

FIRE RESISTANCE OF CLT JOINTS

TEST REPORT

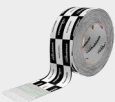


rothoblaas

Solutions for Building Technology

FIRE SOLUTIONS RANGE

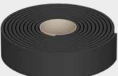
LINEAR JOINTS

PRODUCT	DESCRIPTION		
PROTECT	SELF-ADHESIVE BUTYL BAND, CAN BE PLASTERED	 	
CONSTRUCTION SEALING	COMPRESSIBLE SEALING GASKET FOR REGULAR JOINTS	 	
SPEEDY BAND	UNIVERSAL SINGLE-SIDED TAPE WITHOUT RELEASE LINER	 	
FLEXI BAND	UNIVERSAL SINGLE-SIDED HIGH-ADHESIVE TAPE	 	
INVISI BAND	TRANSPARENT SINGLE-SIDED ADHESIVE TAPE WITHOUT LINER, RESISTANT TO UV AND HIGH TEMPERATURES	 	
EXPAND BAND	SELF-EXPANDING SEALING TAPE	 	
FIRE FOAM	HIGH FIRE-RESISTANT SEALING POLYURETHANE FOAM	  	
FIRE SEALING ACRYLIC	HIGH FIRE-RESISTANT ACRYLIC SEALANT	  	
FIRE SEALING SILICONE	HIGH FIRE-RESISTANT ACRYLIC SEALANT	  	
FIRE STRIPE GRAPHITE	FLEXIBLE INTUMESCENT GASKET	 	
SUPRA BAND	UNIVERSAL DOUBLE-SIDED BUTYL TAPE WITH HIGH ADHESION	 	
MANICA PLASTER	ADHESIVE SEALING SLEEVE THAT CAN BE PLASTERED	 	
DEFENCE ADHESIVE	SELF-ADHESIVE PROTECTIVE MEMBRANE	 	
XYLOFON	HIGH PERFORMANCE RESILIENT SOUNDPROOFING PROFILE	 	

WALLS, ROOFS AND FLOORS

PRODUCT	DESCRIPTION		
MULTI BAND UV	SPECIAL UV-RESISTANT HIGH-ADHESION TAPE		
FRONT BAND UV 210	UNIVERSAL SINGLE-SIDED TAPE, HIGHLY RESISTANT TO UV RAYS		
BARRIER ALU NET SD1500	REFLECTIVE VAPOUR BARRIER Sd > 1500 m		
BARRIER ALU NET ADHESIVE 300	SELF-ADHESIVE REFLECTIVE VAPOUR BARRIER Sd > 1500 m		
BARRIER ALU FIRE A2 SD2500	REFLECTIVE AIR VAPOUR BARRIER FIRE REACTION CLASS A2-s1,d0		
TRASPIR EVO UV 115	BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS	 	
TRASPIR EVO 160	MONOLITHIC BREATHABLE MEMBRANE	  	
TRASPIR FELT EVO UV 210	BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS		
TRASPIR EVO UV 210	HIGHLY BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS	  	
TRASPIR EVO UV ADHESIVE	SELF-ADHESIVE BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS		
TRASPIR EVO 300	HIGHLY BREATHABLE MONOLITHIC MEMBRANE		
TRASPIR ALU FIRE A2 430	REFLECTIVE HIGHLY BREATHABLE MEMBRANE		

SERVICE PENETRATIONS

PRODUCT	DESCRIPTION		
MASS	INTUMESCENT BRICK FOR MECHANICAL AND ELECTRICAL TECHNICAL PENETRATIONS		
UNICOLLUM	ROLL OF FIRESTOP RING FOR MECHANICAL AND ELECTRICAL TECHNICAL PENETRATIONS		
COLLUM	FIRESTOP RING FOR MECHANICAL AND ELECTRICAL TECHNICAL PENETRATIONS		
SACCUS	FIREPROOF BAG FOR CABLE TRAY PENETRATIONS		
PANNUS	FIREPROOF COVER FOR METAL PIPE PENETRATIONS		
PANEL	PANEL WITH FIREPROOF COATING		
SEAL W	FIREPROOF ACRYLIC SEALANT		
FIRE STRIPE GRAPHITE PRO	FIRE CUFF FOR INSULATED METAL PIPES AND ELECTRICAL CABLES		
GRAPHIT FOAM	TWO-COMPONENT FIREPROOF POLYURETHANE FOAM SUPPLEMENTED WITH GRAPHITE		



FIRE RESISTANCE OF CLT JOINTS

The project aims to measure the fire resistance performance of certain types of CLT joints through a series of tests.

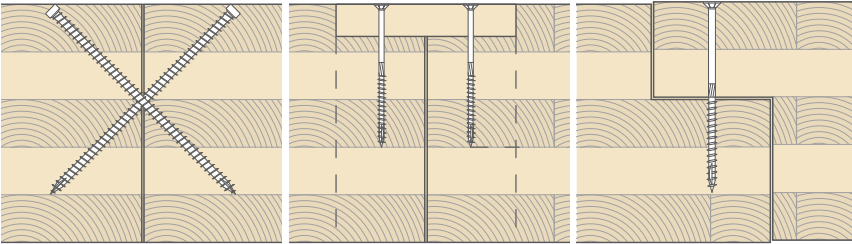
The tests were carried out according to UNI EN 1363-1:2020 "**Fire resistance tests - Part 1: General requirements**" in which the general principles for determining the fire resistance of various building elements subjected to standardised fire exposure conditions are defined. The specimen is exposed to fire from below (intrados).

PROPERTY OF THE MATERIAL

CLT			
Wood species [type]	Fir		
Denisty [kg/m³]	350-420		
Reaction to fire class	D-s2,d0		
Number of layers [no.]	5		
TYPE OF ELEMENT	WALL	FLOOR SLAB	FLOOR SLAB
Thickness (mm)	100	120	200



TYPES OF JOINT



SIMPLE

WITH JOINT COVER PLATE

HALF-LAP JOINT

PERFORMANCE CRITERIA

The criteria for assessing the performance of the test specimen are detailed in EN 1363-1: 2020. The performance of the test specimen is measured by the time, expressed in full minutes (i.e. net of seconds), in which the specimen continues to meet the performance criteria described below.

TIGHTNESS

The time in full minutes during which the specimen continues to maintain its separation function without:

- causing a cotton swab to ignite
- allowing the penetration of a feeler gauge
- developing persistent flames

INSULATION

The time in full minutes during which the specimen continues to maintain its separation function, without developing temperatures on the surface not exposed to fire that exceed the initial average temperature at all sensor positions (including the moving thermocouple) by 180 K.

Note: increments refer to the average initial temperature measured on the side not exposed to fire of the test specimen.

TESTED PRODUCTS

MANICA PLASTER (PROTECT)

SELF-ADHESIVE BUTYL BAND,
CAN BE PLASTERED

CONSTRUCTION SEALING

COMPRESSIBLE SEALING
GASKET FOR REGULAR JOINTS

SPEEDY BAND

SELF-EXPANDING
SEALING TAPE

FLEXI BAND

UNIVERSAL SINGLE-SIDED
HIGH-ADHESION TAPE

INVISI BAND

WATER- AND HEAT-RESISTANT
ADHESIVE TAPE, TRANSPARENT

EXPAND BAND

SELF-EXPANDING
SEALING TAPE

FIRE FOAM

HIGH FIRE-RESISTANT
SEALING FOAM

FIRE SEALING ACRYLIC

HIGH FIRE-RESISTANT
ACRYLIC SEALANT

FIRE SEALING SILICONE

HIGH FIRE-RESISTANT SILICONE
SEALANT

FIRE STRIPE GRAPHITE

FLEXIBLE INTUMESCENT
GASKET

SUPRA BAND

FLEXIBLE INTUMESCENT
GASKET

DEFENCE ADHESIVE

SELF-ADHESIVE PROTECTIVE
MEMBRANE

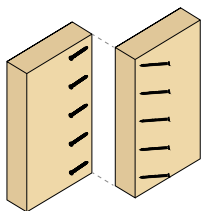
XYLOFON

HIGH PERFORMANCE RESILIENT
SOUNDPROOFING PROFILE

SUMMARY TABLE

LINEAR JOINTS ON WALL WITH A MINIMUM THICKNESS OF 100 mm

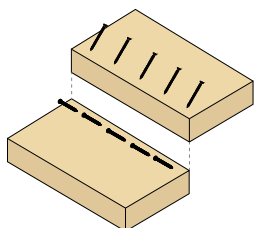
GAP 2 - 20 mm



1ST SEALING LEVEL	2ND SEALING LEVEL		
FLEXI BAND	FIRE STRIPE GRAPHITE	Joint v100 1	page 8
FIRE SEALING SILICONE		Joint v100 2	page 9
FIRE SEALING ACRYLIC		Joint v100 3	page 10
FIRE FOAM		Joint v100 4	page 11
SPEEDY BAND		Joint v100 5	page 12
SUPRA BAND	SUPRA BAND	Joint v100 6	page 13
EXPAND BAND	EXPAND BAND	Joint v100 7	page 14
CONSTRUCTION SEALING		Joint v100 8	page 15
INVISI BAND		Joint v100 9	page 16

LINEAR JOINTS ON FLOOR SLAB WITH A MINIMUM THICKNESS OF 120 mm

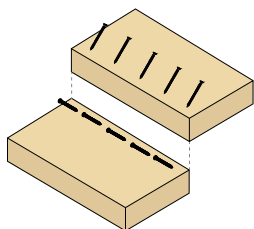
GAP 2 - 20 mm



1ST SEALING LEVEL	2ND SEALING LEVEL		
MANICA PLASTER (PROTECT)	FIRE STRIPE GRAPHITE	Joint h120 1	page 17
FLEXI BAND	FIRE STRIPE GRAPHITE	Joint h120 2	page 18
FIRE SEALING SILICONE		Joint h120 3	page 19
FIRE SEALING ACRYLIC		Joint h120 4	page 20
FIRE FOAM		Joint h120 5	page 21
FIRE FOAM	FIRE FOAM	Joint h120 6	page 22
SPEEDY BAND		Joint h120 7	page 23
DEFENCE ADHESIVE		Joint h120 8	page 24
SUPRA BAND	SUPRA BAND	Joint h120 9	page 25
EXPAND BAND	EXPAND BAND	Joint h120 10	page 26
CONSTRUCTION SEALING		Joint h120 10	page 27
DEFENCE ADHESIVE		Joint h120 12	page 28
XYLOFON		Joint h120 13	page 29

LINEAR JOINTS ON FLOOR SLAB WITH A MINIMUM THICKNESS OF 200 mm

GAP 2 - 10 mm

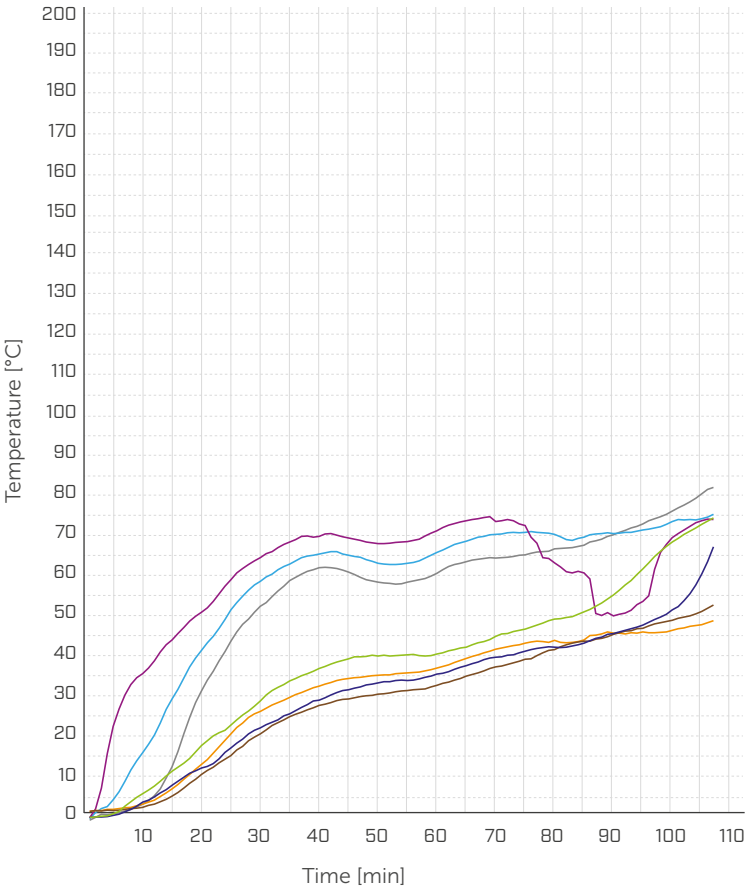
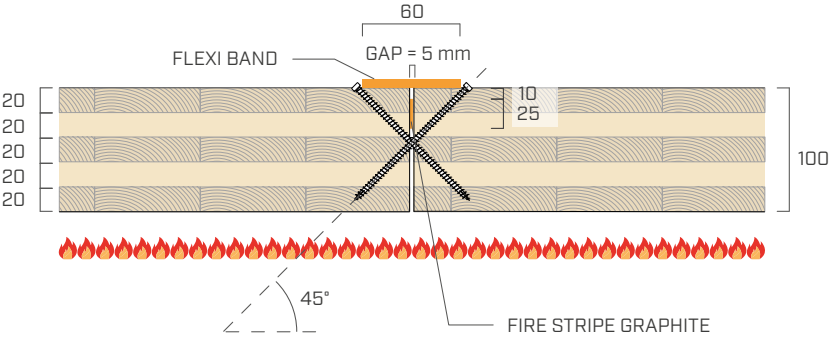


1ST SEALING LEVEL	2ND SEALING LEVEL		
FLEXI BAND		Joint h200 1	page 30
	FIRE SEALING SILICONE	Joint h200 2	page 31
	FIRE SEALING ACRYLIC	Joint h200 3	page 32
	FIRE STRIPE GRAPHITE	Joint h200 4	page 33
FLEXI BAND	FIRE SEALING SILICONE	Joint h200 5	page 34
FLEXI BAND	FIRE STRIPE GRAPHITE	Joint h200 6	p. 35
EXPAND BAND		Joint h200 7	page 36
EXPAND BAND	EXPAND BAND	Joint h200 8	page 37
EXPAND BAND	EXPAND BAND	Joint h200 9	page 38
FLEXI BAND	FIRE STRIPE GRAPHITE	Joint h200 10	page 39
CONSTRUCTION SEALING	CONSTRUCTION SEALING	Joint h200 11	page 40
CONSTRUCTION SEALING	FIRE STRIPE GRAPHITE	Joint h200 12	page 41
EXPAND BAND	FIRE STRIPE GRAPHITE	Joint h200 13	page 42
FLEXI BAND	FIRE STRIPE GRAPHITE	Joint h200 14	page 43
FIRE SEALING SILICONE		Joint h200 15	page 44
FIRE FOAM	FIRE FOAM	Joint h200 16	page 45

JOINT v100 | 1 - TEST REPORT

SIMPLE JOINT WITH VGZ7120 CROSSED SCREWS, 5 mm GAP AND FIRE STRIPE GRAPHITE + FLEXI BAND

TOP SEALANT	FLEXI BAND
Description	Universal single-sided high-adhesive tape
Material	PE film/glue/reinforcing polyester grid
Width [mm]	60
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 106 minutes
Persistent flame	
INSULATION (I)	Time > 106 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

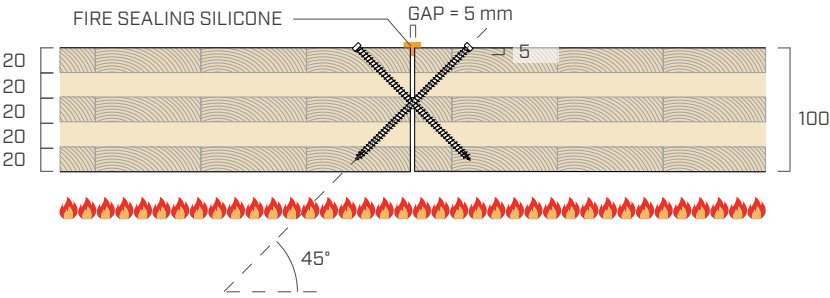
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face
- TC 05 - non-exposed face
- TC 06 - non-exposed face
- TC 07 - non-exposed face

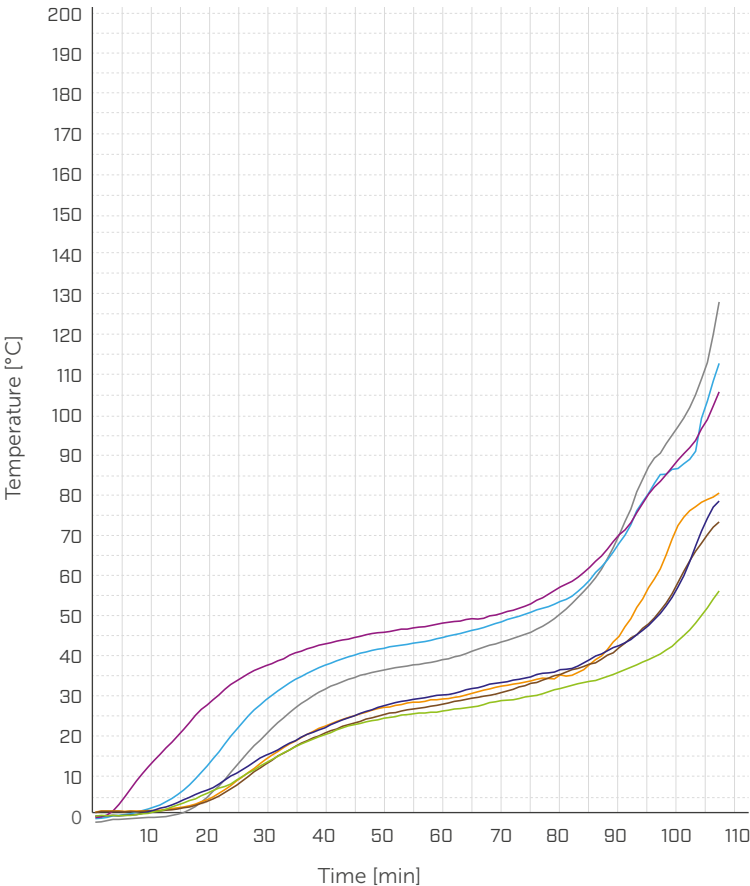
JOINT v100 | 2 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 5 mm GAP AND FIRE SEALING SILICONE

TOP SEALANT	FIRE SEALING SILICONE
Description	High fire-resistant silicone sealant
Material	Silicone
BOTTOM SEALANT	without sealant



FIRE SEALING SILICONE



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 106 minutes
INSULATION (I)	Time	> 106 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

