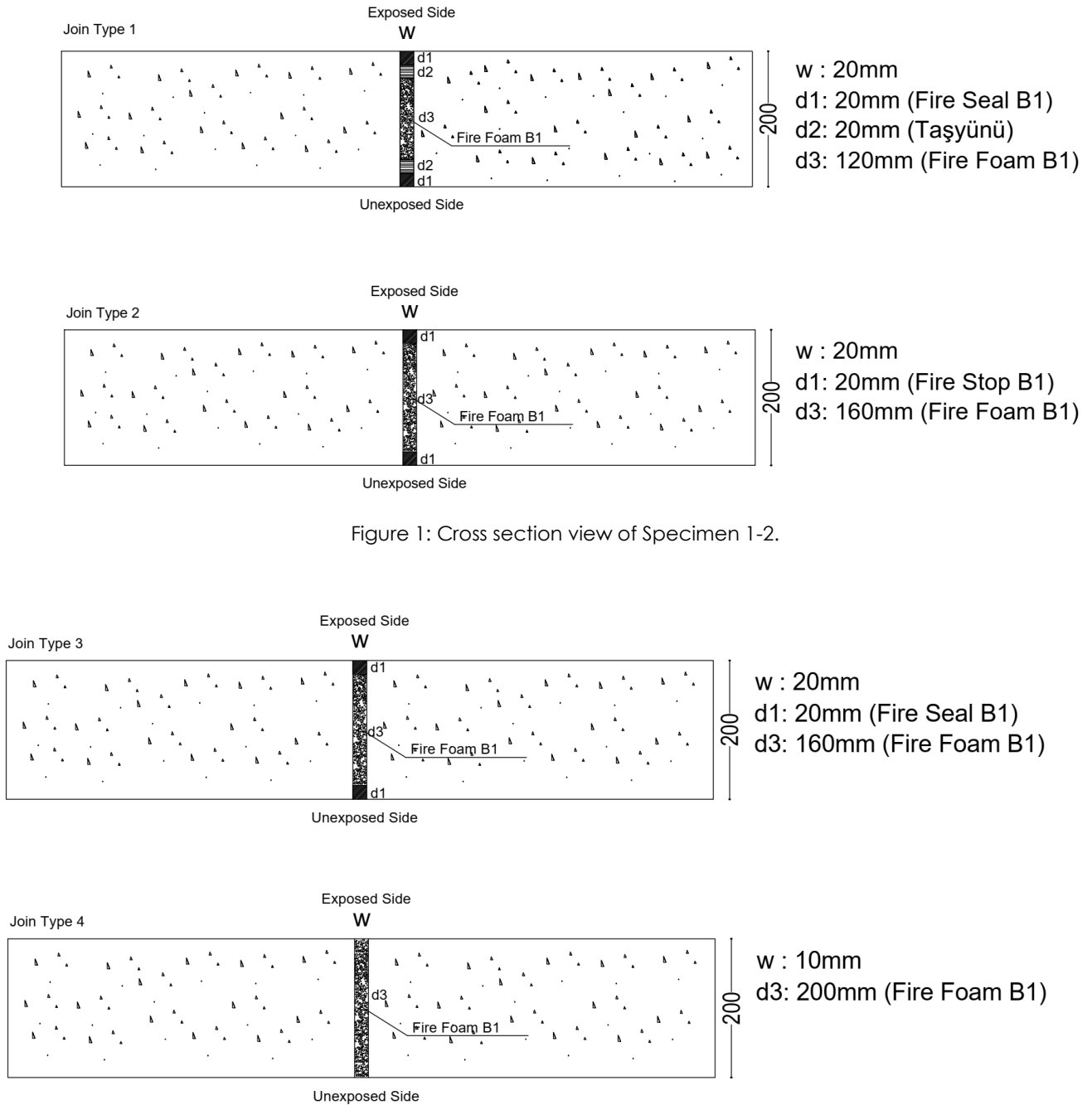


Figure 1: Cross section view of Specimen 1-2.

