

European Technical Assessment

**ETA-23/0536
of 12/09/2023**

English translation prepared by CSTB – Original version is in French language

General Part

Nom commercial
Trade Name

Nullifire FS704 Hybrid Sealant

Famille de produit
Product family

Produits de Calfeutrements et de Compartimentage au feu :
Joint linéaire et d'étanchéité résistant au feu
Fire Stopping and Fire Sealing Products:
Linear joint and Gap seals

Titulaire
Manufacturer

Tremco CPG UK Limited
Coupland Rd, Hindley Green, Wigan WN2 4HT (United Kingdom)

Usine de fabrication
Manufacturing plant

Tremco CPG Germany GmbH
Traunring 65, 83301 Traunreut (Germany)

Cette évaluation contient
This assessment contains

43 pages incluant 39 pages d'annexes qui font partie intégrante de cette évaluation
43 pages including 39 pages of annexes which form an integral part of this
assessment

Base de l'ETE
Basis of ETA

DEE 350141-00-1106 (Septembre 2017)
EAD 350141-00-1106 (September 2017)

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Specific part

1 Technical Description of the product

Nullifire FS704 is defined as a fire-resistant linear static seal, used to reinstate the fire resistance performance where gaps are present between two wall or floor constructions or gaps where wall and floor constructions abut.

Nullifire FS704 is supplied in a 310 ml tube / foil pack and 600 ml sausage foil pack. The sealant is gunned into the aperture in the separating element/elements, to a specified depth using required backing materials, as specified in Annex below.

2 Specification of the intended use

Detailed information and data are given in Annexes.

2.1 Intended use

The intended use of Nullifire FS704 is to reinstate the fire resistance performance of gaps in and joints in and between flexible wall and rigid wall constructions, gaps in and joints between rigid floor constructions.

The specific elements of construction that the system Nullifire FS704 may be used to provide a gap or joint seal in, are as follows:

- a. Partition wall: Partitions must be at least 98 mm thick or be constructed as described in the appendix. They must consist at least of a metal or wooden frame to which 2 x 12,5 mm thick type F plasterboard are fixed on either side. The openings in the partitions must be made in accordance with the provisions described in the tables in this document.
- b. Rigid wall: The wall must be at least 100 mm thick and made of concrete, aerated concrete or concrete blocks with a minimum density of 650 kg/m³.
- c. Rigid Floor: The floor must have a minimum thickness of 150 mm and be made of concrete or aerated concrete (including floors consisting of concrete slabs and concrete joists) with a minimum density of 650 kg/m³.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

The overall board layers thickness is equal to or greater than that tested. The number of layers is equal to or greater than that tested.

The maximum permitted joint/gap width for system Nullifire FS704 is 50 mm.

The maximum movement capability of system Nullifire FS704 is $\leq 7,5\%$ depending upon application.

2.2 Use Category

Use scenario: **IA1**, **IA2** ; **S/W2**

- **IA1:** Product with direct contact to indoor air.
- **IA2:** Product with indirect contact to indoor air (e.g., covered products) but possible impact on indoor air.
- **S/W2:** Product with indirect contact to soil-, ground- and surface water

Type X: Nullifire FS704 intended for use in conditions exposed to weathering.

Includes lower categories i.e., Type Y₁, Y₂, Z₁ and Z₂.

The provisions made in this European Technical Assessment are based on an assumed working life of Nullifire FS704 Hybrid Sealant of 25 years provided that the conditions laid down in the product datasheet for the packaging/transport/ storage/installation/use/repair are met.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or by the Technical Assessment Body but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product

3.1 Safety in case of fire (BWR2)

Essential Characteristic	Performance
Reaction to fire	No performance assessed
Resistance to fire	Classification according to EN 13501-2 Standard Performance declared up to EI 120 See Annex B