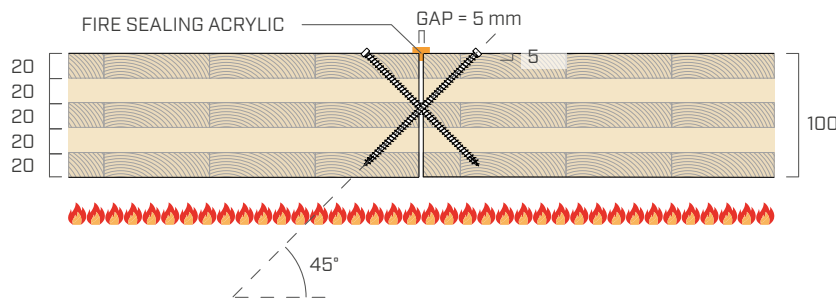
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face
- TC 05 - non-exposed face
- TC 06 - non-exposed face
- TC 07 - non-exposed face

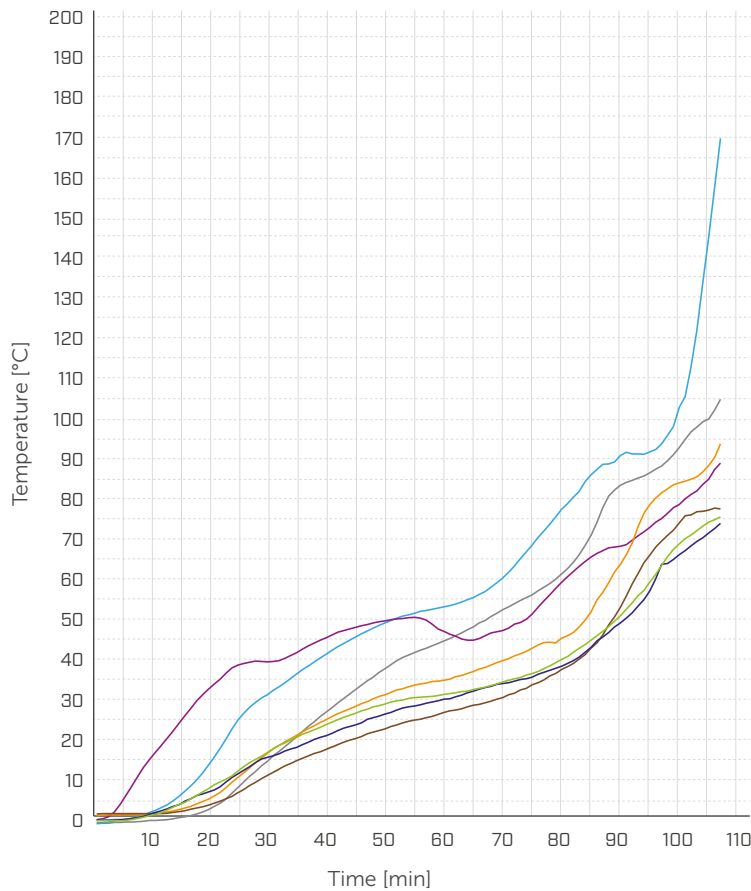
JOINT v100 | 3 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 5 mm GAP AND FIRE SEALING ACRYLIC

TOP SEALANT	FIRE SEALING ACRYLIC
Description	High fire-resistant acrylic sealant
Material	Acrylic polymers in aqueous dispersion
BOTTOM SEALANT	without sealant



FIRE SEALING ACRYLIC



PERFORMANCE CRITERIA

TIGHTNESS (E) Cotton swab **> 106 minutes**
Persistent flame



INSULATION (I) Time **> 106 minutes**

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

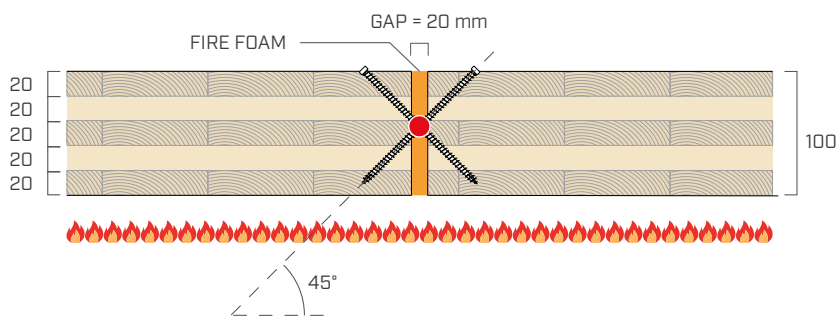
LEGEND:

TC 01 - non-exposed face
 TC 02 - non-exposed face
 TC 03 - non-exposed face
 TC 04 - non-exposed face
 TC 05 - non-exposed face
 TC 06 - non-exposed face
 TC 07 - non-exposed face

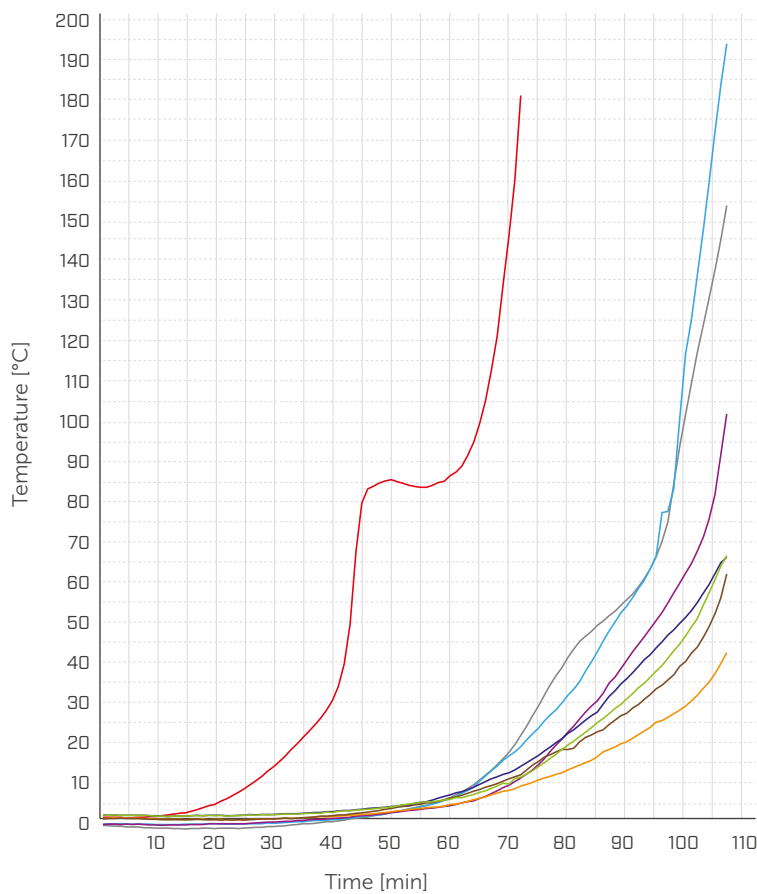
JOINT v100 | 4 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 20 mm GAP AND FIRE FOAM

SEALANT	FIRE FOAM
Description	High fire-resistant sealing foam
Material	Single component PU



FIRE
FOAM



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 106 minutes
Persistent flame	
	EI 90

INSULATION (I)	Time	105 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
• 60 mm from slab bottom (non-exposed face)	TC 01	65	< 180°C
on the unexposed face of the slab	TC 07	104	170°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

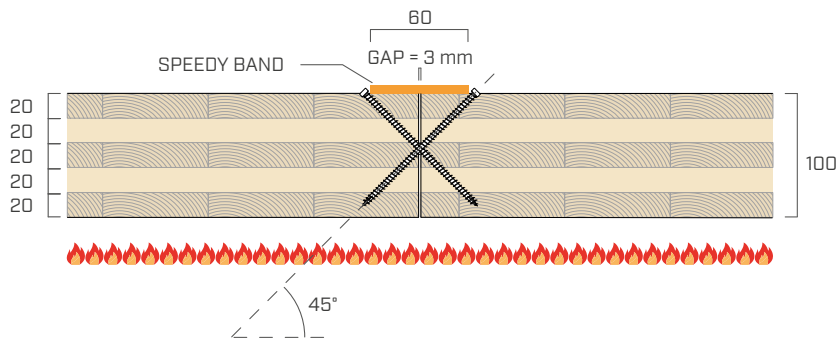
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - non-exposed face	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

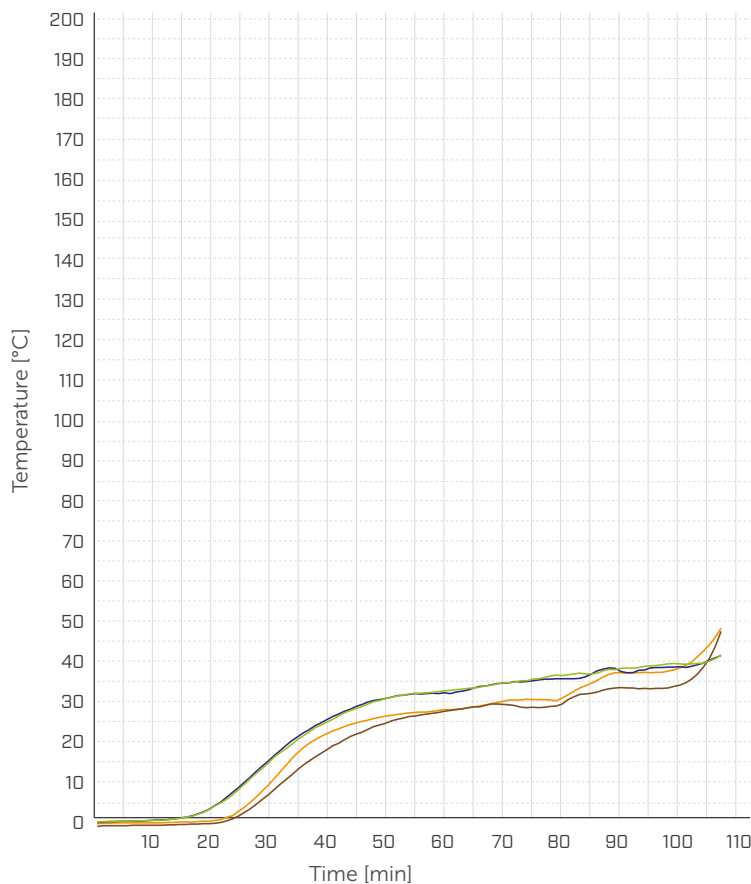
JOINT v100 | 5 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 3 mm GAP AND SPEEDY BAND

TOP SEALANT	SPEEDY BAND
Description	Universal tape without release liner
Material	Pe film/reinforcing grid/acrylic glue UV
Width [mm]	60
BOTTOM SEALANT	without sealant



SPEEDY BAND



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) **> 106 minutes**
Persistent flame



INSULATION (I) Time **> 106 minutes**

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

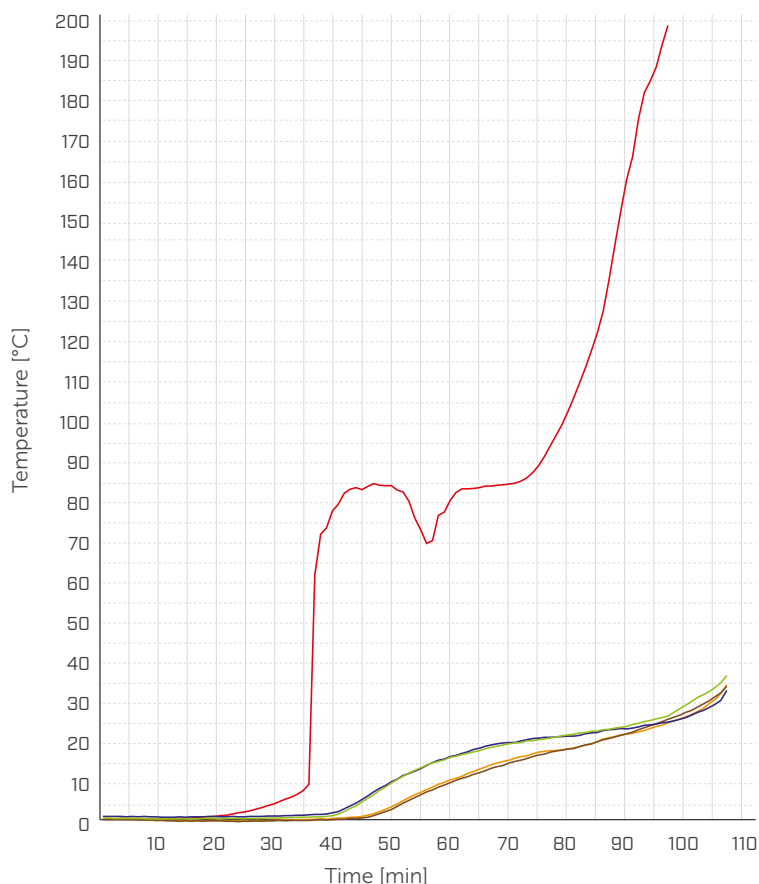
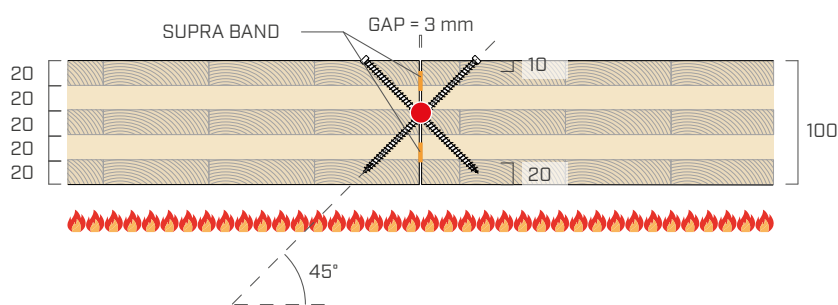
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face

JOINT v100 | 6 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 3 mm GAP AND SUPRA BAND

TOP SEALANT	SUPRA BAND
Description	Universal double-sided butyl tape with high adhesiveness
Material	Grey adhesive butyl compound
Width [mm]	6
Thickness [mm]	4
BOTTOM SEALANT	SUPRA BAND
Description	Universal double-sided butyl tape with high adhesiveness
Material	Grey adhesive butyl compound
Width [mm]	6
Thickness [mm]	4



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 106 minutes**
 Persistent flame



INSULATION (I) Time **> 106 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
• 60 mm from slab bottom (non-exposed face)	TC 01	80	< 180°C
on the unexposed face of the slab	TC 04	106	34°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

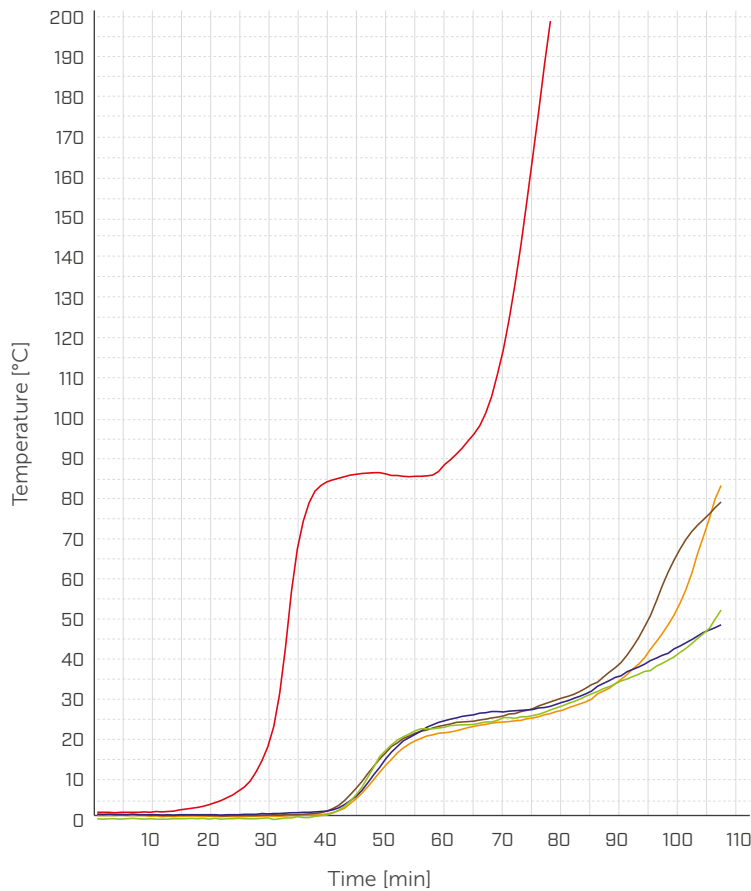
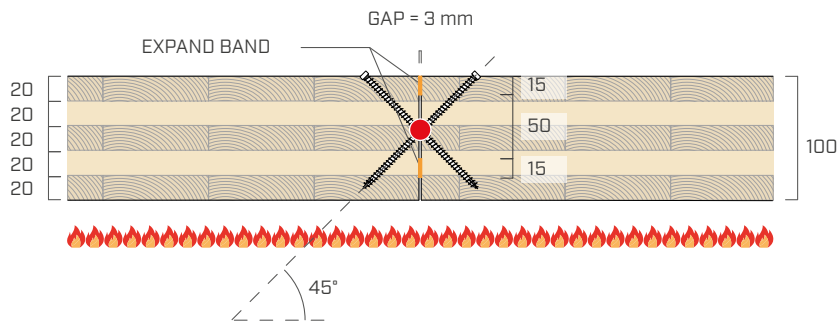
LEGEND:

— TC 01 - 60 mm from bottom
— TC 02 - non-exposed face
— TC 03 - non-exposed face
— TC 04 - non-exposed face
— TC 05 - non-exposed face

JOINT v100 | 7 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 3 mm GAP AND EXPAND BAND

TOP SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic PU foam with additives
Width [mm]	15
BOTTOM SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic PU foam with additives
Width [mm]	15



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) > 106 minutes
 Persistent flame



INSULATION (I) Time > 106 minutes

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
• 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
on the unexposed face of the slab	TC 04	106	78°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