Figure 2: Cross section view of Specimen 3-4.

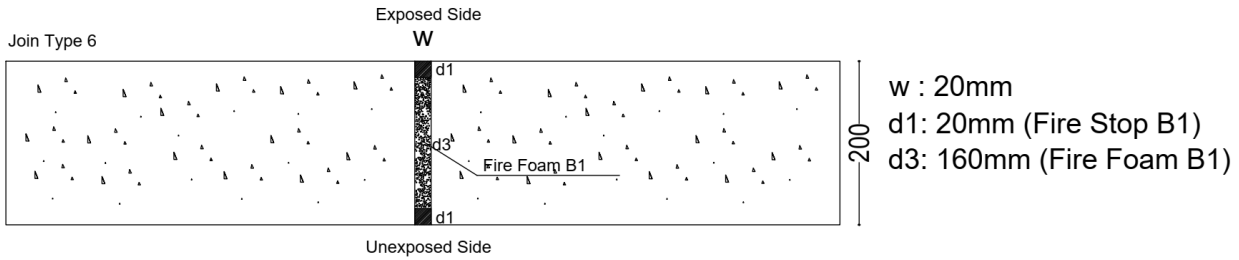
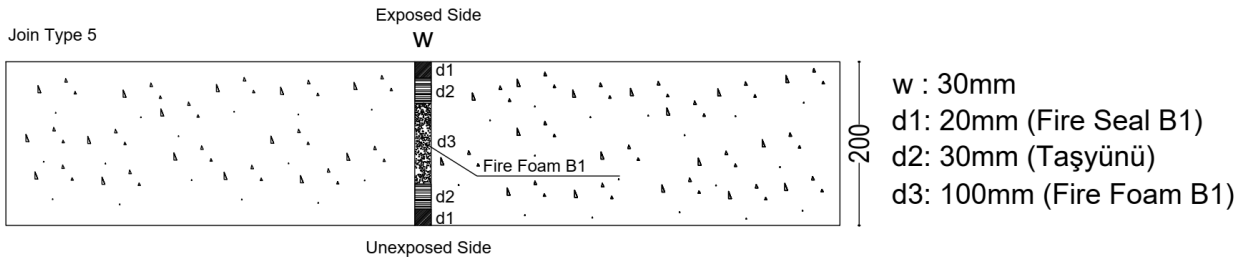


Figure 3: Cross section view of Specimen 5-6.