3.2 Hygiene, health and the environment (BWR3)

Essential Characteristic	Performance
Content, emission and/or release of dangerous substance	<p>The applicant has submitted a written declaration that Nullifire FS704 does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there.</p> <p>There may be other requirements applicable to the products falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Directive, these requirements need also to be complied with, when and where they apply.</p> <p>Safety Data Sheet see Annex C</p>
Air permeability	<p>Test result according to EN 1026:</p> <p>Performance declared up to 600 Pa See Annex D</p>
Water permeability	No performance assessed

3.3 Safety and accessibility in use (BWR4)

Essential Characteristic	Performance
Mechanical resistance and stability	No performance required / applicable to the system
Resistance to impact / movement	No performance required / applicable to the system
Adhesion	<p>Test result according to ISO 9046:</p> <p>Performance declared: Adhesive with $M_c < 7,5 \%$</p>
Durability	<p>Type X:</p> <p>Nullifire FS704 intended for use in conditions exposed to weathering</p>
Movement capability	<p>Test result according to ISO 8339:</p> <p>Performance declared less than $7,5 \%$</p>
Cycling of perimeter seals for curtains wall	No performance required / applicable to the system
Compression set	No performance required / applicable to the system
Linear expansion on setting	No performance required / applicable to the system

3.4 Protection against noise (BWR5)

Essential Characteristic	Performance
Airborne and sound insulation	Test result according to EN ISO 10140 Performance declared up to 66 dB See Annex E

3.5 Energy economy and heat retention (BWR6)

Essential Characteristic	Performance
Thermal properties	No performance assessed
Water vapor permeability	No performance assessed

4 Assessment and verification of constancy of performance (AVCP)

According to the Decision 1999/454/EC of the European Commission, the system of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table applies.

Product	Intended use	Level or Class	System
Fire Stopping and Fire Sealing Products:	Linear seal for fire compartmentation and/or fire protection or fire performance	Any	1

5 Technical details necessary for the implementation of the AVCP system

Technical Details necessary for the implementation of the Assessment and verification of constancy of performance (AVCP) system are laid down in the control plan deposited at Centre Scientifique et Technique du Bâtiment.

The control plan including confidential information, it is not included in the published part of this European Technical Assessment (ETA).

The manufacturer shall, on the basis of a contract, involve a notified body approved in the field of fire stopping and sealing products for issuing the certificate of conformity CE based on the control plan.

The Notified Body shall visit the factory at least twice a year for surveillance of the manufacturer.

Issued at Marne La Vallée, 12/09/2023

The original French version is signed by

Anca Cronopol

Head of Division

A01: Technical data sheet (1/2)

Note: The Technical data sheet above is given as an indication, only the technical data sheets supplied and/or available on the manufacturer's website are authentic.

CI/SFB		(29)	(K2)
CAW P10			
Uniclass JP10:L68114			

Product Information

Description

FS704 is a non-sagging fire resistant sealant with excellent processing properties. In a reaction with humidity from the air it forms a soft elastic sealant that shows good resistance to light, ageing and weathering. The film formation is approx. 45 minutes. Due to the fast-curing system the depth of curing after the first day is about 2.8 mm. The movement capability (EN 15651-1) is 25 % in normal usage of the building. FS704 is free of phthalates, isocyanates, and silicone. It is compatible to metals and to most construction materials. Contact with bituminous or tar containing surfaces can lead to discoloration.

Usage / Purpose

FS704 is suitable for a variety of applications in static linear joints:

- Concrete-Timber
- Concrete- Concrete
- Steel- Steel
- Steel – Concrete
- Drywall – Drywall
- Drywall- Concrete
- Drywall – Steel
- Timber –Timber

See the Performance Table

Colours

White
Grey

Packaging

310 ml cartridges (12 per box)
600 ml sausages (20 per box)

Usage Guidelines

Always read SDS, pre-application guidance and relevant application detail prior to application. Ensure the latest documents are downloaded prior to every project commencement. Protective Equipment Use in well ventilated conditions and ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to safety data sheet.