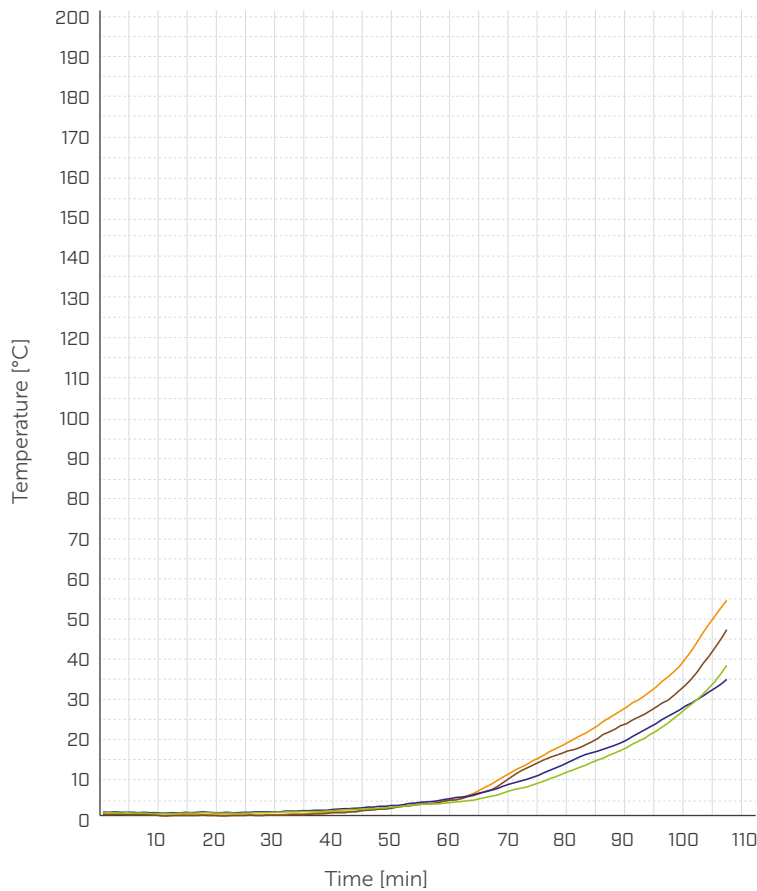
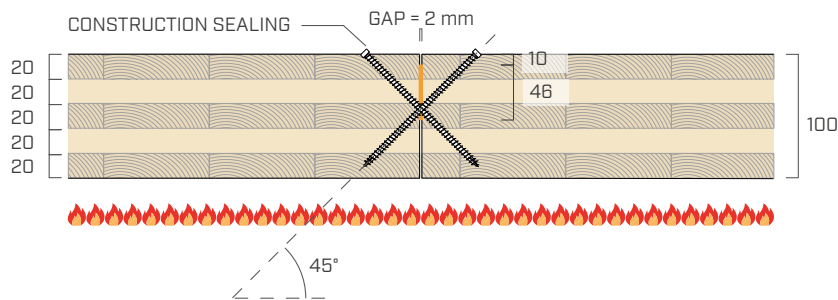
LEGEND:

- TC 01 - 60 mm from bottom
 — TC 03 - non-exposed face
 — TC 05 - non-exposed face
- TC 02 - non-exposed face
 — TC 04 - non-exposed face

JOINT v100 | 8 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7120, 2 mm GAP AND CONSTRUCTION SEALING

TOP SEALANT	CONSTRUCTION SEALING
Description	Compressible seal for regular joints
Material	Extruded EPDM
Width [mm]	46
Thickness [mm]	3



PERFORMANCE CRITERIA

Cotton swab

TIGHTNESS (E) > 106 minutes

Persistent flame



INSULATION (I) Time > 106 minutes

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

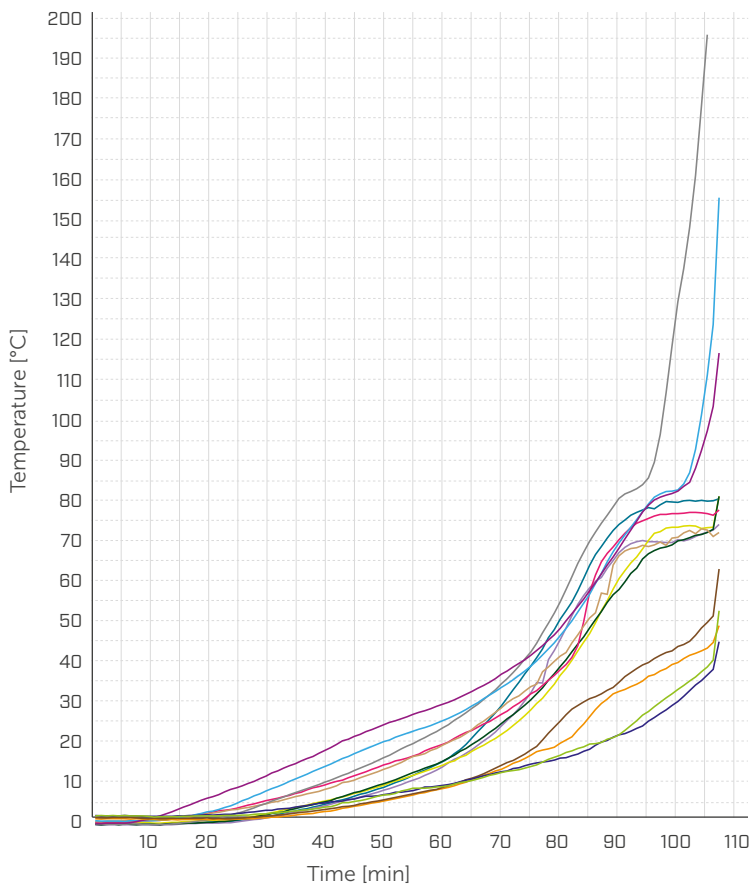
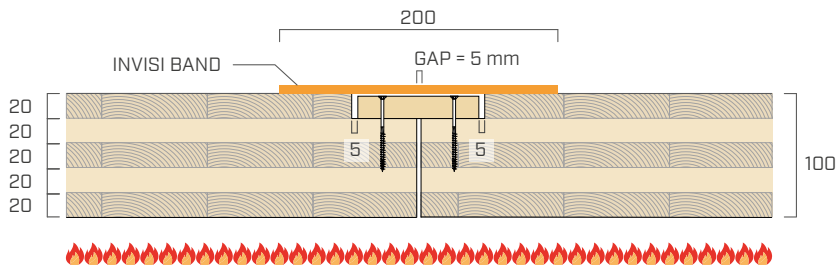
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face

JOINT v100 | 9 - TEST REPORT

JOINT WITH COVER PLATE AND PARTIAL THREAD SCREWS SHS3560, 5 mm GAP AND INVISI BAND

TOP SEALANT	INVISI BAND
Description	Transparent adhesive tape without liner, resistant to UV rays and high temperatures
Material	PE film/reinforcing grid/acrylic glue
Width [mm]	200
BOTTOM SEALANT	without sealant



PERFORMANCE CRITERIA

TIGHTNESS (E) Cotton swab **105 minutes**
Persistent flame



INSULATION (I) Time **> 104 minutes**

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

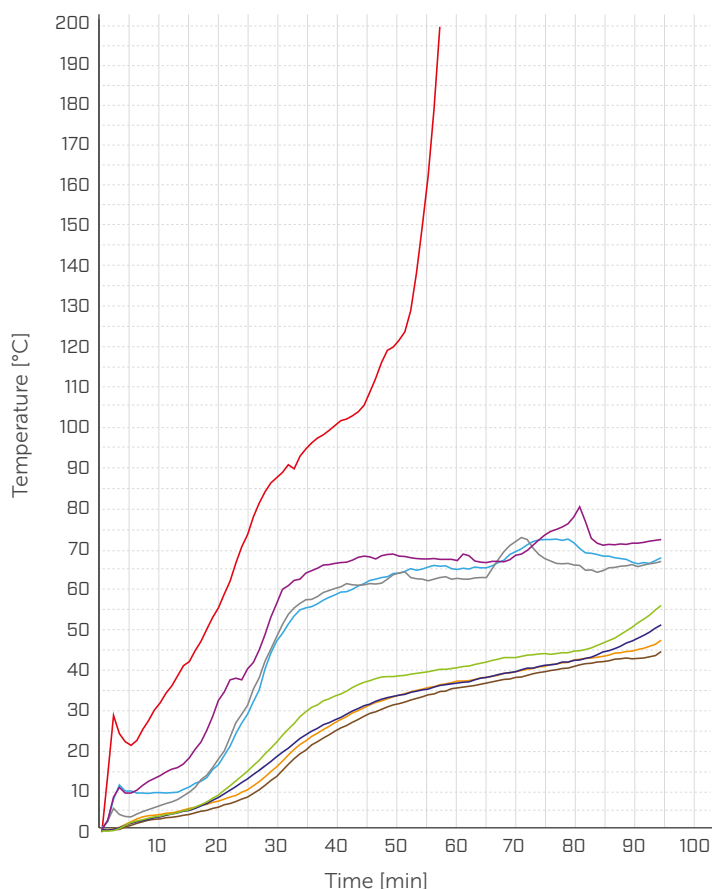
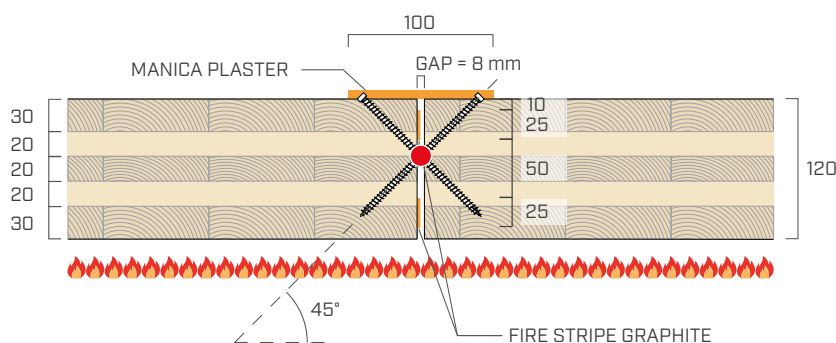
LEGEND:

- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| TC 01 - non-exposed face | TC 05 - non-exposed face | TC 08 - non-exposed face | TC 11 - non-exposed face |
| TC 02 - non-exposed face | TC 06 - non-exposed face | TC 09 - non-exposed face | TC 12 - non-exposed face |
| TC 03 - non-exposed face | TC 07 - non-exposed face | TC 10 - non-exposed face | TC 13 - non-exposed face |
| TC 04 - non-exposed face | | | |

JOINT h120 | 1 - TEST REPORT

SIMPLE JOINT WITH VGZ7140 CROSSED SCREWS, 8 mm GAP AND FIRE STRIPE GRAPHITE + MANICA PLASTER (PROTECT)

TOP SEALANT	MANICA PLASTER (PROTECT)
Description	Adhesive butyl compound
Material	Non-woven PP fabric/grey adhesive butyl compound
Width [mm]	100
BOTTOM SEALANTS	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 96 minutes
Persistent flame	
INSULATION (I)	Time > 96 minutes



ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	50	< 180°C
on the unexposed face of the slab	TC 03	96	50°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

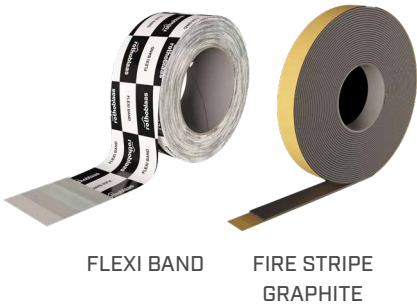
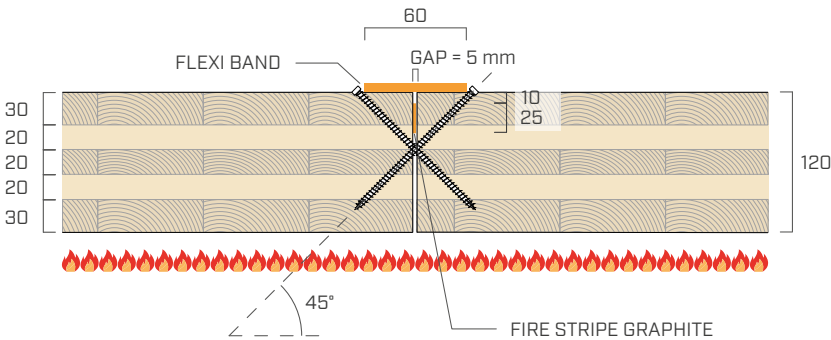
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - non-exposed face	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

JOINT h120 | 2 - TEST REPORT

SIMPLE JOINT WITH VGZ7140 CROSSED SCREWS, 5 mm GAP AND FIRE STRIPE GRAPHITE + FLEXI BAND

TOP SEALANT	FLEXI BAND
Description	Universal high-adhesive tape
Material	PE film/glue/reinforcing polyester grid
Width [mm]	60
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 96 minutes
INSULATION (I)	Time	> 96 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

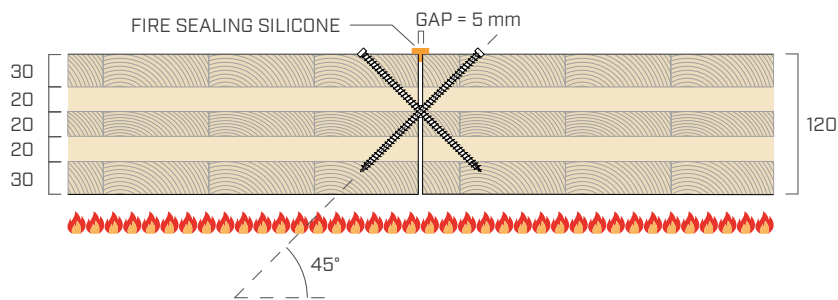
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face
- TC 05 - non-exposed face
- TC 06 - non-exposed face
- TC 07 - non-exposed face

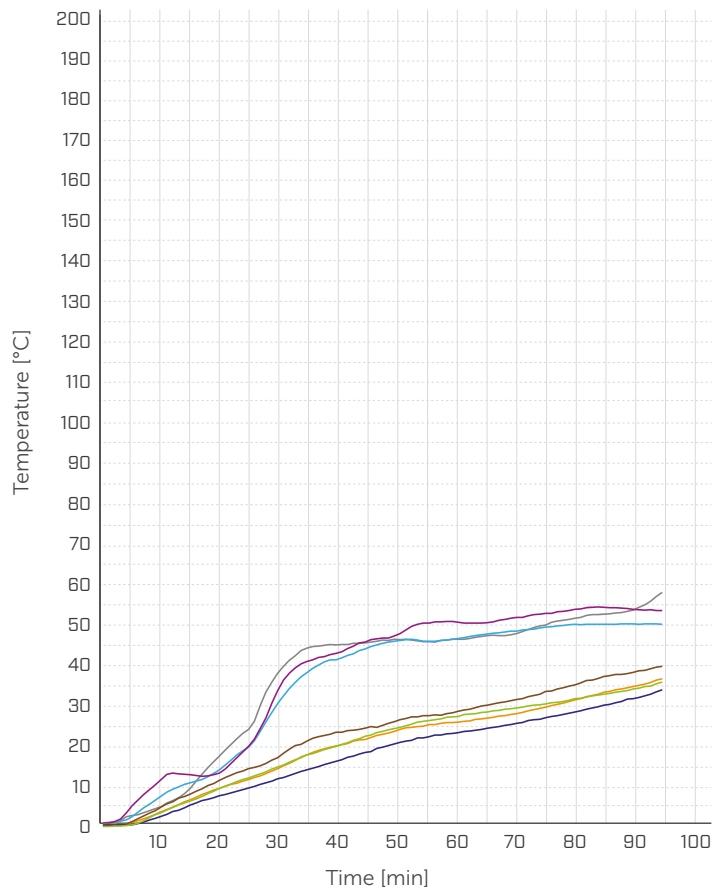
JOINT h120 | 3 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 5 mm GAP AND FIRE SEALING SILICONE

TOP SEALANT	FIRE SEALING SILICONE
Description	High fire-resistant silicone sealant
Material	Silicone
BOTTOM SEALANT	without sealant



FIRE SEALING SILICONE



PERFORMANCE CRITERIA

TIGHTNESS (E) Cotton swab **> 96 minutes**
Persistent flame



INSULATION (I) Time **> 96 minutes**

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

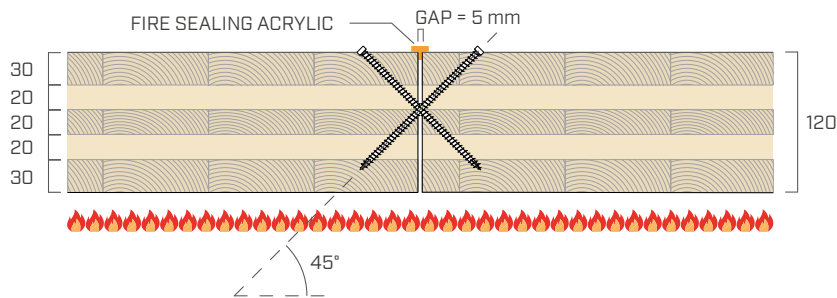
LEGEND:

TC 01 - non-exposed face
 TC 02 - non-exposed face
 TC 03 - non-exposed face
 TC 04 - non-exposed face
 TC 05 - non-exposed face
 TC 06 - non-exposed face
 TC 07 - non-exposed face

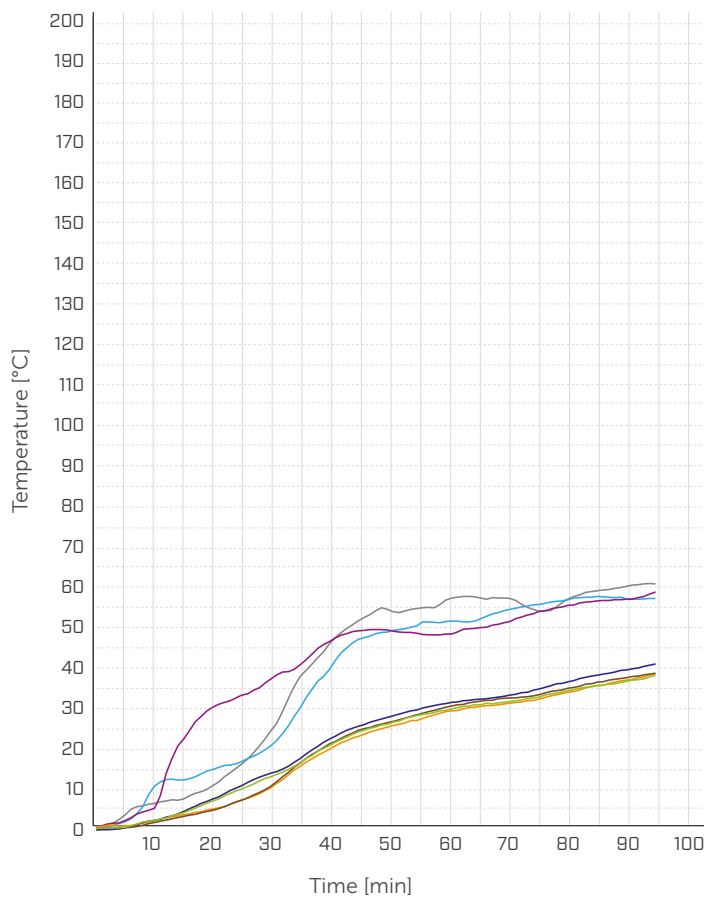
JOINT h120 | 4 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 5 mm GAP AND FIRE SEALING ACRYLIC

