

product	<b>Firetect<sup>®</sup> A</b> - field of application
description	fire protective board, hard-pressed mineral board
intended use	fireboard to protect elements to be used for structural steelwork + fire compartments
certification	tested and certified by ETA-14/0402-A; fire resistance performances and assembly methods for uses in:

<b>constructive element</b>		
<b>loadbearing steel elements</b> type 4 acc. ETAG 018	- columns, profile sections 50 up to 355 [m <sup>-1</sup> ] - beams, profile sections 50 up to 355 [m <sup>-1</sup> ]	
<b>fire rated ceilings</b> acc. EN 1995-1-2+C2	- ceilings under structural timber floors / roofs - ceilings under trapezoidal steel roofs	Eurocode 5 (out of scope ETA 14/0402-A) Eurocode 5 (out of scope ETA 14/0402-A)
<b>adjacent joint wall / roof / facade</b> acc. NEN 6068+C1: fire propagation + flashover	- flame barriers under trapezoidal steel roofs	Dutch NEN (out of scope ETA 14/0402-A)

<b>fire resistance</b> related to field of application			
	<b>board cladding for structural steel</b>		<b>configuration</b>
acc. EN 13501-2 / 13381-4	columns	beams	board thickness depending on
<b>R 30</b>	500 ° C	600 ° C	design temperature +
<b>R 60</b>	ctc 1200mm	ctc 600mm	factor [m <sup>-1</sup> ] + no. of exposed sides
<b>R 90</b>			see tables <sup>1)</sup>
<b>R 120</b>			at <a href="http://www.firetect.eu/download">www.firetect.eu/download</a>
<b>R 180</b>			
acc. EN 1995-1-2+C2	<b>fire rated ceilings</b> <sup>2)</sup>		
<b>30</b> minutes	1 layer Firetect A15		
<b>60</b> minutes	1 layer Firetect A20		
<b>90</b> minutes	2 layer Firetect A15 or	1 layer Firetect A20 + 1 layer Firetect P12,5	
<b>120</b> minutes	2 layer Firetect A20		
acc. NEN 6068+C1	<b>flame barriers for adjacent joint wall</b> <sup>3)</sup> / <b>roof</b> <sup>4)</sup> / <b>facade</b>		
<b>30</b> minutes	1 layer Firetect A20 495x1200mm on 1 side		
<b>60</b> minutes	1 layer Firetect A20 495x1200mm on 2 sides		
<sup>1)</sup> Other design temperatures 350 °C up to 750 °C available upon request. <sup>2)</sup> Ceilings under structural timber floors or steel roofs <sup>4)</sup> . <sup>3)</sup> Rigid walls ≥ 150mm, density ≥ 650 kg/m <sup>3</sup> . <sup>4)</sup> Trapezoidal corrugated steel roofs with mineral wool roof insulation. For EPS / PIR / PUR insulation, additional measurements are required.			

directions for use

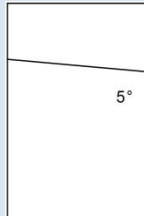
**Firetect<sup>®</sup> A** as board cladding for structural steel

**important** installation must follow DoP No. CPR-14/0402-A

- equipment - tacker, air / gas / powder operated gun  
 - sawing equipment  
     sawing machine: use exhaust equipment, type self-cleaning < 10 mg/m<sup>3</sup> particle absorption  
     use saw blades with hardened metal teeth  
 on site: cut board with Stanley knife, hand or power saw

installation **BOARD CLADDING for structural steel**

- Firetect A boards, board length 1200mm; mount boards butt joint
- board thickness, depending on profile factor [m<sup>-1</sup>] + no. of exposed sides + design temperature <sup>1)</sup>
- columns: joints staggered
- ! - beams: butt joints in base boards may either coincide or stagger with butt joints in upright boards
- mounting on noggings or directly onto steel



**mounting on noggings:**

- use Firetect P or C noggings (5° wedge + base parts), min. 95x20mm (width x thickness)  
     for beams > IPE400, use proportionally larger noggings
- fit noggings between steel flanges at ctc 1200mm (columns) + ctc 600mm (beams)
- upright boards are shot stapled on noggings with joints across noggings
- base boards are attached between protruding parts of upright boards
- use steel staples, non-corrosive, ctc 120mm:

- 1 layer or 1<sup>st</sup> layer: staple crown 10.6mm, staple steel thickness 1.60mm
- staple leg: 38mm between boards, 38mm on noggings
- ≥ 2 layers: staple leg: 38mm between boards, 50mm on noggings

**mounting directly onto steel:** (hollow sections)

- steel hardened nails, min. 3 nails per 1000mm, staggered  
     nail length depending on board thickness, 20 or 30mm (nail steel thickness min. 2.60mm )
- use washers for improved clamp strength

**joint finish**

- 1 layer, butt joint: NO joint filler required; if board-to-board joint >3mm: use Firetect Acrylic sealant  
     note: base boards with beams do NOT require cover strips for joints !
- 2 layers, butt joint: NO joint filler required with joints / boards staggered at min. 300mm

<sup>1)</sup> See tables at [www.firetect.eu/download](http://www.firetect.eu/download); other design temperatures 350 °C up to 750 °C available upon request.

**directions for use**

**Firetect® A** for fire rated ceilings

**important** installation must follow DoP No. CPR-14/0402-A

- equipment - electric screwdriver  
 - sawing equipment  
     sawing machine: use exhaust equipment, type self-cleaning < 10 mg/m<sup>3</sup> particle absorption  
     use saw blades with hardened metal teeth  
 on site: cut board with Stanley knife, hand or power saw

installation **FIRE RATED CEILING**<sup>1)</sup>

- Firetect A boards, butt joint  
     no limitations for ceiling height or width
- board thickness + no. of layers, depending on required fire resistance

see also page 1

*installation method 1*

**mounting directly onto constructive element:**

- for timber beams: use self-tapping screws 35mm, coarse thread, ctc 200mm
- for steel roofs: use phosphated drylining screws, fine thread;  
     screw length= board thickness + 10mm, ctc 300mm per corrugation

acc. EN 1995-1-2+C2

		<i>joint specs</i>
<b>30</b> minutes	1 layer Firetect A15	butt joint
<b>60</b> minutes	1 layer Firetect A20	butt joint
<b>90</b> minutes	2 layer Firetect A15	staggered at min. 300mm
<b>120</b> minutes	2 layer Firetect A20	staggered at min. 300mm

*installation method 2*

**mounting onto supportive construction (metal stud):**

C60/27 profiles acc. EN 14195, ctc 400mm

acc. EN 1995-1-2+C2

- 60** minutes 1 layer Firetect A20  
 - use phosphated drylining screws, fine thread;  
     screw length = 35mm, ctc 200mm  
 - ensure that joints are supported, either by metal stud profiles or cover strips
- 90** minutes 1 layer Firetect A20 + 1 layer Firetect P12,5  
 - use phosphated drylining screws fine thread  
     screw length = 35 (1st layer) + 55mm (2nd layer), ctc 300mm  
 - apply plenum insulation acc. EN 13162, mineral wool ≥ 50mm

**joint finish**

- 1 layer: NONE if butt joint; if board-to-board joint >3mm: use Firetect Acrylic sealant ceilings under timber with 1 layer Firetect A20: support joints (see above)
- 2 layers: NONE if butt joint + joints staggered at min. 300mm

<sup>1)</sup> Ceilings under structural timber or trapezoidal corrugated steel roofs with mineral wool roof insulation.

directions for use

**Firetect<sup>®</sup> A** for flame barriers

**important** installation must follow DoP No. CPR-14/0402-A

equipment - electric screwdriver  
- sawing equipment  
use saw blades with hardened metal teeth  
use exhaust equipment, type self-cleaning < 10 mg/m<sup>3</sup> particle absorption  
on site: cut board with Stanley knife, hand or power saw

installation **FLAME BARRIERS** for adjacent joint wall <sup>1)</sup> / roof <sup>2)</sup> / facade

Note: all constructive elements in the fire propagation / flash over 'zone'  
(thus also wall, roof, steelwork) must have the same fire resistance.