Necessary Tools

- Sealant caulking gun
- Sealant profiling tool/spatula
- Masking tape (if decorative finish is

required to surrounding substrates)

Preparation

- All surfaces must be clean and sound, free from dirt, grease and other contamination.
- Wood, plaster and brick may be damp but not running wet.
- Porous or high gloss surfaces require priming prior to application.
- If a clean line is required on adjoining substrates, masking tape should be used.
- Check specification is suitable for movement, fire rating and gap size required.

Application

- S704 is an elastic sealant for joints for interior and exterior application according to EN 15651 part 1, type F-EXT-INT-CC, class 25LM. Long term elastic sealing, when not in a fire situation, of perimeter and movement joints between construction components as well as for other indoor and outdoor movement joints. FS704 is recommended for construction sealing based on ISO EN 11600. It can be used for indoor and outdoor applications. The product is not recommended for bonding. If used on natural stone staining of the edges cannot be excluded.
- Insert required backing material (see performance table on backing materials), oversized to joint width to ensure stability, to provide correct depth of seal.
- Using a sharp knife, cut nozzle of cartridge to bead size and angle required.
- Gun sealant into gap to required depth by applying an even pressure to the trigger.
- Work and tool to a smooth finish immediately with a wet profiling tool or spatula.

Coverage

To determine quantity of sealant required, please see the performance table.

For further guidance on application methods, and material requirements, please contact the Tremco CPG Technical Services Department.

Nullifire
Smart Protection

FS704
Fire Resistant Hybrid

up to
120
mins



Key Benefits Summary

- Up to 2 hours fire resistance Tested to EN 1366-4
- Up to 25% movement capability normal usage in building: not during fire
- Suitable for flexible walls and rigid walls & floors
- Acoustics up to ---- dB (waiting for testresults)
- Air seal up to ----- Pa (waiting for testresults)

Nullifire FS704 Hybrid Sealant

Technical data sheet

Annex B

A01: Technical data sheet (2/2)

Note: The Technical data sheet above is given as an indication, only the technical data sheets supplied and/or available on the manufacturer's website are authentic.



Technical information

Property	Test Method	Result
Composition		hybrid acrylic sealant
Acoustic Rating	BS EN ISO 10140:2-2010	waiting for testresults
Air Permeability	BS EN ISO 1023:2	waiting for testresults
Solids Content		78% to 82%
pH Value		8.2 to 9.5
Specific Gravity		1.50 to 1.56
Viscosity		Thixotropic
Shore A Hardness		~ 30
Touch Dry	at +20°C	45 minutes
Cure Rate	at +20°C	2,8 mm/day
Application Temperature		+5°C - +40°C
Maximum Continuous Service Temperature		+70°C
Storage	Store in dry conditions between +5°C and +25°C.	
Shelf Life	12 months when stored as recommended in original unopened package	

Cleaning

Immediately remove all excess sealant and masking tape before cure. Fresh, uncured sealant can be removed with AT115. Cured sealant can only be removed mechanically.

Health & Safety Precautions

Safety data sheet must be read and understood before use.

Technical Service

Tremco CPG has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more information, service, advice please call Customer Services

Guarantee / Warranty

Tremco CPG products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG written instructions and (b) in any application recommended by Tremco CPG, but which is proved to be defective, will be replaced free of charge. No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.
It is a requirement of the installer to ensure suitability and compatibility of all elements before installation commences and that compliance can be achieved as required.