TOP SEALANT	FIRE SEALING ACRYLIC
Description	High fire-resistant acrylic sealant
Material	Acrylic polymers in aqueous dispersion
BOTTOM SEALANT	without sealant



FIRE SEALING ACRYLIC



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 96 minutes
INSULATION (I)	Time	> 96 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

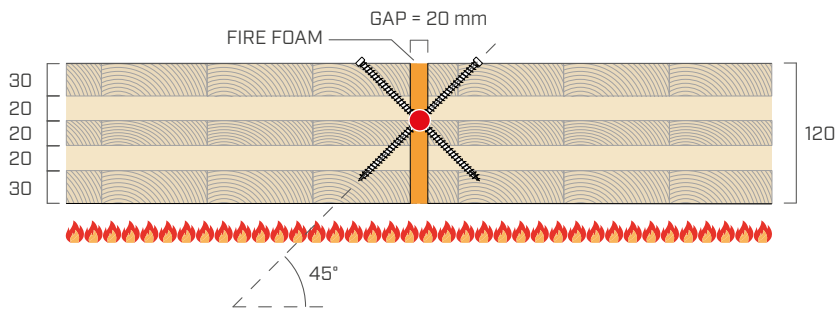
LEGEND:

TC 01 - non-exposed face	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - non-exposed face	TC 04 - non-exposed face	TC 06 - non-exposed face	

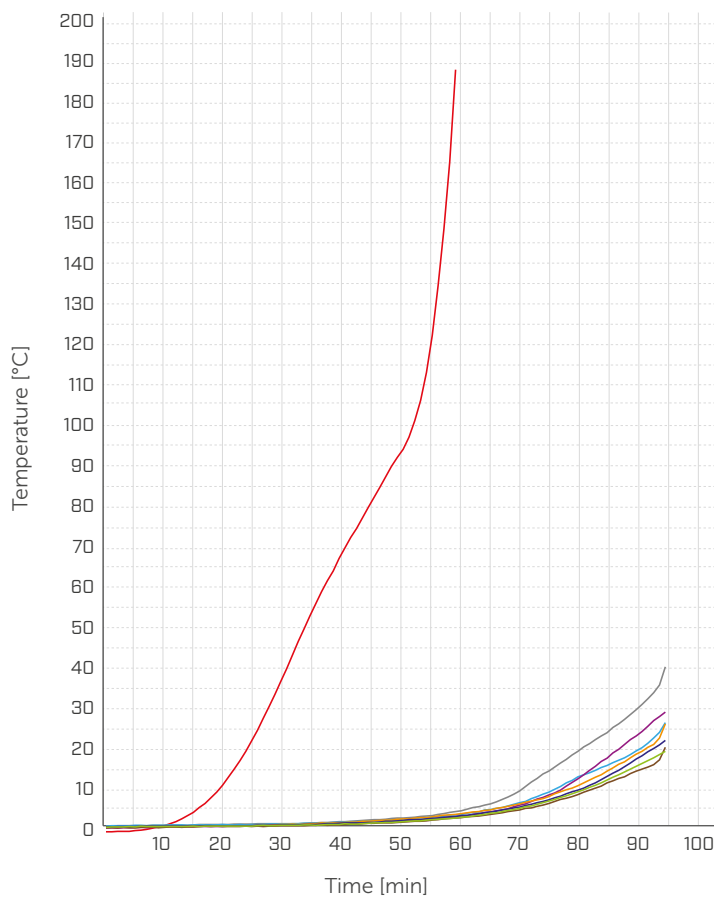
JOINT h120 | 5 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 20 mm GAP AND FIRE FOAM

TOP SEALANT	FIRE FOAM
Description	High fire-resistant sealing foam
Material	Single component PU
BOTTOM SEALANT	without sealant



FIRE FOAM



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 96 minutes**

Persistent flame



INSULATION (I) Time **> 96 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
• 60 mm from slab bottom (non-exposed face)	TC 01	55	< 180°C
on the unexposed face of the slab	TC 05	96	25°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

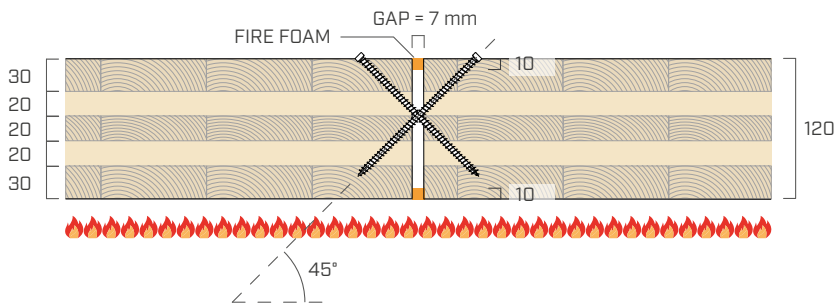
LEGEND:

- TC 01 - 60 mm from bottom
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face
- TC 05 - non-exposed face
- TC 06 - non-exposed face
- TC 07 - non-exposed face
- TC 08 - non-exposed face

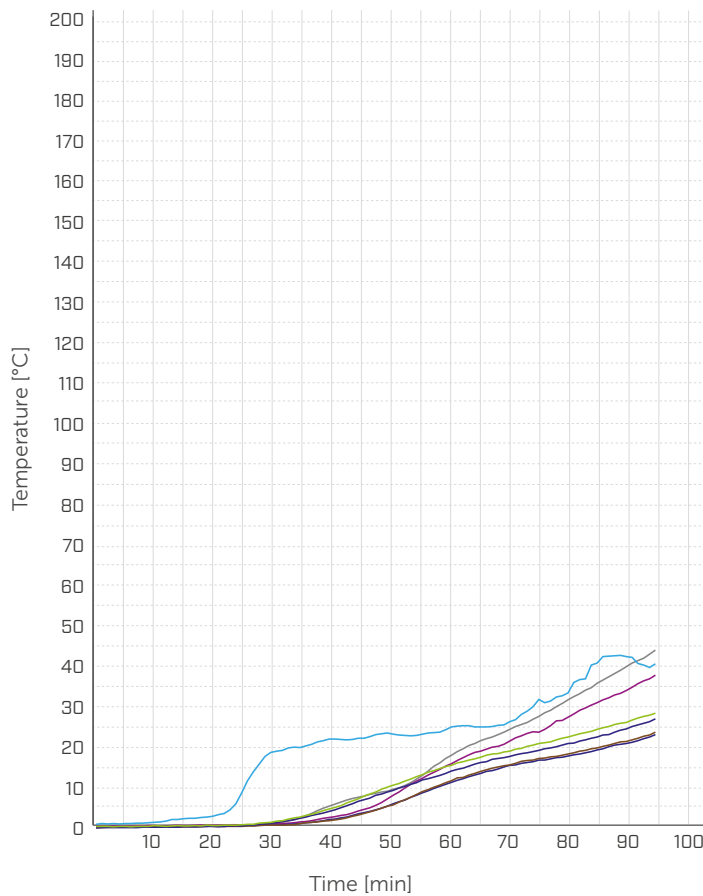
JOINT h120 | 6 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 7 mm GAP AND FIRE FOAM

TOP SEALANT	FIRE FOAM
Description	High fire-resistant sealing foam
Material	Single component PU
BOTTOM SEALANT	FIRE FOAM
Description	High fire-resistant sealing foam
Material	Single component PU



FIRE FOAM



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 96 minutes
INSULATION (I)	Time	> 96 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

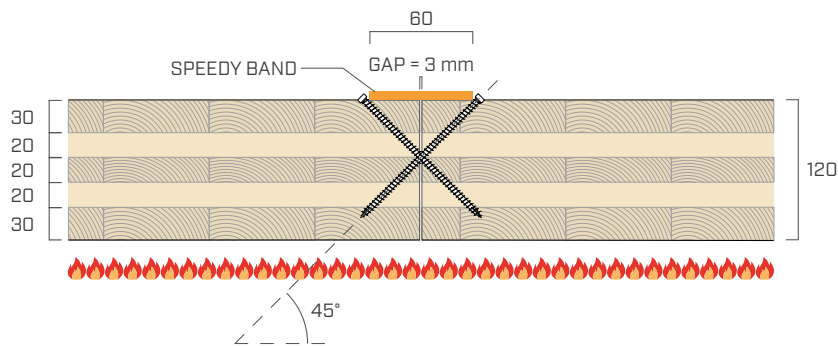
LEGEND:

TC 01 - non-exposed face	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - non-exposed face	TC 04 - non-exposed face	TC 06 - non-exposed face	

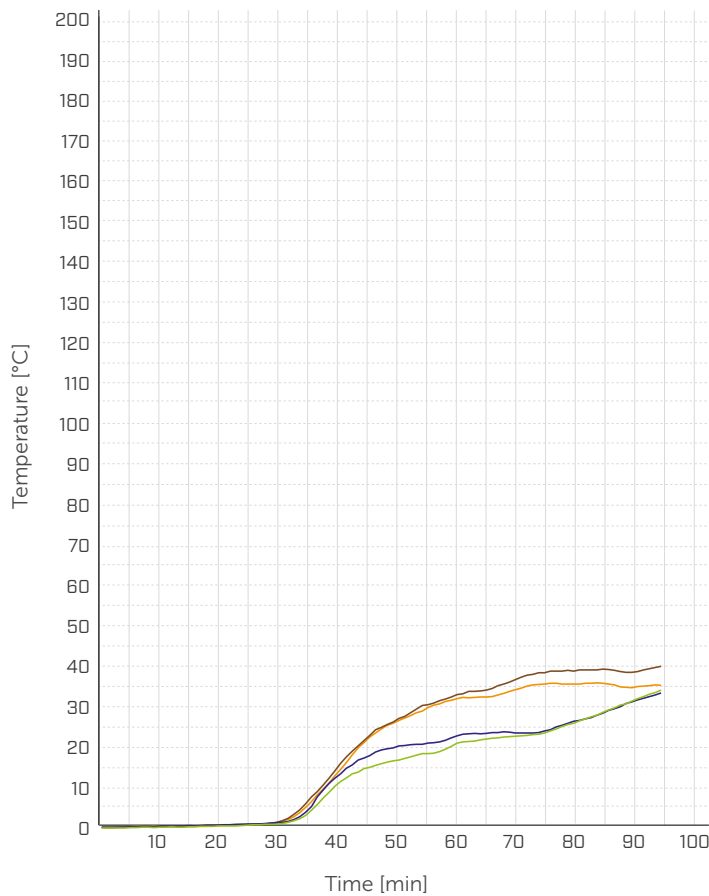
JOINT h120 | 7 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 3 mm GAP AND SPEEDY BAND

TOP SEALANT	SPEEDY BAND
Description	Universal tape without release liner
Material	PE film/polyester reinforcing grid/solvent-free UV-crosslinked acrylic
Width [mm]	60
BOTTOM SEALANT	without sealant



SPEEDY BAND



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 96 minutes
INSULATION (I)	Time	> 96 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

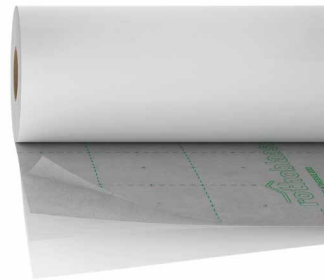
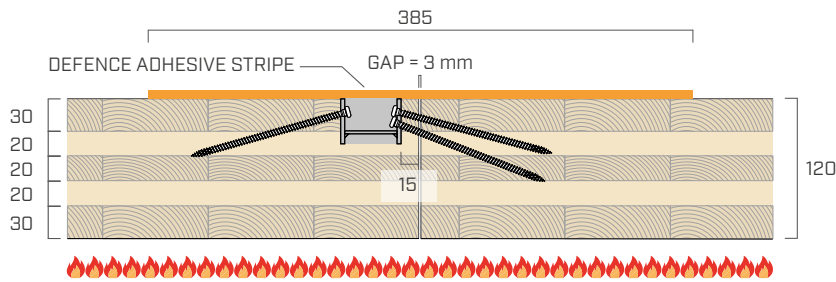
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face

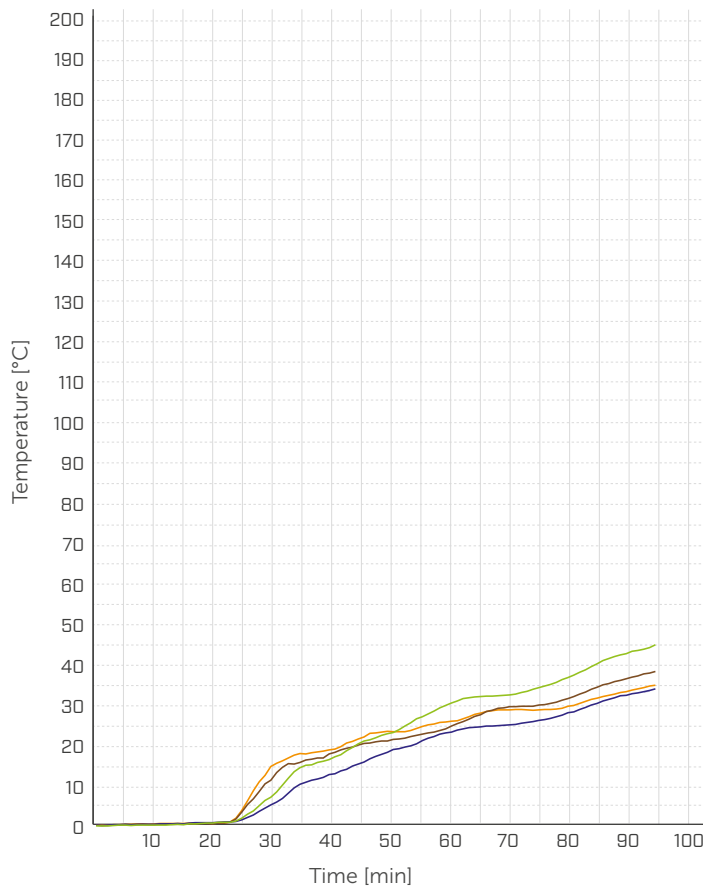
JOINT h120 | 8 - TEST REPORT

SIMPLE JOINT WITH RING (RING60T), 3 mm GAP AND DEFENCE ADHESIVE

TOP SEALANT	DEFENCE ADHESIVE
Description	Self-adhesive protective membrane for building elements
Material	EVA coating/non-woven PP fabric/acrylic dispersion without solvents
Width [mm]	385
BOTTOM SEALANT	without sealant



DEFENCE ADHESIVE



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 96 minutes
INSULATION (I)	Time	> 96 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

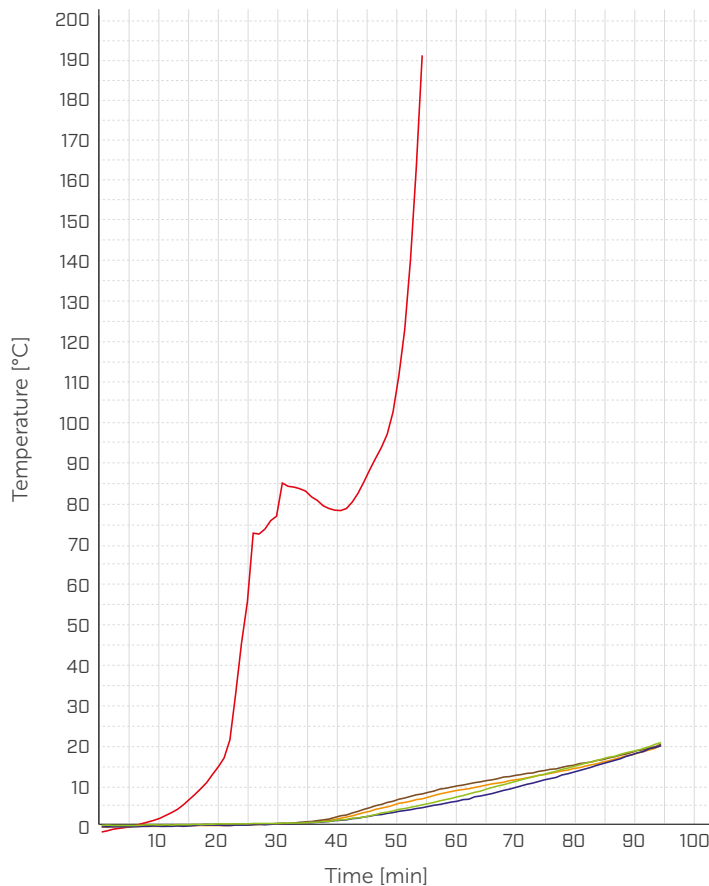
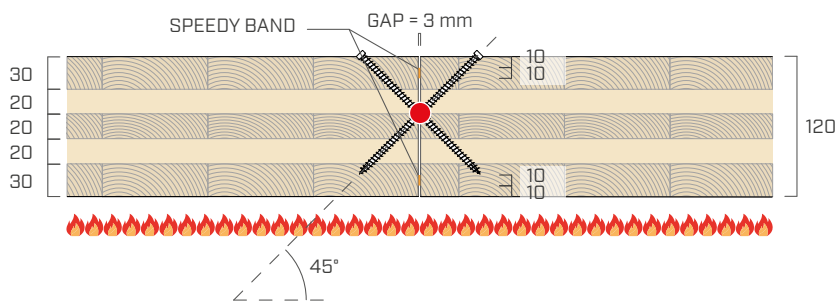
LEGEND:

TC 01 - non-exposed face	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - non-exposed face	TC 04 - non-exposed face	TC 06 - non-exposed face	

JOINT h120 | 9 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 3 mm GAP AND SUPRA BAND

TOP SEALANT	SUPRA BAND
Description	Universal double-sided butyl tape with high adhesiveness
Material	Double-sided grey butyl compound
Width [mm]	10
Thickness [mm]	4
BOTTOM SEALANT	SUPRA BAND
Description	Universal double-sided butyl tape with high adhesiveness
Material	Double-sided grey butyl compound
Width [mm]	10
Thickness [mm]	4



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) **> 96 minutes**
Persistent flame



INSULATION (I) Time **> 96 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	50	< 180°C
on the unexposed face of the slab	TC 03	96	50°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