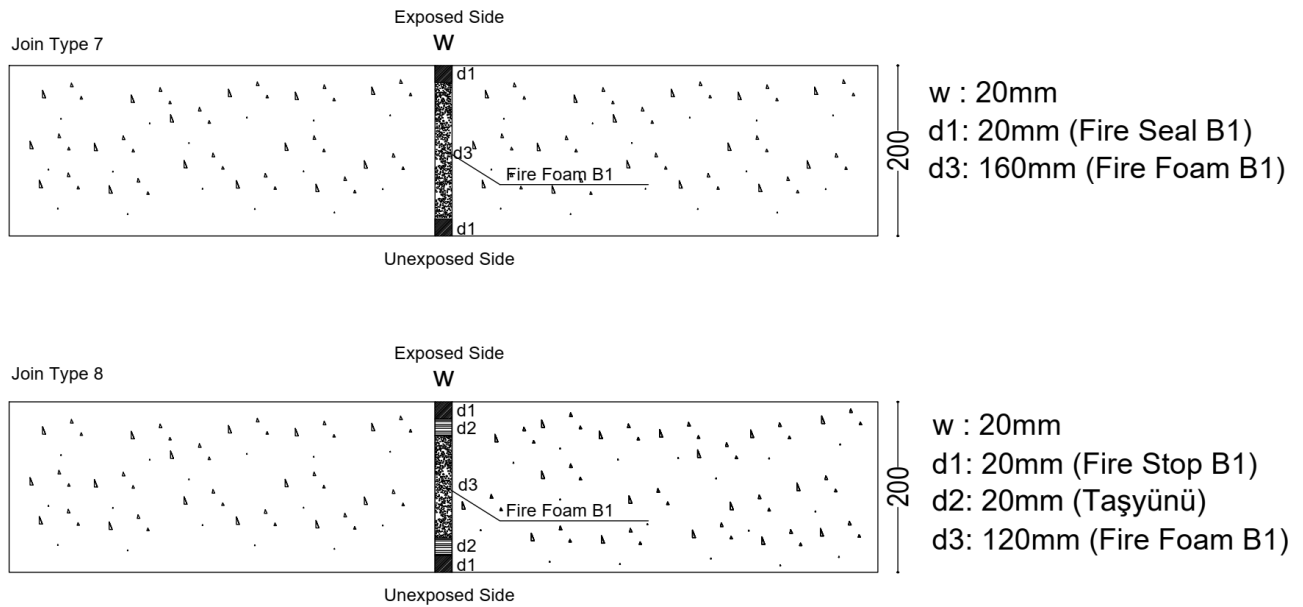


Figure 4: Cross section view of Specimen 7-8.