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2023-04

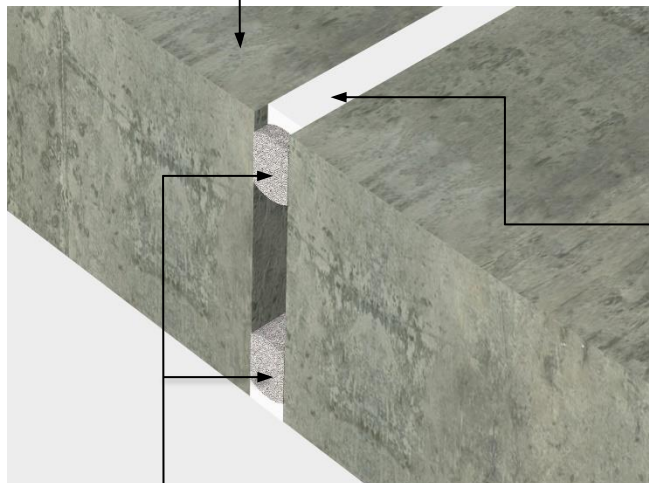
Nullifire FS704 Hybrid Sealant

Technical data sheet

Annex B

B01: Horizontal linear joint caulking (Application of two faces on an identical floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete**
Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³

Linear joint opening
Minimum: **05** mm | Maximum: **50** mm
Mastic thickness
Cf. Classification hereinbelow

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

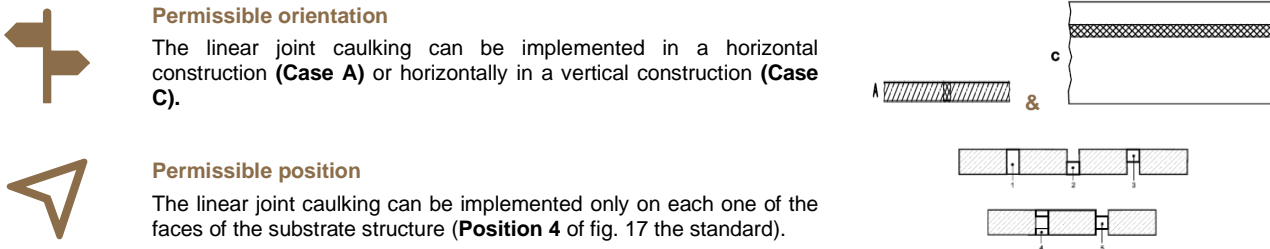
Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening $\times 2$**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Fire Direction
Underside of the floor

Induced Movement
< not applicable >

Permissible orientation
The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 4** of fig. 17 the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI120 - H - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI90 - H - X - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

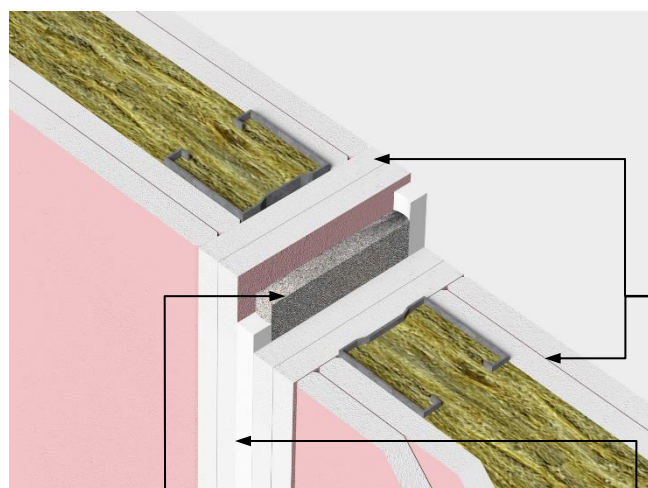
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B02: Vertical linear joint caulking (Application of two faces on an identical wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Characteristics of the support material

Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³



Permissible orientation

The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).



Permissible position

The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1** of fig. 17 of the standard).



Permissible substrate structure (Wall)

Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.