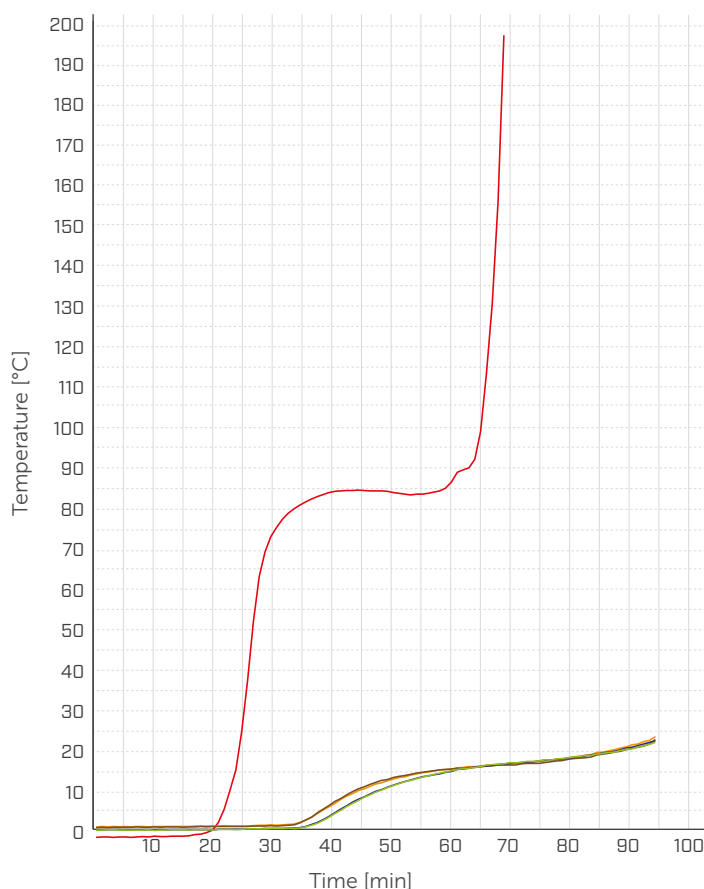
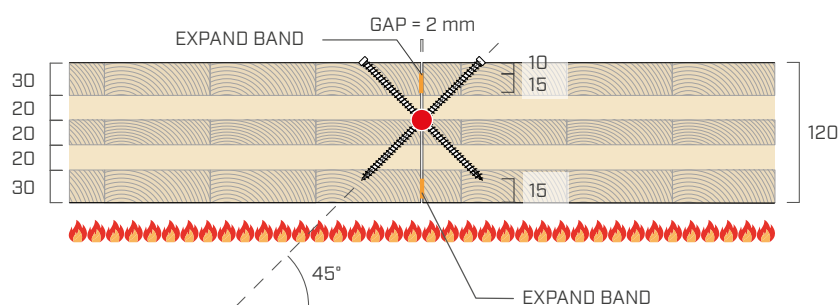
LEGEND:

- TC 01 - 60 mm from bottom
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face
- TC 05 - non-exposed face

JOINT h120 | 10 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 2 mm GAP AND EXPAND BAND

TOP SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives
Width [mm]	15
BOTTOM SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives
Width [mm]	15



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 96 minutes**
Persistent flame



INSULATION (I) Time **> 96 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
on the unexposed face of the slab	TC 05	96	23°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

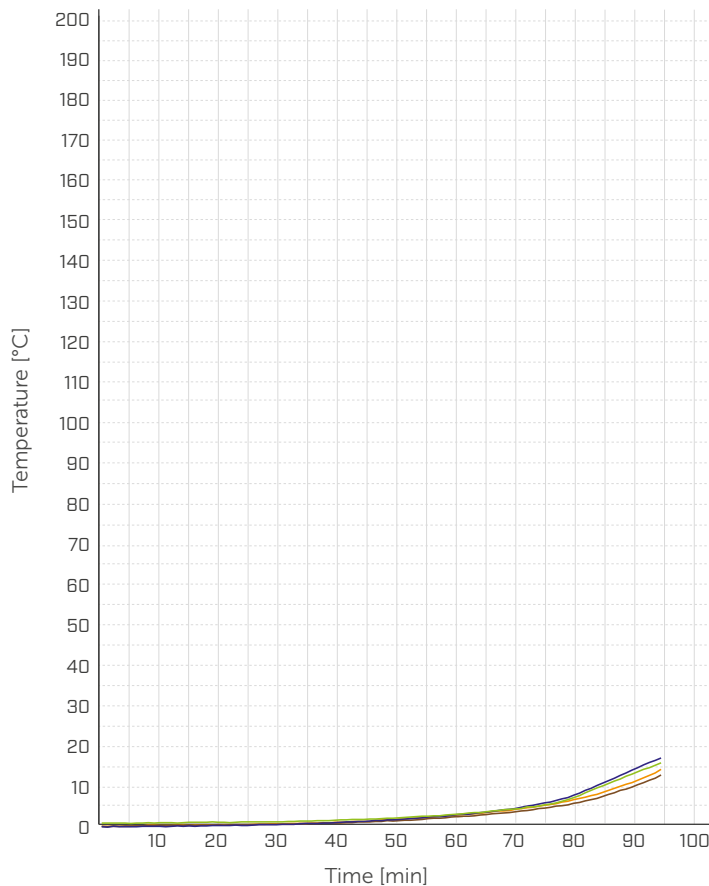
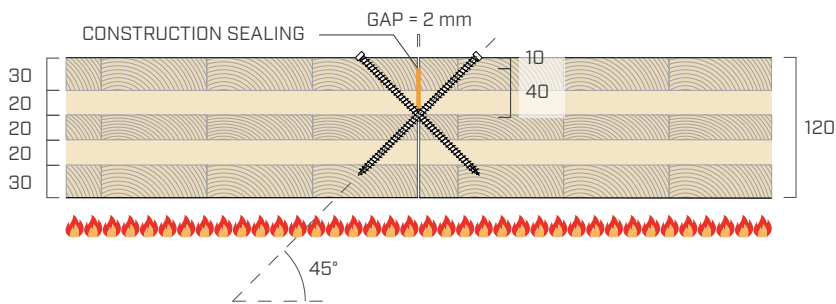
LEGEND:

— TC 01 - 60 mm from bottom — TC 03 - non-exposed face — TC 05 - non-exposed face
— TC 02 - non-exposed face — TC 04 - non-exposed face

JOINT h120 | 11 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 2 mm GAP AND CONSTRUCTION SEALING

TOP SEALANT	CONSTRUCTION SEALING
Description	Compressible seal for regular joints
Material	Expanded EPDM
Width [mm]	46
Thickness [mm]	3



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) **> 96 minutes**
Persistent flame



INSULATION (I) Time **> 96 minutes**

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

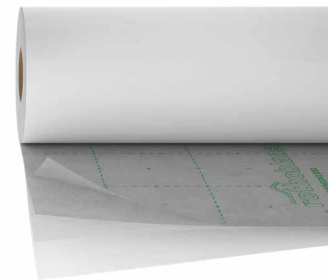
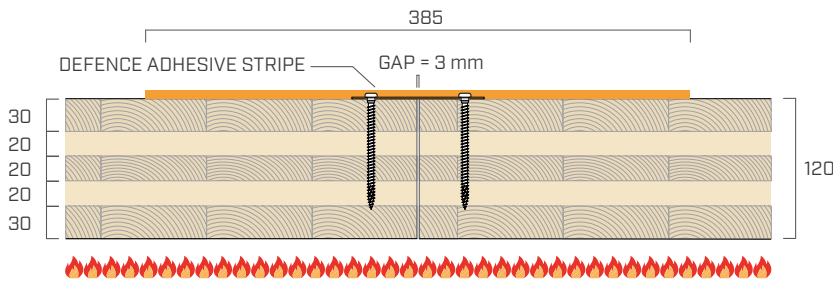
LEGEND:

- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face
- TC 05 - non-exposed face

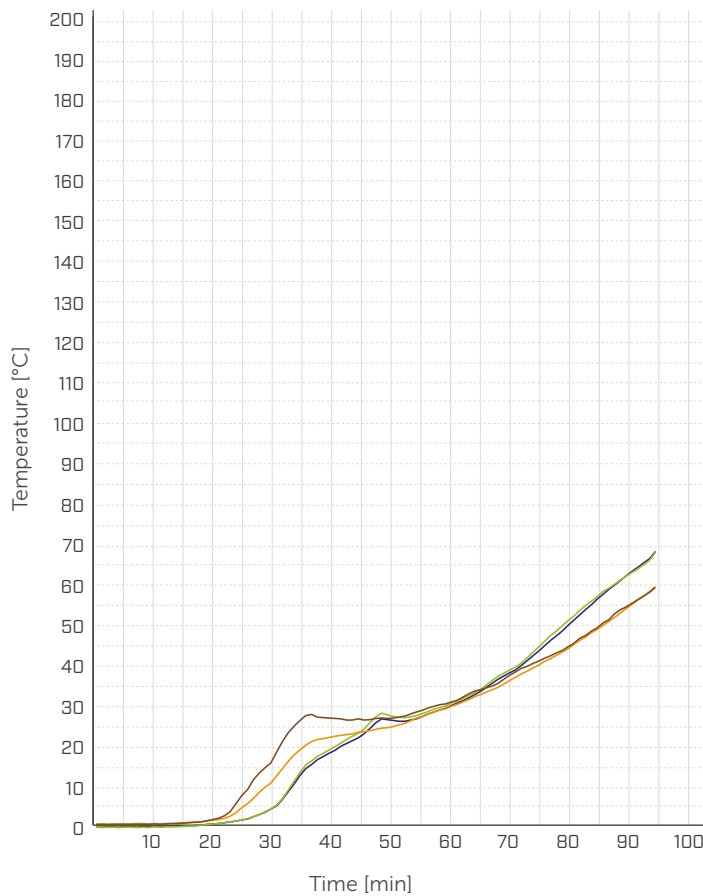
JOINT h120 | 12 - TEST REPORT

SIMPLE JOINT WITH TITAN PLATE [TTP1200], 3 mm GAP AND DEFENCE ADHESIVE

TOP SEALANT	DEFENCE ADHESIVE
Description	Self-adhesive protective membrane for building elements
Material	EVA coating/non-woven PP fabric/acrylic dispersion without solvents
Width [mm]	385
BOTTOM SEALANT	without sealant



DEFENCE
ADHESIVE



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	> 96 minutes
INSULATION (I)	Time	> 96 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

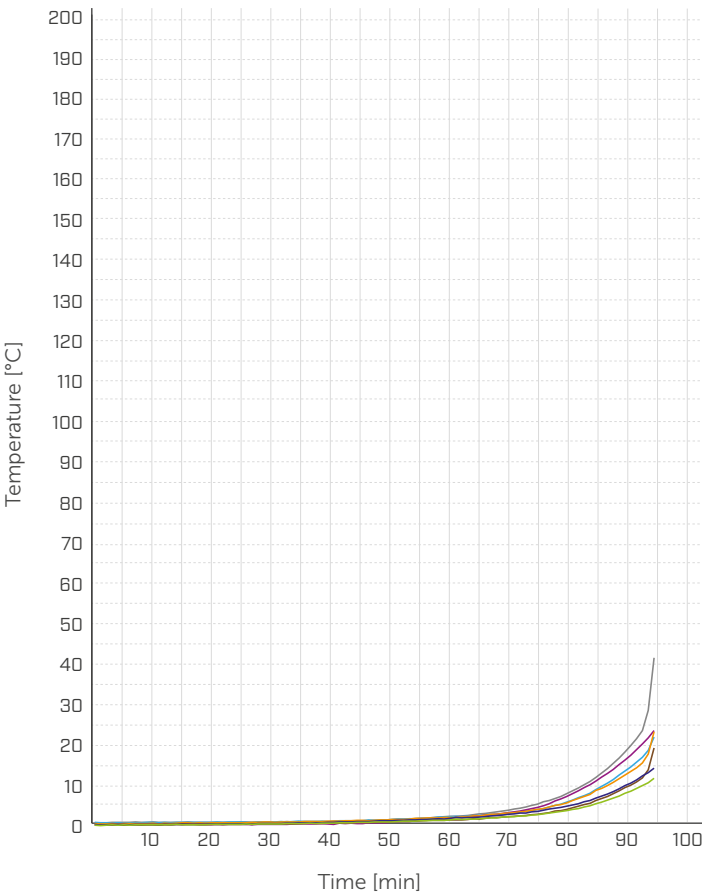
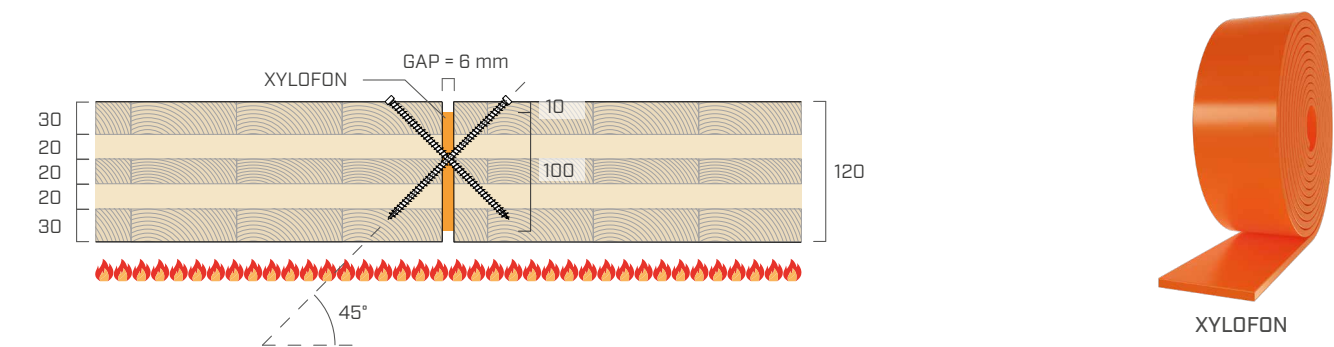
LEGEND:

- TC 01 - non-exposed face
- TC 02 - non-exposed face
- TC 03 - non-exposed face
- TC 04 - non-exposed face

JOINT h120 | 13 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ7140, 6 mm GAP AND XYLOFON

TOP SEALANT	XYLOFON
Description	Universal high-adhesive tape FLEXI BAND
Material	PU monolithic structure
Width [mm]	100
Thickness [mm]	6



PERFORMANCE CRITERIA

	Cotton swab	
TIGHTNESS (E)	Persistent flame	94 minutes
INSULATION (I)	Time	94 minutes



Reference standard: EN 1363-1:2020 | EN 1366-4:2021

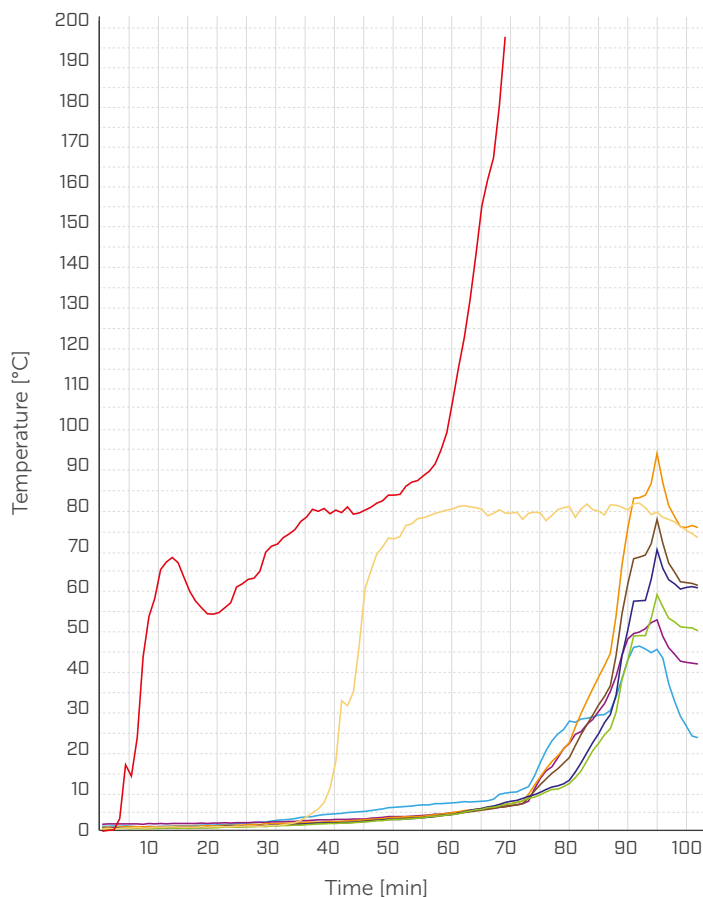
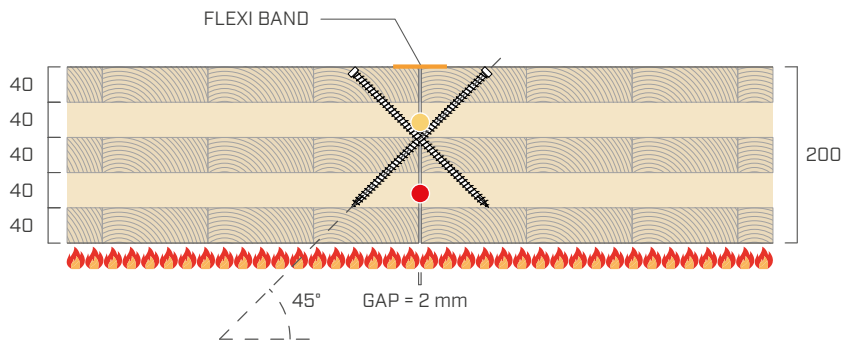
LEGEND:

- TC 01 - non-exposed face
- TC 03 - non-exposed face
- TC 05 - non-exposed face
- TC 07 - non-exposed face
- TC 01 - non-exposed face
- TC 04 - non-exposed face
- TC 06 - non-exposed face

JOINT h200 | 1 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 2 mm GAP AND FLEXI BAND

TOP SEALANT	FLEXI BAND
Description	Universal single-sided high-adhesive tape
Material	PE film/glue/reinforcing polyester grid
Width [mm]	60
BOTTOM SEALANT	without sealant



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 102 minutes**
 Persistent flame



INSULATION (I) Time **> 102 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
● 140 mm from slab bottom	TC 02	102	72°C
on the unexposed face of the slab	TC 06	102	75°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

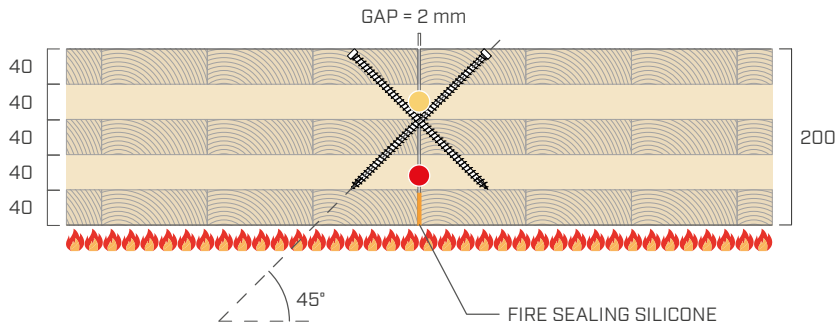
LEGEND:

— TC 01 - 60 mm from bottom — TC 03 - non-exposed face — TC 05 - non-exposed face — TC 07 - non-exposed face
 — TC 02 - 140 mm from bottom — TC 04 - non-exposed face — TC 06 - non-exposed face — TC 08 - non-exposed face