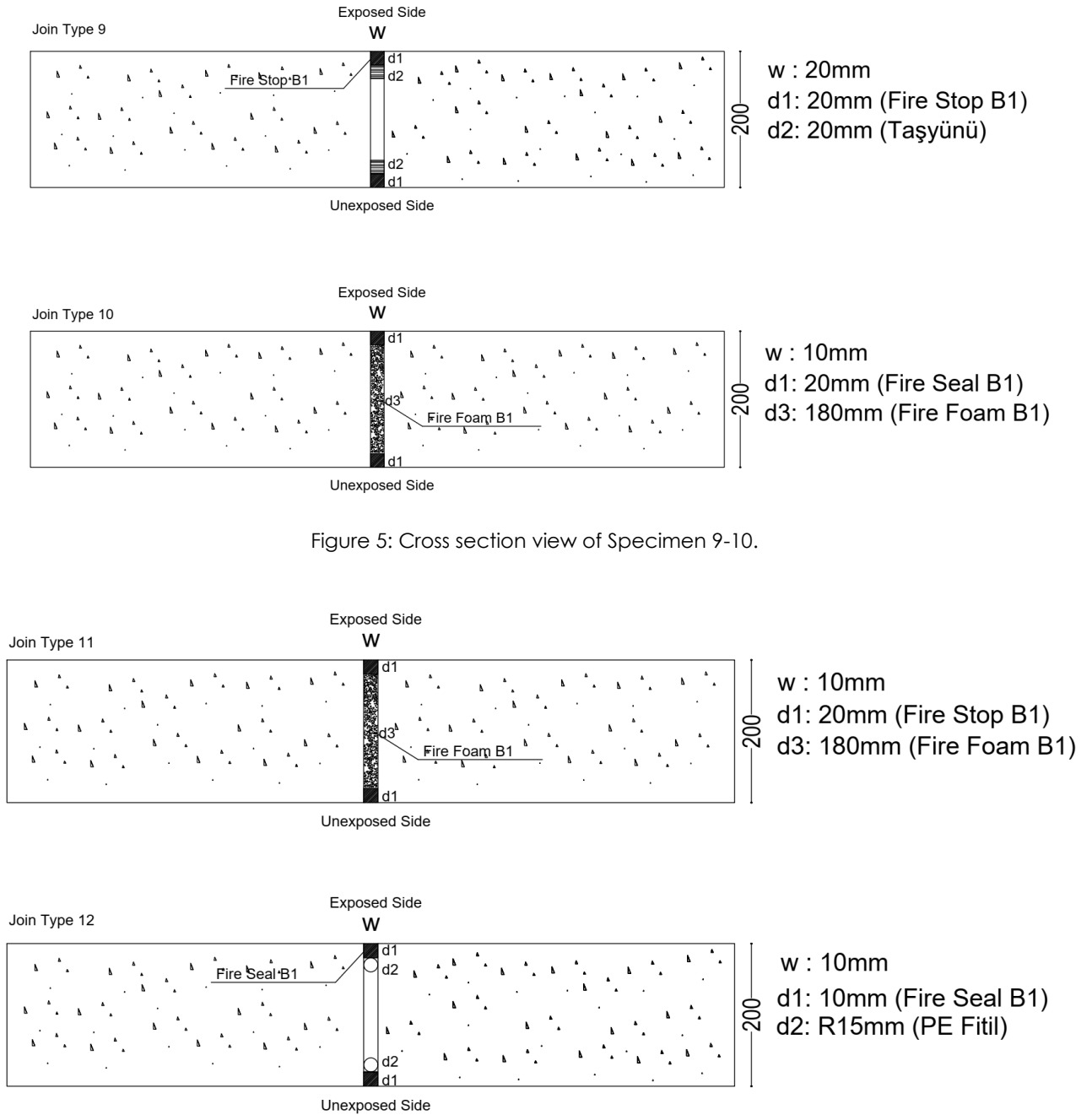


Figure 5: Cross section view of Specimen 9-10.

Figure 6: Cross section view of Specimen 11-12.

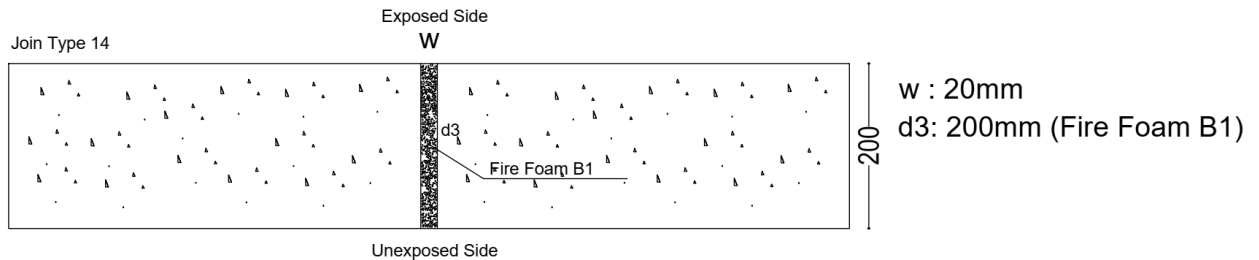
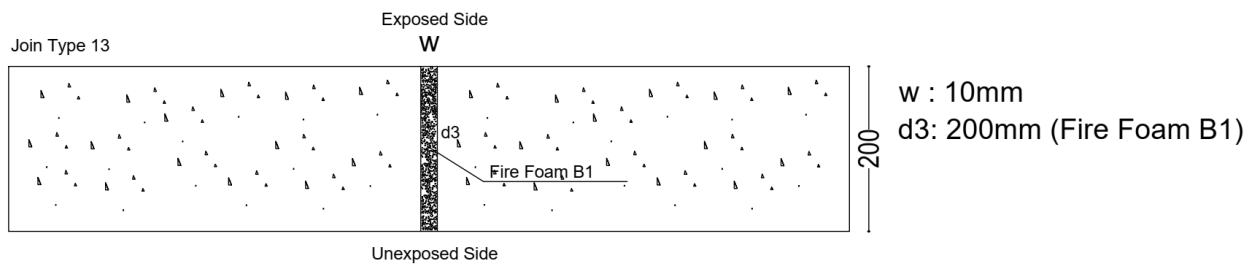


Figure 7: Cross section view of Specimen 13-14.