Th. ≥ 98 mm

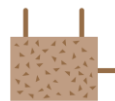
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm



Or

Rigid wall: **Masonry in concrete blocks or aerated concrete**

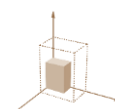
Th. ≥ 98 mm | Density ≥ 350 kg/m³



Or

Rigid wall: **Reinforced concrete**

Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

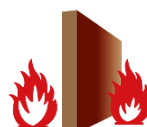


Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

Cf. Classification hereinbelow

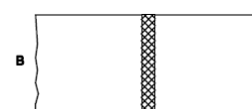


Fire direction

Front / Back
Indifferent

Induced Movement

< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI60 - V - X - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

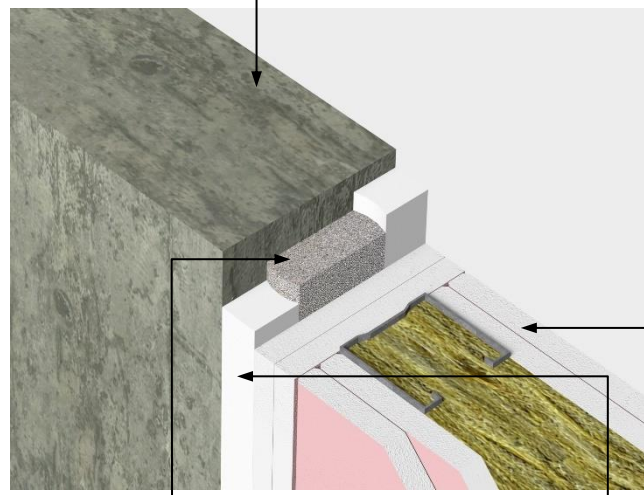
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B03: Vertical linear joint caulking (Application of two faces on a mixed wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/ m³

Permissible orientation
The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1** of fig. 17 of the standard).

Permissible substrate structure (Wall)
Rigid wall: **Reinforced concrete**
Th. ≥ 100 mm | Density ≥ 2400 ± 200 kg/m³

Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet ≥ 12,5 mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/ m³

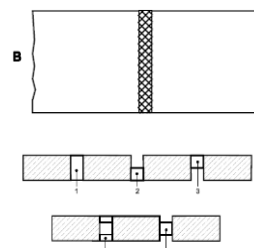
Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density ≥ 2400 ± 200 kg/ m³

Linear joint opening
Minimum: **05 mm** | Maximum: **50 mm**

Mastic thickness
Cf. Classification hereinbelow

Fire direction
Front / Back
Indifferent

Induced Movement
< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - X - B - W05 to W50

(Mastic min. Th.: 25 mm)

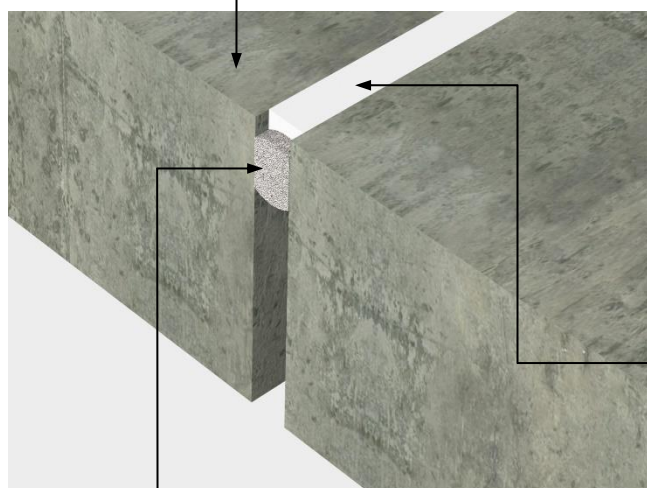
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B04: Horizontal linear joint caulking (Application on one face on an identical floor)

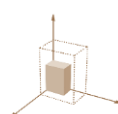
Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete**

Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³



Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

Cf. Classification hereinbelow

Characteristics of the support material

Combustible joint bottom: **PE / PU**

Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening x 2**

Th. ≥ 45 mm | Density ≥ 33 kg/m³



Fire Direction

Underside of the floor

Induced Movement

< not applicable >



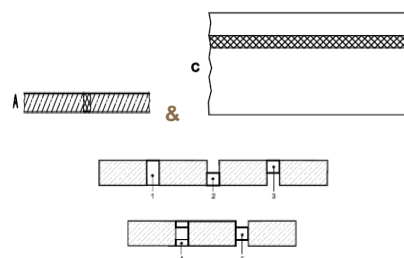
Permissible orientation

The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).