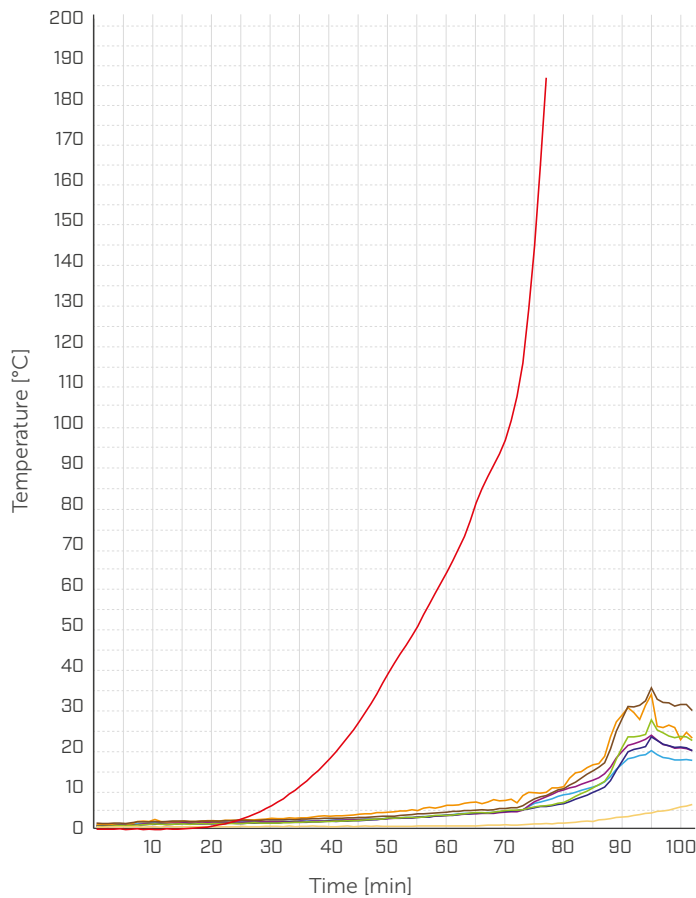
JOINT h200 | 2 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 2 mm GAP AND FIRE SEALING SILICONE (EXPANDED ON PANEL SIDE)

TOP SEALANT	without sealant
BOTTOM SEALANT	FIRE SEALING SILICONE
Description	High fire-resistant acrylic sealant
Material	Silicone



FIRE SEALING SILICONE



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) > 102 minutes
 Persistent flame



INSULATION (I) Time > 102 minutes

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	70	< 180°C
● 140 mm from slab bottom	TC 02	102	6°C
on the unexposed face of the slab	TC 05	102	29°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

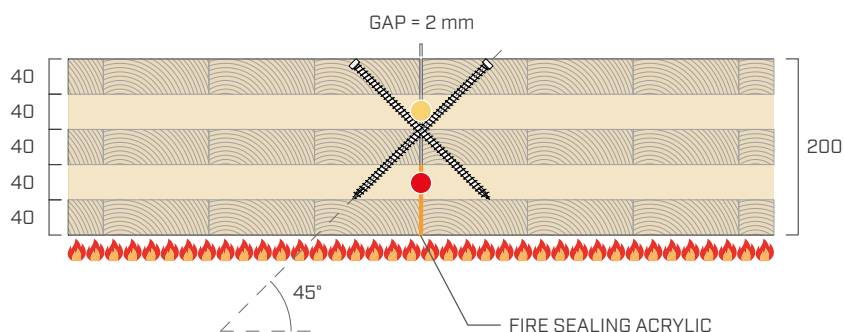
LEGEND:

— TC 01 - 60 mm from bottom — TC 03 - non-exposed face — TC 05 - non-exposed face — TC 07 - non-exposed face
 — TC 02 - 140 mm from bottom — TC 04 - non-exposed face — TC 06 - non-exposed face — TC 08 - non-exposed face

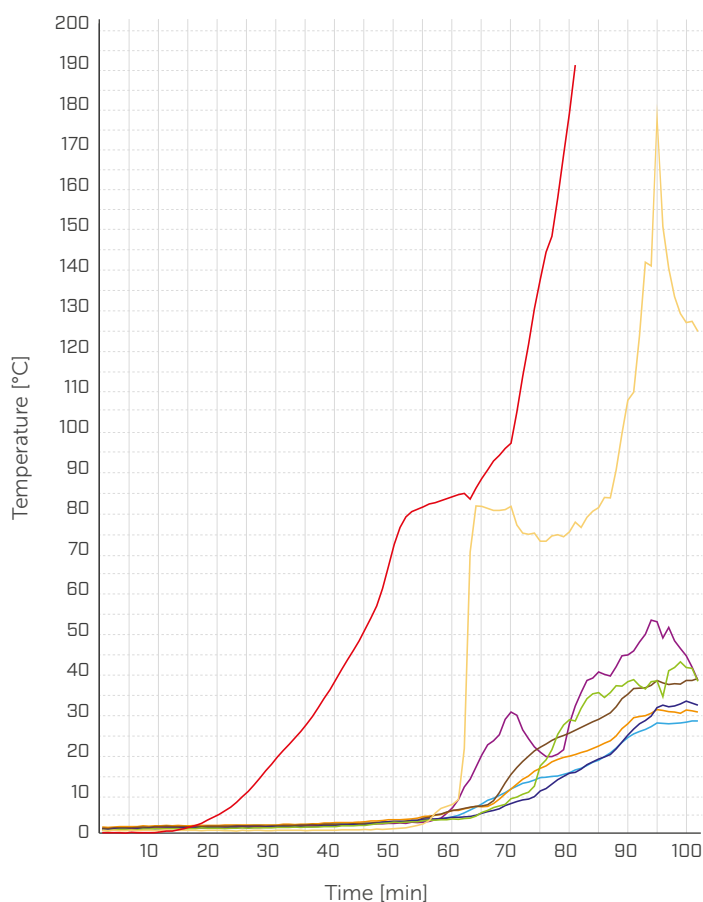
JOINT h200 | 3 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 2 mm GAP AND FIRE SEALING ACRYLIC (EXPANDED ON PANEL SIDE)

TOP SEALANT	without sealant
BOTTOM SEALANT	FIRE SEALING ACRYLIC
Description	High fire-resistant acrylic sealant
Material	Acrylic polymers in aqueous dispersion



FIRE SEALING ACRYLIC



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) > 102 minutes
 Persistent flame



INSULATION (I) Time > 102 minutes

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	70	< 180°C
● 140 mm from slab bottom	TC 02	90	< 180°C
on the unexposed face of the slab	TC 05	102	38°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

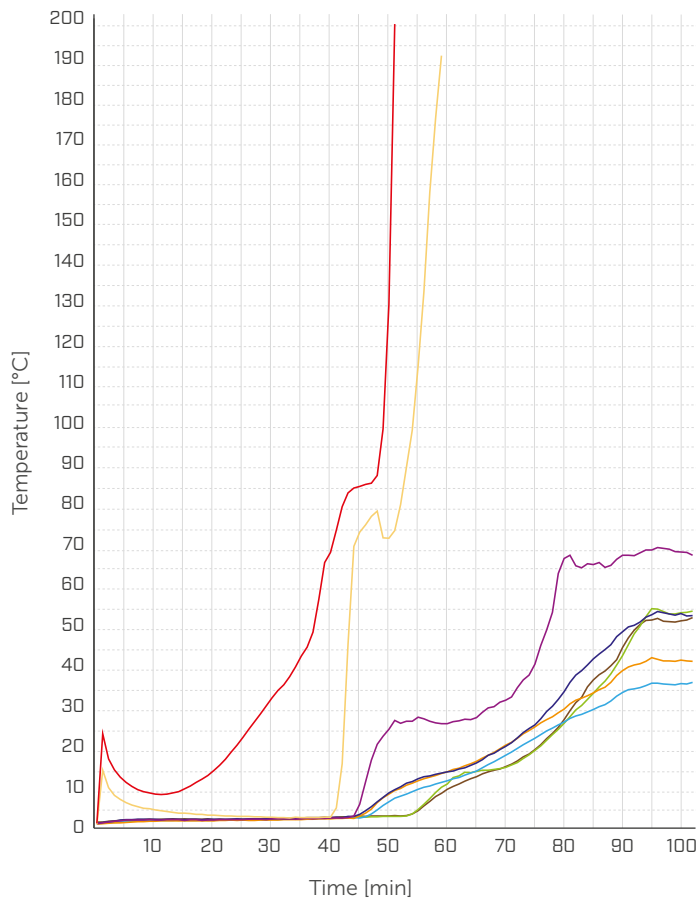
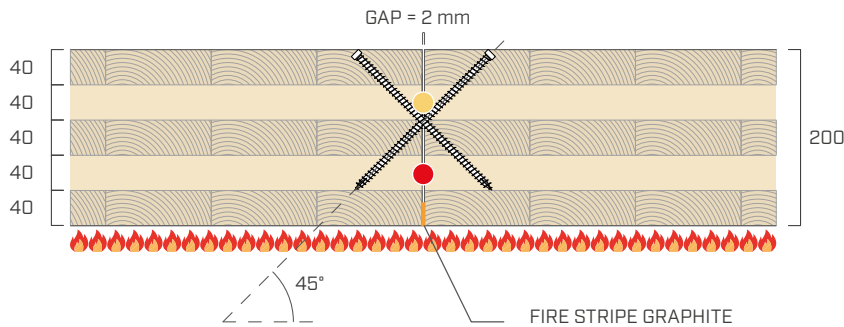
LEGEND:

- TC 01 - 60 mm from bottom
- TC 03 - non-exposed face
- TC 05 - non-exposed face
- TC 07 - non-exposed face
- TC 02 - 140 mm from bottom
- TC 04 - non-exposed face
- TC 06 - non-exposed face
- TC 08 - non-exposed face

JOINT h200 | 4 - TEST REPORT

SIMPLE JOINT WITH VGZ9220 CROSSED SCREWS, 2 mm GAP AND FIRE STRIPE GRAPHITE

TOP SEALANT	without sealant
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 102 minutes
Persistent flame	

INSULATION (I)	Time	> 102 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	40	< 180°C
● 140 mm from slab bottom	TC 02	50	< 180°C
on the unexposed face of the slab	TC 03	102	67°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

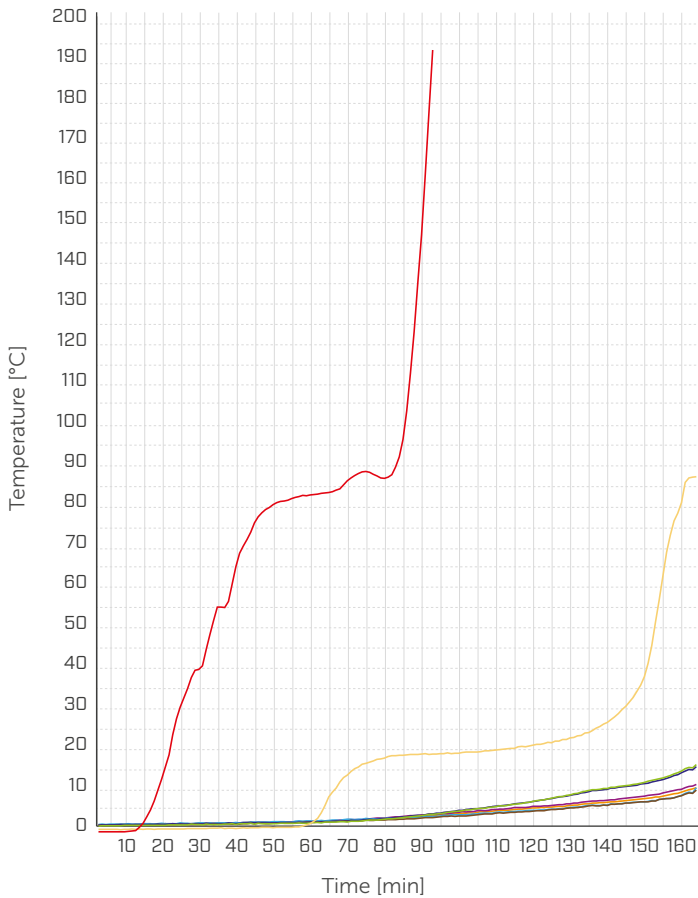
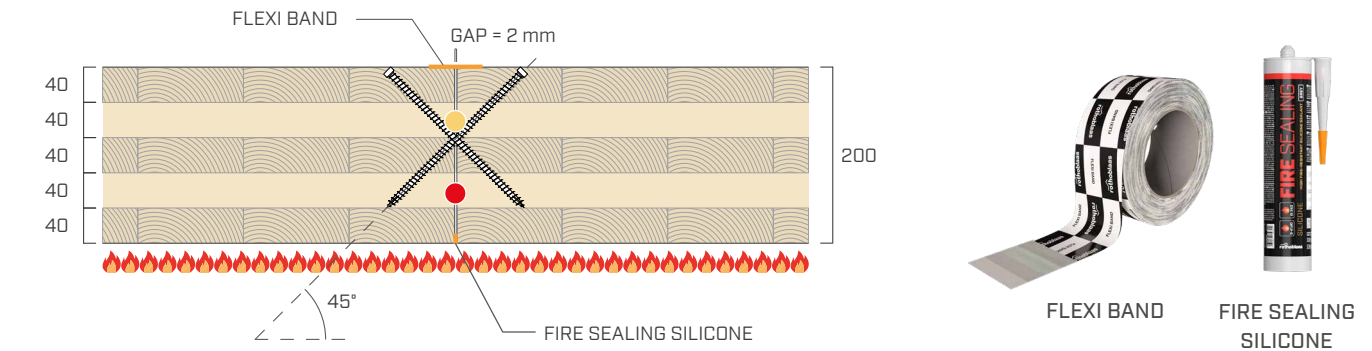
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - 140 mm from bottom	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

JOINT h200 | 5 - TEST REPORT

SIMPLE JOINT WITH VGZ9220 CROSSED SCREWS, 2 mm GAP, FIRE SEALING SILICONE (APPLIED ON THE SIDE OF THE PANEL) AND FLEXI BAND

TOP SEALANT	FLEXI BAND
Description	Universal single-sided high-adhesive tape
Material	PE film/glue/reinforcing polyester grid
Width [mm]	60
BOTTOM SEALANT	FIRE SEALING SILICONE
Description	High fire-resistant silicone sealant
Material	Silicone



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	
	EI 120

INSULATION (I)	Time	> 161 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	80	< 180°C
● 140 mm from slab bottom	TC 02	161	86°C
on the unexposed face of the slab	TC 03	161	15°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

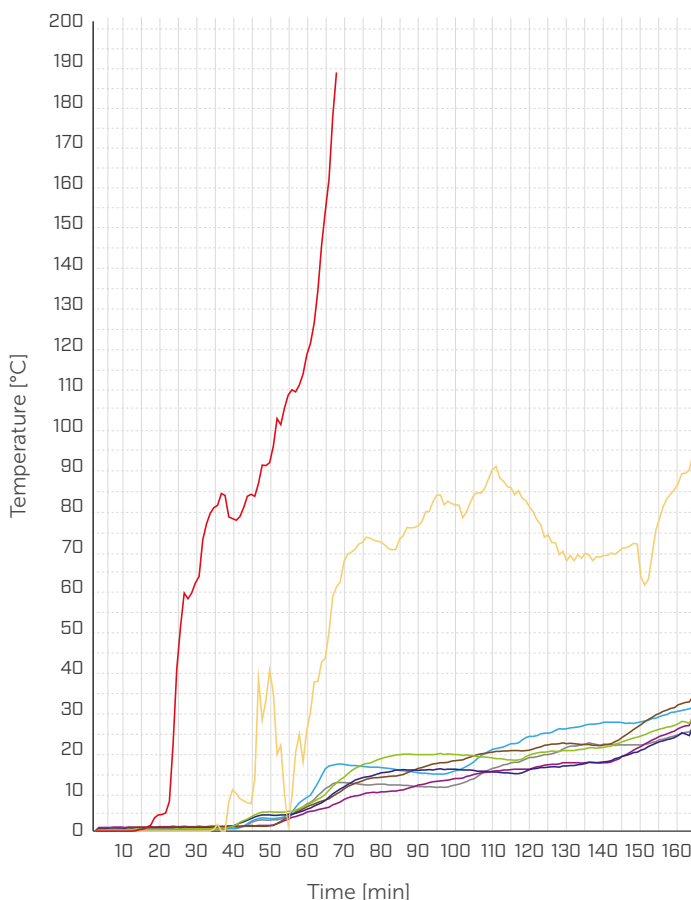
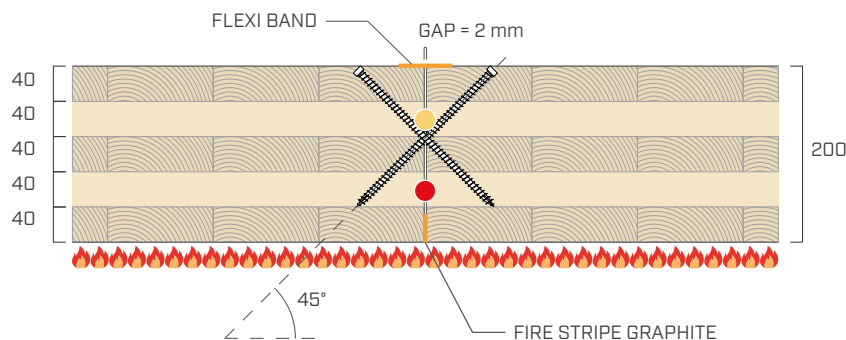
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - 140 mm from bottom	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

JOINT h200 | 6 - TEST REPORT

SIMPLE JOINT WITH VGZ9220 CROSSED SCREWS, 2 mm GAP AND FIRE STRIPE GRAPHITE AND FLEXI BAND

TOP SEALANT	FLEXI BAND
Description	Universal single-sided high-adhesive tape
Material	PE film/glue/reinforcing polyester grid
Width [mm]	60
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	

INSULATION (I)	Time	> 161 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
● 140 mm from slab bottom	TC 02	161	93°C
on the unexposed face of the slab	TC 05	161	33°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