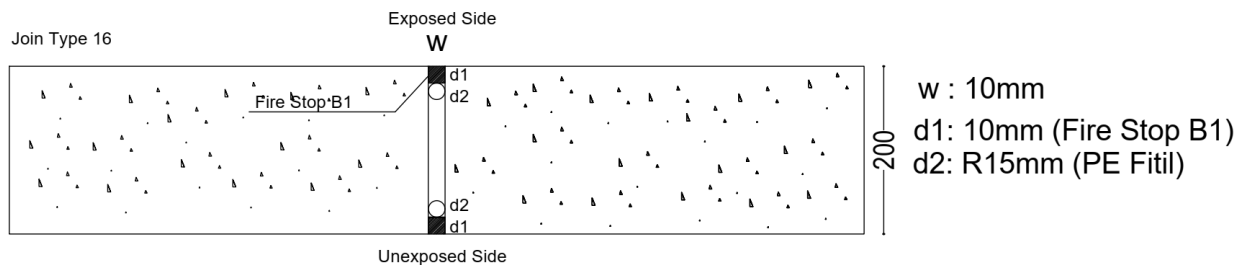
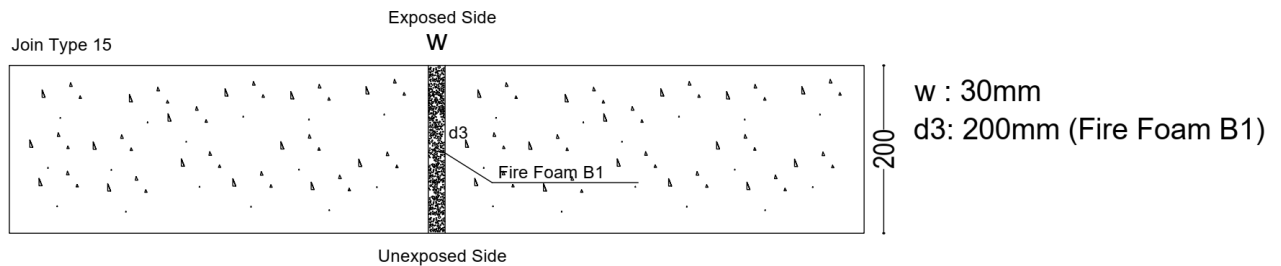


Figure 8: Cross section view of Specimen 15-16.