Permissible position

The linear joint caulking can be implemented only the from the upper face of the substrate structure (**Position 3** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI90 - H - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI60 - H - X - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

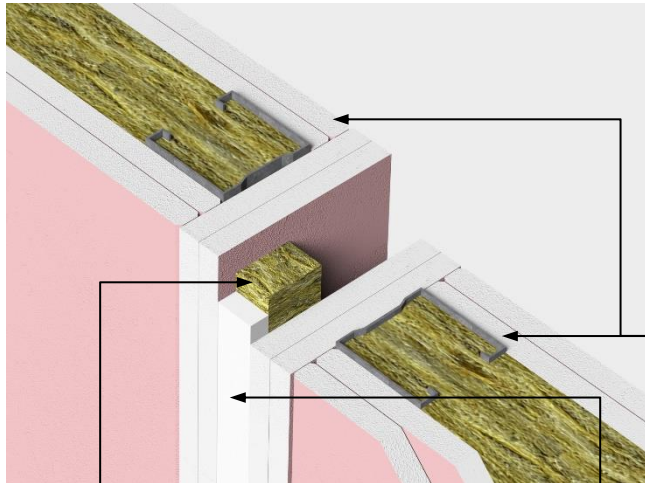
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B05: Vertical linear joint caulking (Application on one face on an identical wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Characteristics of the support material

Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening × 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³



Fire Direction
Mastic Side



Permissible orientation

The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).



Permissible position

The linear joint caulking can be implemented only on one face of the substrate structure (**Position 2, 3 and 5** of fig. 17 of the standard), with the mastic oriented on the face exposed to the fire



Permissible substrate structure (Wall)

Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.

Th. ≥ 98 mm

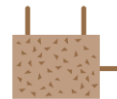
No. of skin ≥ 2 | Th. Sheet ≥ 12,5 mm



Or

Rigid wall: **Masonry in concrete blocks or aerated concrete**

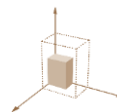
Th. ≥ 98 mm | Density ≥ 350 kg/m³



Or

Rigid wall: **Reinforced concrete**

Th. ≥ 98 mm | Density ≥ 2400 ± 200 kg/m³



Linear joint opening

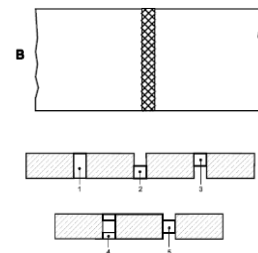
Minimum: **05 mm** | Maximum: **50 mm**

Mastic thickness

Cf. Classification hereinbelow

Induced Movement

< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - X - B - W05 to W50

(Mastic min. Th.: 25 mm)

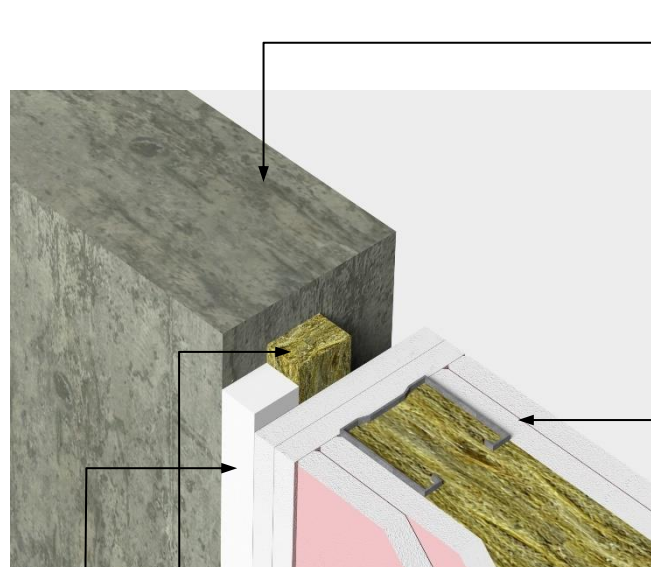
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B06: Vertical linear joint caulking (Application on one face on a mixed wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Wall)