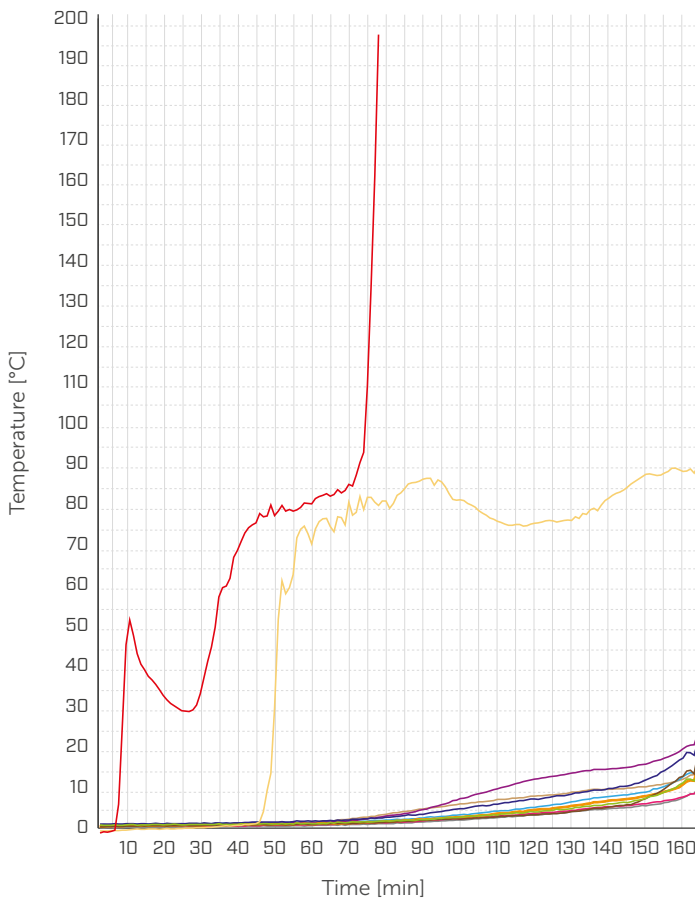
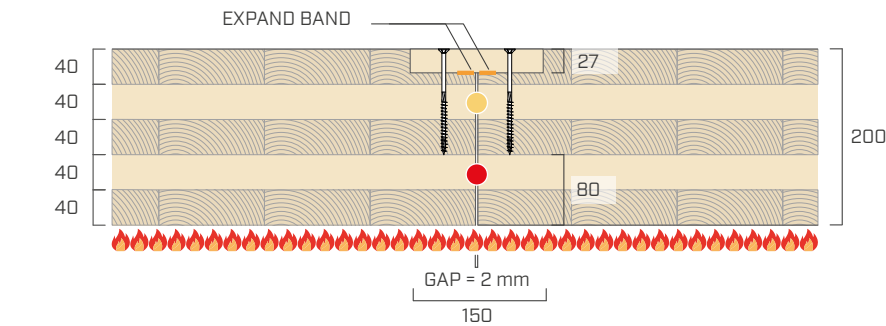
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - 140 mm from bottom	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

JOINT h200 | 7 - TEST REPORT

JOINT WITH COVER PLATE AND PARTIAL THREAD SCREWS HBS6120, 2 mm GAP AND EXPAND BAND

TOP SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives
BOTTOM SEALANT	without sealant



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	

INSULATION (I)	Time	> 161 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	70	< 180 °C
● 140 mm from slab bottom	TC 02	161	90°C
on the unexposed face of the slab	TC 07	161	24°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

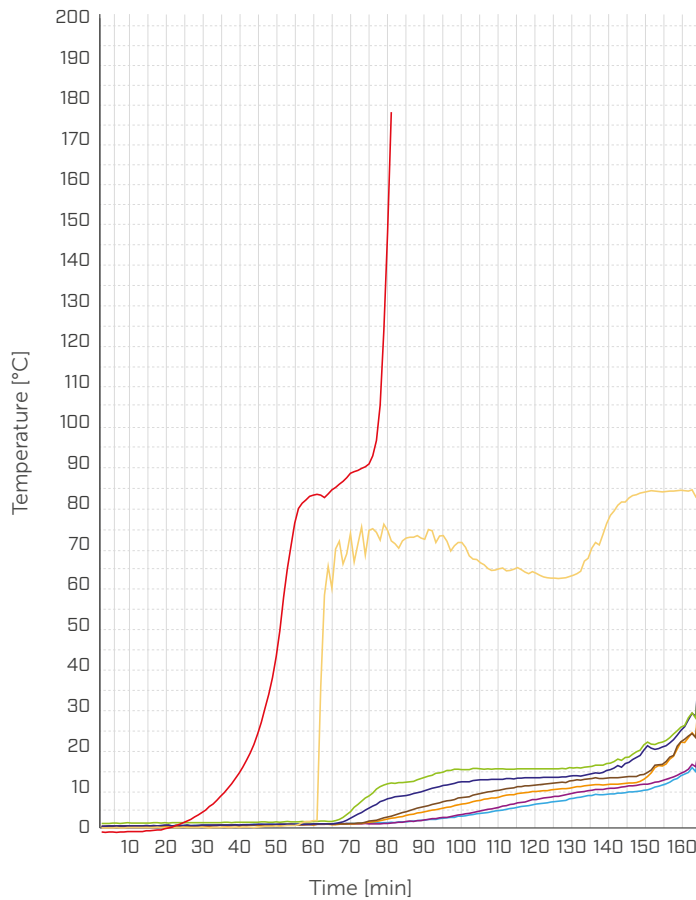
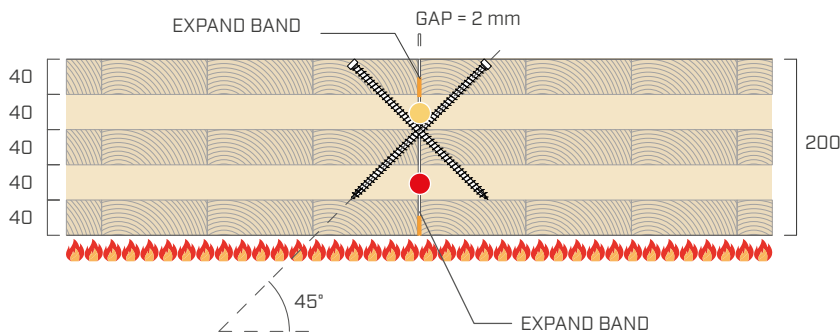
LEGEND:

TC 01 - 60 mm from bottom	TC 04 - non-exposed face	TC 07 - non-exposed face	TC 10 - non-exposed face
TC 02 - 140 mm from bottom	TC 05 - non-exposed face	TC 08 - non-exposed face	TC 11 - non-exposed face
TC 03 - non-exposed face	TC 06 - non-exposed face	TC 09 - non-exposed face	

JOINT h200 | 8 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 2 mm GAP AND EXPAND BAND

TOP SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives
BOTTOM SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 161 minutes**
 Persistent flame



INSULATION (I) Time **> 161 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	70	< 180 °C
● 140 mm from slab bottom	TC 02	161	83°C
on the unexposed face of the slab	TC 04	161	42°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

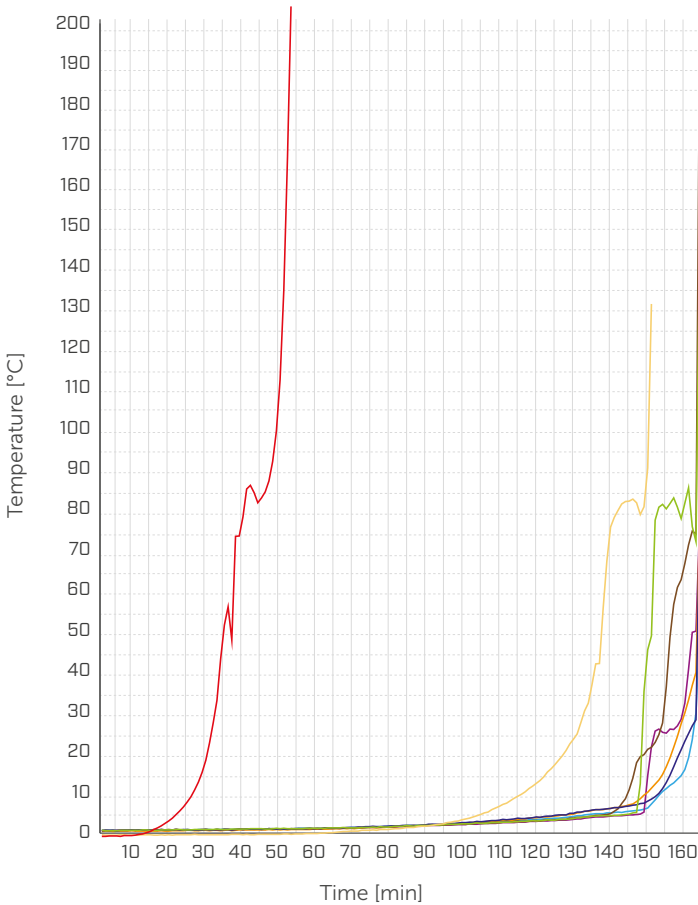
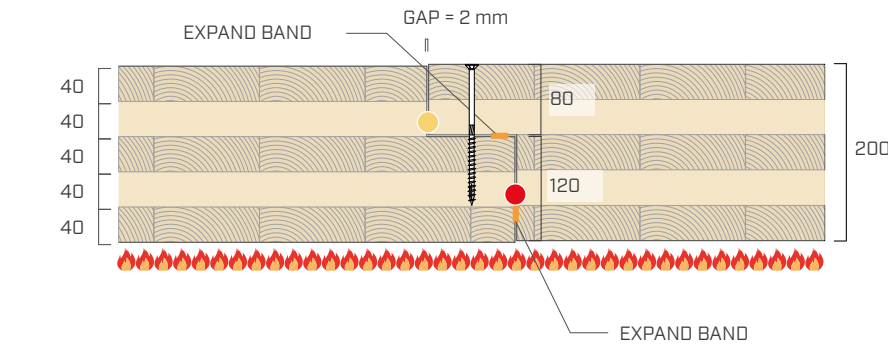
LEGEND:

— TC 01 - 60 mm from bottom — TC 03 - non-exposed face — TC 05 - non-exposed face — TC 07 - non-exposed face
 — TC 02 - 140 mm from bottom — TC 04 - non-exposed face — TC 06 - non-exposed face — TC 08 - non-exposed face

JOINT h200 | 9 - TEST REPORT

HALF-LAP JOINT WITH PARTIAL THREAD SCREWS HBS8160, 2 mm GAP AND EXPAND BAND

TOP SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives/silicone paper release liner
BOTTOM SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives/silicone paper release liner



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 161 minutes**
Persistent flame



INSULATION (I) Time **> 161 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	40	< 180°C
● 140 mm from slab bottom	TC 02	140	< 180°C
on the unexposed face of the slab	TC 05	161	199°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

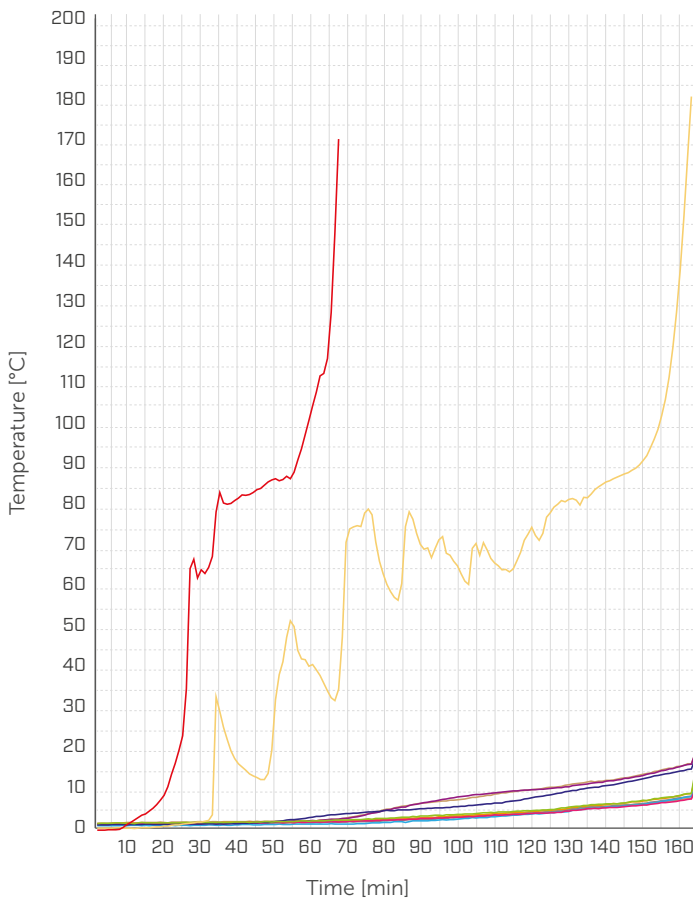
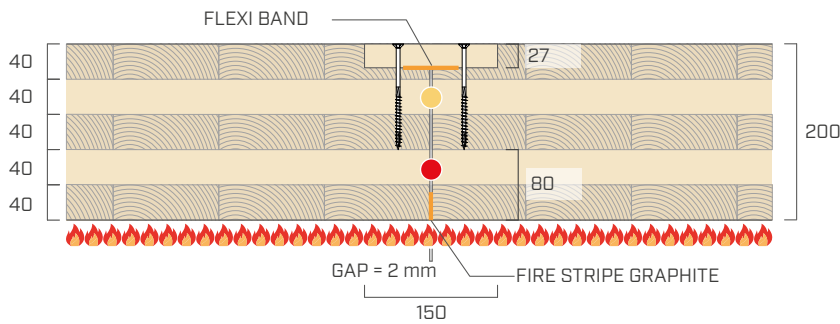
LEGEND:

- | | | | |
|------------------------------|----------------------------|----------------------------|----------------------------|
| — TC 01 - 60 mm from bottom | — TC 03 - non-exposed face | — TC 05 - non-exposed face | — TC 07 - non-exposed face |
| — TC 02 - 140 mm from bottom | — TC 04 - non-exposed face | — TC 06 - non-exposed face | — TC 08 - non-exposed face |

JOINT h200 | 10 - TEST REPORT

JOINT WITH COVER PLATE AND PARTIAL THREAD SCREWS HBS6120, 2 mm GAP, FIRE STRIPE GRAPHITE AND FLEXI BAND

TOP SEALANT	FLEXI BAND
Description	Universal single-sided high-adhesive tape
Material	PE film/glue/reinforcing polyester grid/silicone coated paper
Width [mm]	60
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	

INSULATION (I)	Time	> 161 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
● 140 mm from slab bottom	TC 02	150	< 180°C
on the unexposed face of the slab	TC 07	161	19°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

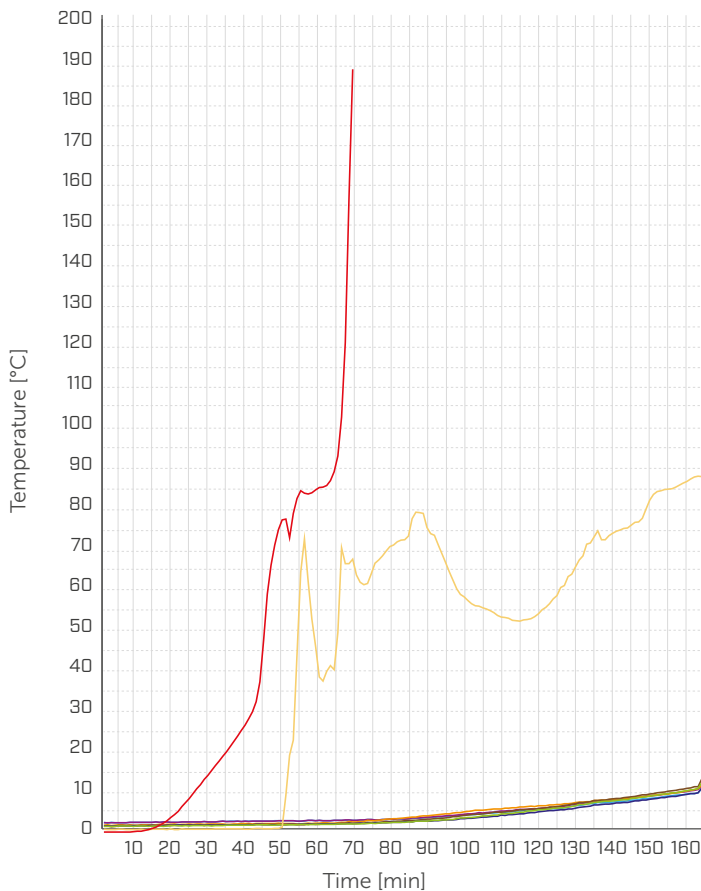
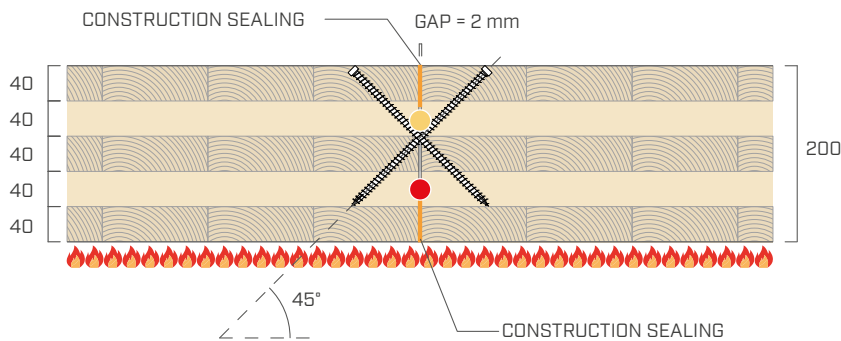
LEGEND:

TC 01 - 60 mm from bottom	TC 04 - non-exposed face	TC 07 - non-exposed face	TC 10 - non-exposed face
TC 02 - 140 mm from bottom	TC 05 - non-exposed face	TC 08 - non-exposed face	TC 11 - non-exposed face
TC 03 - non-exposed face	TC 06 - non-exposed face	TC 09 - non-exposed face	

JOINT h200 | 11 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 2 mm GAP AND CONSTRUCTION SEALING

TOP SEALANT	CONSTRUCTION SEALING
Description	Compressible seal for regular joints
Material	Expanded EPDM
Width [mm]	46
Thickness [mm]	3
BOTTOM SEALANT	CONSTRUCTION SEALING
Description	Compressible seal for regular joints
Material	Expanded EPDM
Width [mm]	46
Thickness [mm]	3



PERFORMANCE CRITERIA

TIGHTNESS (E) Cotton swab **> 161 minutes**

Persistent flame



INSULATION (I) Time **> 161 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
● 140 mm from slab bottom	TC 02	161	87°C
on the unexposed face of the slab	TC 05	161	12°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