- Firetect A20 strips 495x1200mm, butt joint; directly onto steel roof  
no limitations for ceiling height or width
- 1 or 2 sides, depending on required fire resistance:

see also page 1

acc. NEN 6068+C1

- 30** minutes 1 layer Firetect A20 on 1 side
- 60** minutes 1 layer Firetect A20 on 2 sides

**mounting directly onto constructive element:**

*installation method 1*

**under steel roofs with mineral wool roof insulation**

- use phosphated drylining screws, fine thread;  
screw length= board thickness + 10mm, alternately 3 screws per corrugation, staggered
- apply mineral wool  $\geq 27 \text{ kg/m}^3$  in cannelures of roofing sheets (top + bottom) at wall position
- apply a 1000mm strip of concrete tiles at wall position on top of roofing felt

*installation method 2*

**under steel roofs with EPS / PIR / PUR roof insulation**


- use phosphated drylining screws, fine thread;  
screw length= board thickness + 10mm, alternately 3 screws per corrugation, staggered
- apply mineral wool  $\geq 27 \text{ kg/m}^3$  in cannelures of roofing sheets (top + bottom) at wall position
- interrupt roof insulation at wall position  
+ replace by mineral wool roof insulation  $\geq 115 \text{ kg/m}^3$  min. 350mm wide
- apply a 1000mm strip of concrete tiles at wall position on top of roofing felt

**joint finish**

- NONE if butt joint; if board-to-board joint >3mm: use Firetect Acrylic sealant

<sup>1)</sup> Rigid walls  $\geq 150\text{mm}$ , density  $\geq 650 \text{ kg/m}^3$ .

<sup>2)</sup> Trapezoidal corrugated steel roofs with roof insulation.

specifications		Firetect® A - general product specifications
material		light-weight hard-pressed mineral fireboard with organic components
colour		white primered on upper surface, slightly sanded
<b>fire resistance</b> 		R 30 up to R 180, EN; depending on application and configuration
		EI 30 up to EI 120, EN; depending on application and configuration
		30 up to 60 minutes, NEN; depending on application and configuration
	tested acc.	EN 13381-4 + EN 1995-1-2+C2 + NEN 6068+C1
	classified acc.	EN 13501-1: Class A2; EN 13501-2
<b>environmental performance</b>		
	release of dangerous substances	none: non-formaldehyde, non-asbestos
	use category	Z <sub>2</sub> internal use
	application conditions	between +5 °C and +30 °C, max. 70% RH
	packaging	on pallets 1200x1500mm, shrink foil wrapped + corners protected; no. of boards: see below
	storage	store dry, max. 70% RH, avoid condensation and UV; protect from frost; see below
	shelf life	infinite, if stored acc. instructions
	activation temperature	not applicable
	flash point	not applicable
	thermal conductivity	0,054 W/mk
	density	see below; nominal ± 20 kgs, subject to variable (humid) environmental conditions

available sizes		
standard size	1200x1500mm	other sizes upon request; tolerance ± 0,5mm/m <sup>1</sup>
standard thickness	15 + 20mm	other sizes upon request; tolerance ± 1.0mm

limitations
- use Firetect C or P in case of high mechanical impact risks - use Firetect C in case of variable (humid) environmental conditons

transport & storage		- with tautliner, load + unload sideways; do not stack more than 2 pallets - always keep dry; standard packaging is inadequate for protection against rain or leaking water - store on level ground; do not stack more than 2 pallets - HS code: 68069000				
	W x L x Th	boards / pallet	m <sup>2</sup> / pallet	kgs / pallet	density kg/m <sup>2</sup>	density kg/m <sup>3</sup>
Firetect <b>A15</b>	1200 x 1500 x 15mm	55	99	± 675	± 7.0	± 450
Firetect <b>A20</b>	1200 x 1500 x 20mm	40	72	± 660	± 9.0	± 450

health & safety
- no specific restrictions - work according to health & safety Directive and use appropriate PPE (dust mask) - this product is classified as not dangerous under Regulation 1272/2008 and is in compliance with CLP regulations



product information
- tables board thickness and other documentation can be downloaded at <a href="http://www.firetect.eu/download">www.firetect.eu/download</a>
- product certification by DoP; more info on certification of CE building products through ETA at <a href="http://www.firetect.eu/certification">www.firetect.eu/certification</a> ; consult <a href="http://www.firetect.eu">www.firetect.eu</a> for the latest version of this TDS, as product development and testing are ongoing processes at KLF
- contact KLF for other R / EI requirements and (non)standard or complex site requirements; mail <a href="mailto:info@klf.nl">info@klf.nl</a>
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