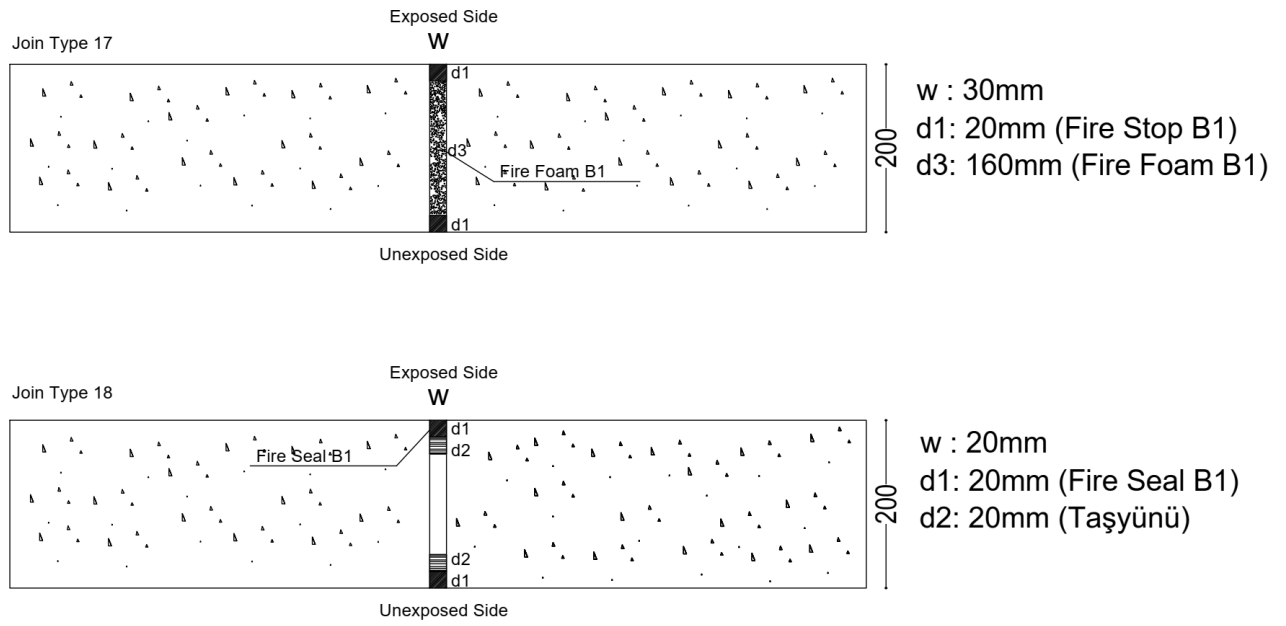


Figure 9: Cross section view of Specimen 17-18.

Wall Thickness mm	Tested Product	Joint No	Position	Joint Width w (mm)	Joint Depth d1 (mm)	Backer Rod (Exposed Side) d2 (mm)	Joint Depth d3 (mm)	Backer Rod (UnExposed Side) d2 (mm)	Joint Depth d1 (mm)
200	FireFoam B1	1	Horizontal	20	20 (FireSeal B1)	Stone wool (20mm*20mm)	120 (FireFoam B1)	Stone wool (20mm*20mm)	20 (FireSeal B1)
200	FireFoam B1	2	Horizontal	20	20 (FireStop B1)		160 (FireFoam B1)		20 (FireStop B1)
200	FireFoam B1	3	Horizontal	20	20 (FireSeal B1)		160 (FireFoam B1)		20 (FireSeal B1)
200	FireFoam B1	4	Horizontal	10			200		
200	FireFoam B1	5	Vertical	30	20 (FireSeal B1)	Stone wool (30mm*30mm)	100 (FireFoam B1)	Stone wool (30mm*30mm)	20 (FireSeal B1)
200	FireFoam B1	6	Vertical	20	20 (FireStop B1)		160 (FireFoam B1)		20 (FireStop B1)
200	FireFoam B1	7	Vertical	20	20 (FireSeal B1)		160 (FireFoam B1)		20 (FireStop B1)
200	FireFoam B1	8	Vertical	20	20 (FireStop B1)	Stone wool (20mm*20mm)	120 (FireFoam B1)	Stone wool (20mm*20mm)	20 (FireStop B1)
200	FireStop. B1	9	Vertical	20	20 (FireStop B1)	Stone wool (20mm*20mm)	120 (Gap)	Stone wool (20mm*20mm)	20 (FireStop B1)
200	FireFoam B1	10	Vertical	10	10 (FireSeal B1)		180 (FireFoam B1)		10 (FireSeal B1)
200	FireFoam B1	11	Vertical	10	10 (FireStop B1)		180 (FireFoam B1)		10 (FireStop B1)
200	FireSeal B1	12	Vertical	10	10 (FireSeal B1)	PE 15mm	150 (Gap)	PE 15mm	10 (FireSeal B1)
200	FireFoam B1	13	Vertical	10			200 (FireFoam B1)		
200	FireFoam B1	14	Vertical	20			200 (FireFoam B1)		
200	FireFoam B1	15	Vertical	30			200 (FireFoam B1)		
200	FireStop B1	16	Vertical	10	10 (FireStop B1)	PE 15mm	150 (Gap)	PE 15mm	10 (FireStop B1)
200	FireFoam B1	17	Vertical	30	20 (FireStop B1)		160 (FireFoam B1)		20 (FireStop B1)
200	FireSeal B1	18	Vertical	20	20 (FireSeal B1)	Stone wool (20mm*20mm)	120 (Gap)	Stone wool (20mm*20mm)	20 (FireSeal B1)

Figure 10: Specimen application details