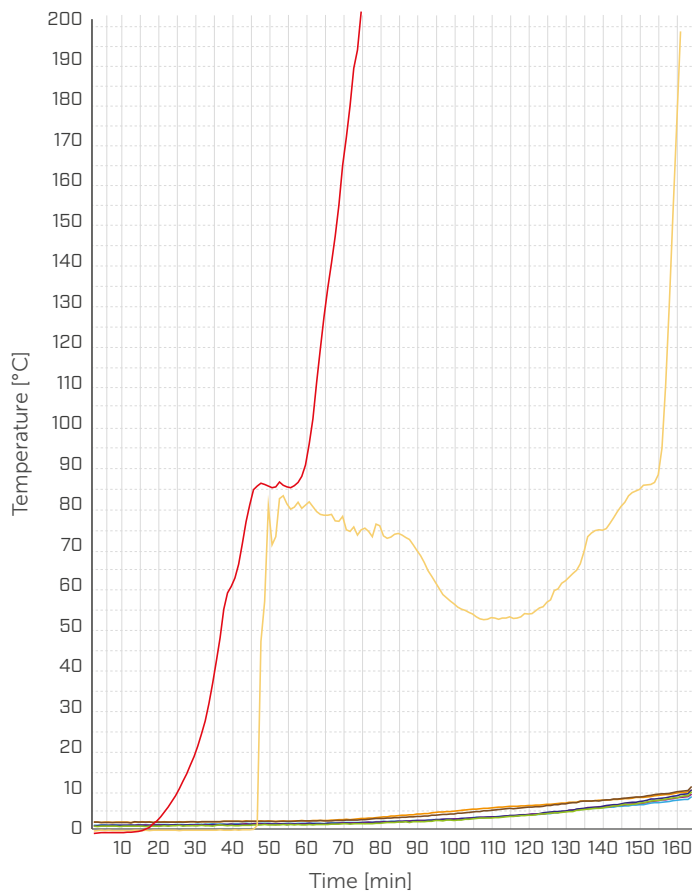
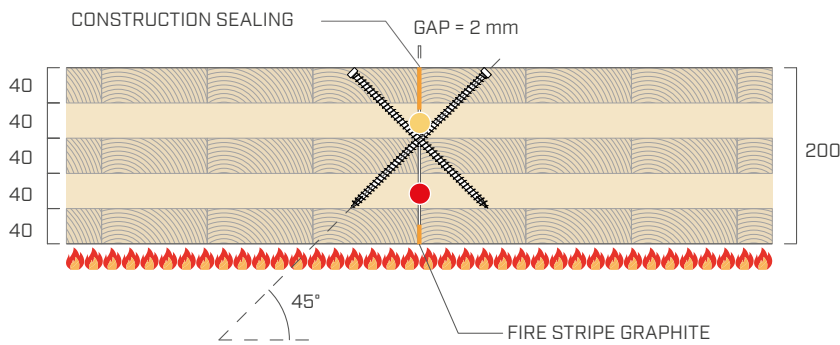
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - 140 mm from bottom	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

JOINT h200 | 12 - TEST REPORT

VGZ9220 SIMPLE JOINT WITH CROSSED SCREWS, 2 mm GAP, CONSTRUCTION SEALING AND FIRE STRIPE GRAPHITE

TOP SEALANT	CONSTRUCTION SEALING
Description	Compressible seal for regular joints
Material	Expanded EPDM
Width [mm]	46
Thickness [mm]	3
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	
INSULATION (I)	Time > 161 minutes

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
● 140 mm from slab bottom	TC 02	150	< 180°C
on the unexposed face of the slab	TC 05	161	11°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

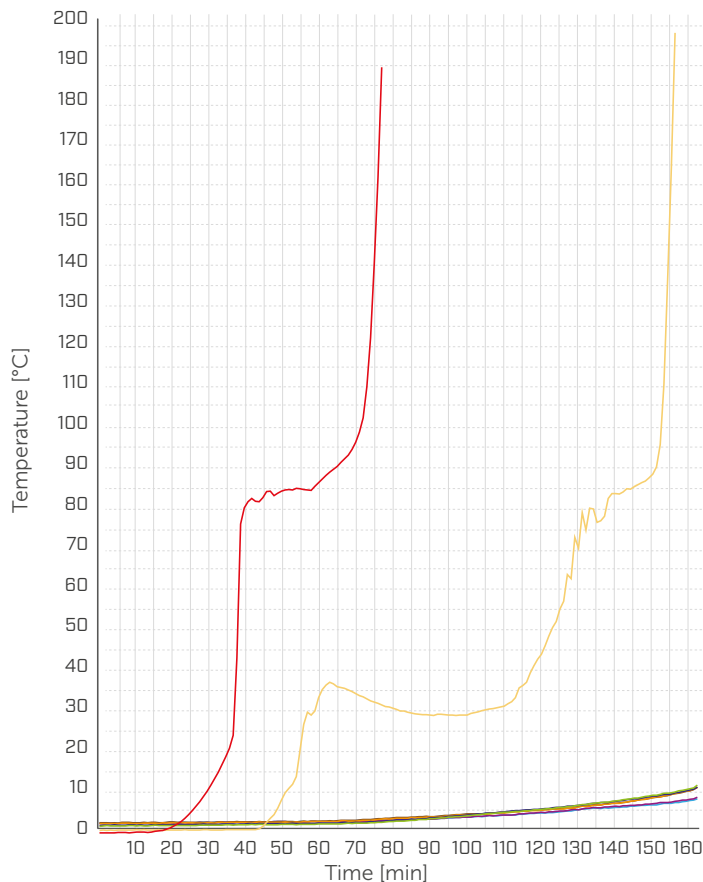
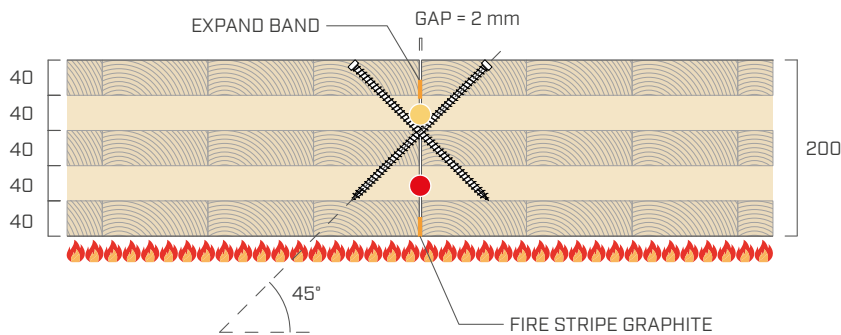
LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - 140 mm from bottom	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face

JOINT h200 | 13 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 2 mm GAP, EXPAND BAND AND FIRE STRIPE GRAPHITE

TOP SEALANT	EXPAND BAND
Description	Self-expanding sealing tape
Material	Elastic polyurethane foam with additives
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) **> 161 minutes**
Persistent flame



INSULATION (I) Time **> 161 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	70	< 180°C
● 140 mm from slab bottom	TC 02	150	< 180°C
on the unexposed face of the slab	TC 03	161	12°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

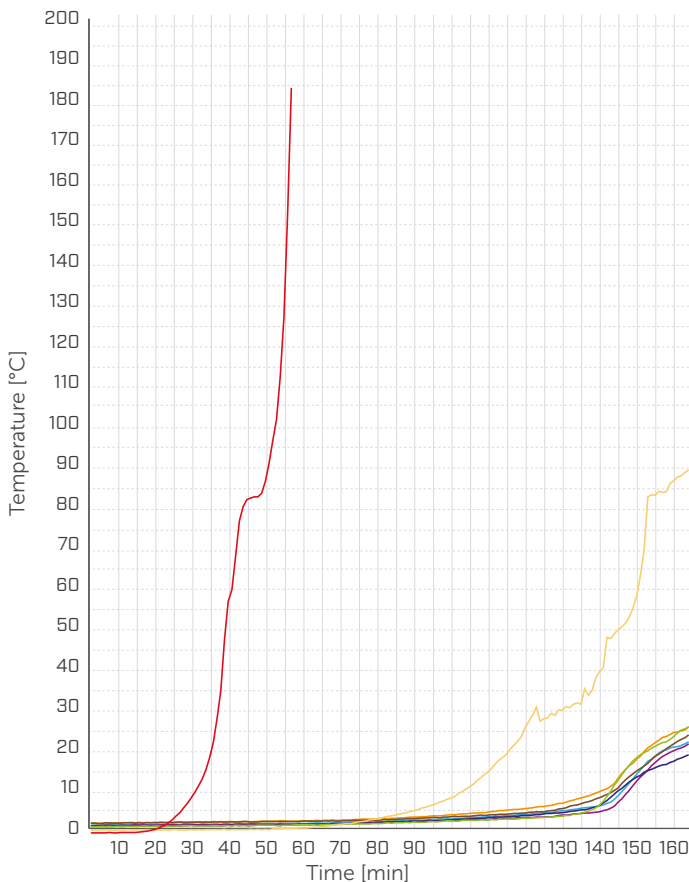
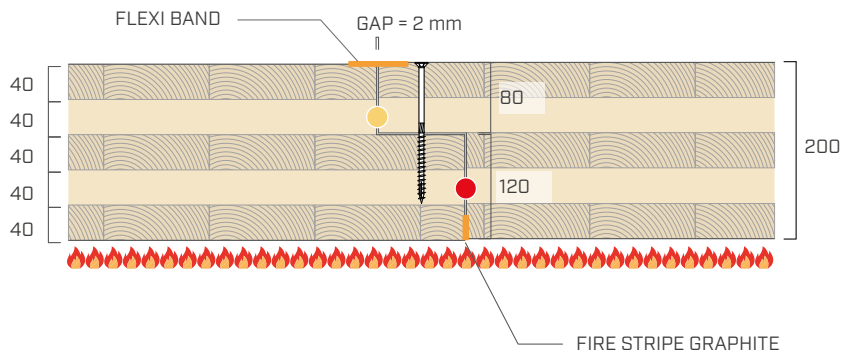
LEGEND:

— TC 01 - 60 mm from bottom
 — TC 03 - non-exposed face
 — TC 05 - non-exposed face
 — TC 07 - non-exposed face
— TC 02 - 140 mm from bottom
 — TC 04 - non-exposed face
 — TC 06 - non-exposed face
 — TC 08 - non-exposed face

JOINT h200 | 14 - TEST REPORT

HALF-LAP JOINT WITH PARTIAL THREAD SCREWS HBS8160, 2 mm GAP, FLEXI BAND AND FIRE STRIPE GRAPHITE

TOP SEALANT	FLEXI BAND
Description	Universal single-sided high-adhesive tape
Material	PE film/glue/reinforcing polyester grid
Width [mm]	60
BOTTOM SEALANT	FIRE STRIPE GRAPHITE
Description	Flexible intumescent gasket
Material	Graphite
Width [mm]	25
Thickness [mm]	1,5



PERFORMANCE CRITERIA

Cotton swab
TIGHTNESS (E) ————— **> 161 minutes**
 Persistent flame



INSULATION (I) Time **> 161 minutes**

ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	50	< 180°C
● 140 mm from slab bottom	TC 02	161	89°C
on the unexposed face of the slab	TC 03-06	161	25°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

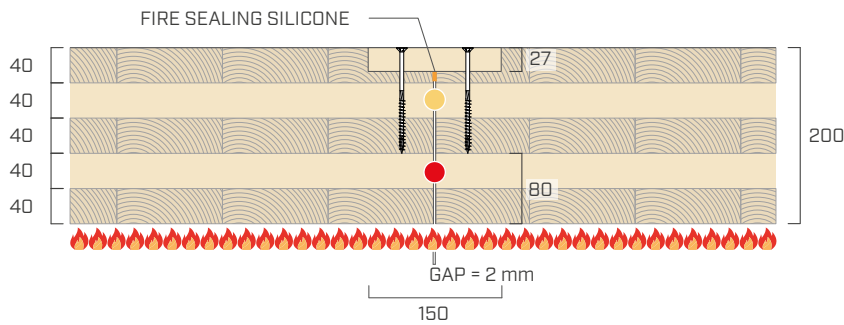
LEGEND:

— TC 01 - 60 mm from bottom — TC 03 - non-exposed face — TC 05 - non-exposed face — TC 07 - non-exposed face
 — TC 02 - 140 mm from bottom — TC 04 - non-exposed face — TC 06 - non-exposed face — TC 08 - non-exposed face

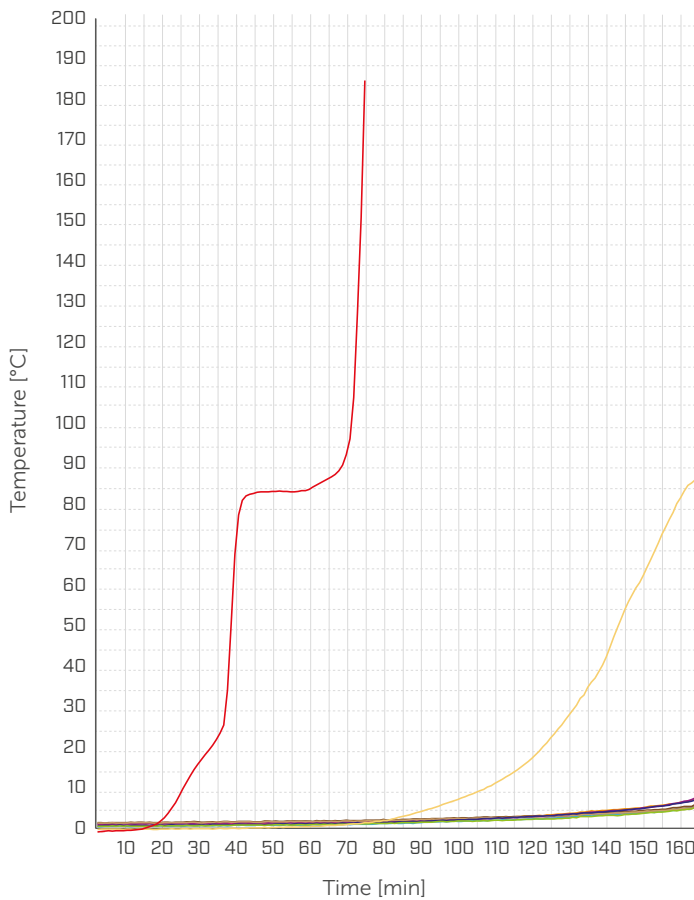
JOINT h200 | 15 - TEST REPORT

JOINT WITH COVER PLATE AND PARTIAL THREAD SCREWS HBS6120, 2 MM GAP AND FIRE SEALING SILICONE

TOP SEALANT	FIRE SEALING SILICONE
Description	High fire-resistant silicone sealant
Material	Silicone
BOTTOM SEALANT	without sealant



FIRE SEALING SILICONE



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	
	 EI 120

INSULATION (I)	Time	> 161 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	70	< 180°C
● 140 mm from slab bottom	TC 02	161	86°C
on the unexposed face of the slab	TC 05	161	8°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

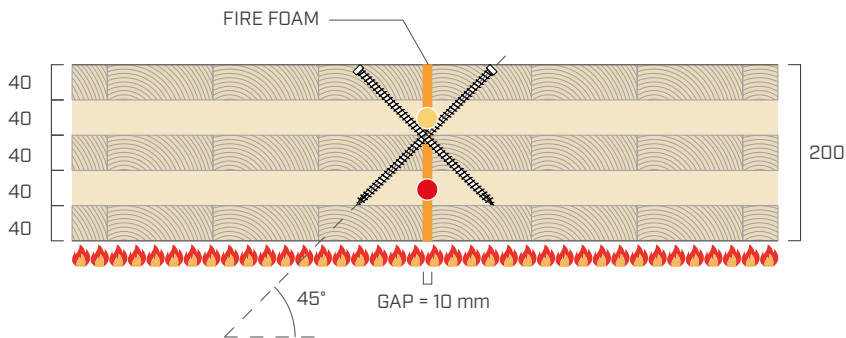
LEGEND:

TC 01 - 60 mm from bottom	TC 04 - non-exposed face	TC 07 - non-exposed face	TC 10 - non-exposed face
TC 02 - 140 mm from bottom	TC 05 - non-exposed face	TC 08 - non-exposed face	TC 11 - non-exposed face
TC 03 - non-exposed face	TC 06 - non-exposed face	TC 09 - non-exposed face	

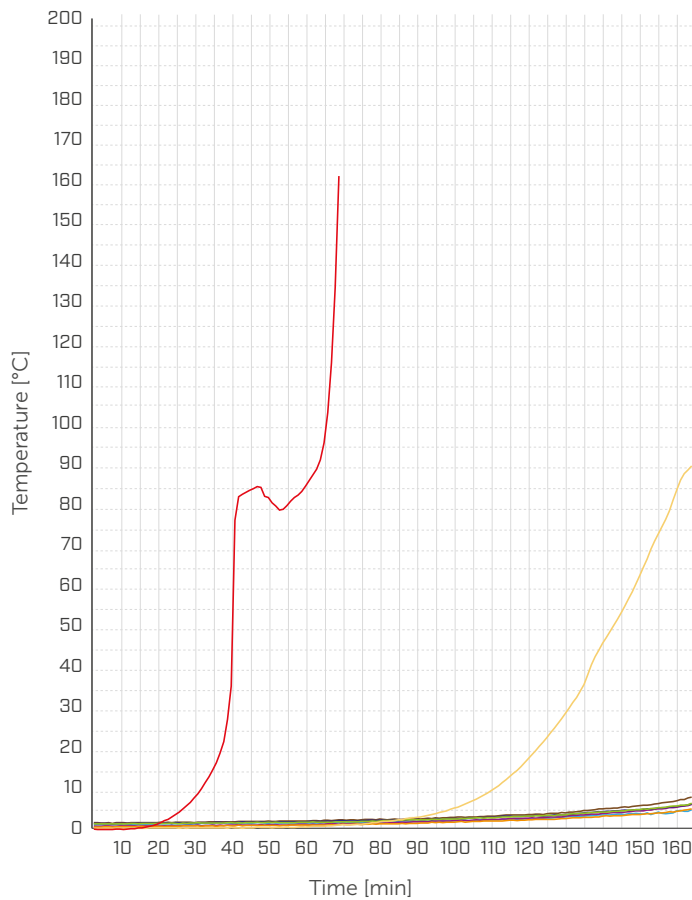
JOINT h200 | 16 - TEST REPORT

SIMPLE JOINT WITH CROSSED SCREWS VGZ9220, 10 mm GAP AND FIRE FOAM

SEALANT	FIRE FOAM
Description	High fire-resistant sealing foam
Material	Single component PU



FIRE FOAM



PERFORMANCE CRITERIA

Cotton swab	
TIGHTNESS (E)	> 161 minutes
Persistent flame	



INSULATION (I)	Time	> 161 minutes
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ΔT measured at the test end	Thermocouple [TC no.]	Time [min]	T°
● 60 mm from slab bottom (non-exposed face)	TC 01	60	< 180°C
● 140 mm from slab bottom	TC 02	161	90°C
on the unexposed face of the slab	TC 05	161	8°C

Reference standard: EN 1363-1:2020 | EN 1366-4:2021

LEGEND:

TC 01 - 60 mm from bottom	TC 03 - non-exposed face	TC 05 - non-exposed face	TC 07 - non-exposed face
TC 02 - 140 mm from bottom	TC 04 - non-exposed face	TC 06 - non-exposed face	TC 08 - non-exposed face



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