Rigid wall: **Reinforced concrete**

Th. ≥ 100 mm | Density $\geq 2400 \pm 200$ kg/m³



Permissible substrate structure (Wall)

Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.

Th. ≥ 98 mm

No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm



Or

Rigid wall: **Masonry in concrete blocks or aerated concrete**

Th. ≥ 98 mm | Density ≥ 350 kg/m³



Or

Rigid wall: **Reinforced concrete**

Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³



Fire Direction

Mastic Side

Induced Movement

< not applicable >

Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

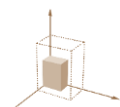
Cf. Classification hereinbelow

Characteristics of the support material

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening** x 2

Th. ≥ 45 mm | Density ≥ 33 kg/m³



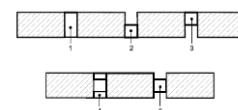
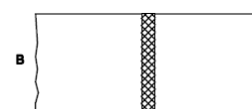
Permissible orientation

The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).



Permissible position

The linear joint caulking can be implemented only on one face of the substrate structure (**Position 2, 3 and 5** of fig. 17 of the standard), with the mastic oriented on the face exposed to the fire



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI45 - V - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI60 - V - X - B - W21 to W50

(Mastic min. Th.: 25 mm)

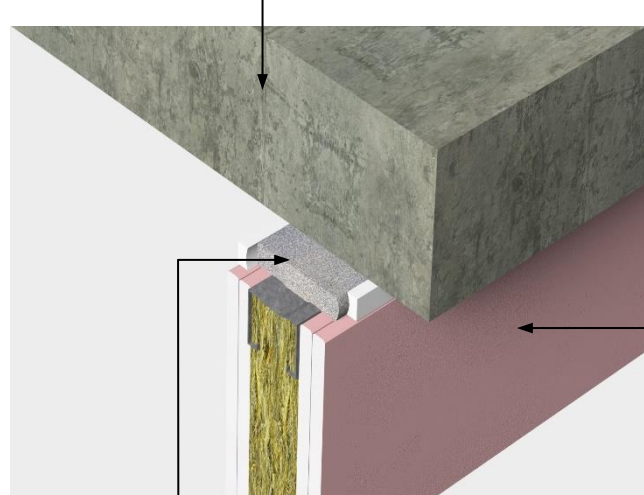
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B07: Horizontal linear joint caulking (Application on two faces on wall top)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete**
Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³

Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

Linear joint opening
Minimum: **05** mm | Maximum: **50** mm

Mastic thickness
Cf. Classification hereinbelow

Fire direction
Front / Back
Indifferent



Induced Movement
< not applicable >

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Permissible orientation
The horizontal linear caulking can be implemented abutting against a floor, a ceiling or roof (wall top or foot of the wall, **Case D**) or horizontally in a vertical construction (**Case C**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1 and 6** of fig. 17 of the standard).

Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI120 - T - X - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI60 - T - X - B - W20 to W50
(Mastic min. Th.: Ratio 2:1)

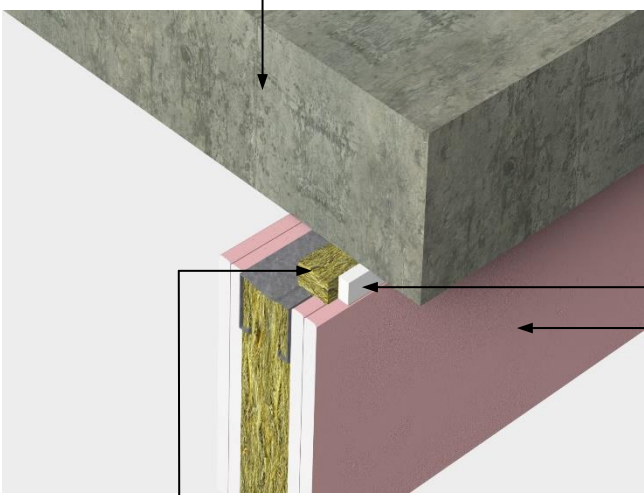
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B08: Horizontal linear joint caulking (Application on one face on wall top)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Characteristics of the support material
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening × 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete**
Th. ≥ 150 mm | Density ≥ 2400 ± 200 kg/m³

Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet ≥ 12,5 mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density ≥ 2400 ± 200 kg/m³

Linear joint opening
Minimum: **05 mm** | Maximum: **50 mm**

Mastic thickness
Cf. Classification hereinbelow

Fire Direction
Mastic Side

Induced Movement
< not applicable >

Permissible orientation
The horizontal linear caulking can be implemented abutting against a floor, a ceiling or roof (wall top or foot of the wall, **Case D**) or horizontally in a vertical construction (**Case C**).

Permissible position
The linear joint caulking can be implemented only on one faces of the substrate structure (**Position 2, 3, 5 and 6** of fig. 17 of the standard) with the mastic oriented on the face exposed to the fire.

Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - T - X - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI90 - T - X - B - W05 to W50
(Mastic min. Th.: 25 mm)

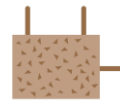
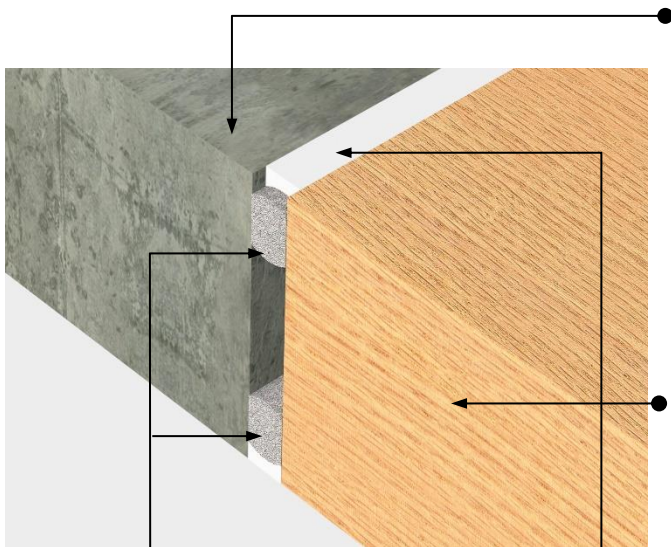
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B09: Horizontal linear caulking (Application of two faces on a mixed floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete**

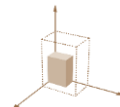
Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³



Permissible substrate structure (Floor)

Rigid floor: **Lumber wood / Framework**

Th. ≥ 150 mm | Density ≥ 450 kg/m³



Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

Cf. Classification hereinbelow



Fire Direction

Underside of the floor

Characteristics of the support material

Combustible joint bottom: **PE / PU**

Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening x 2**

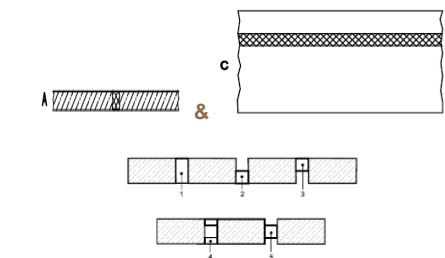
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Permissible orientation

The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

Permissible position

The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 4** of fig. 17 the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI90 - H - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI60 - H - X - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

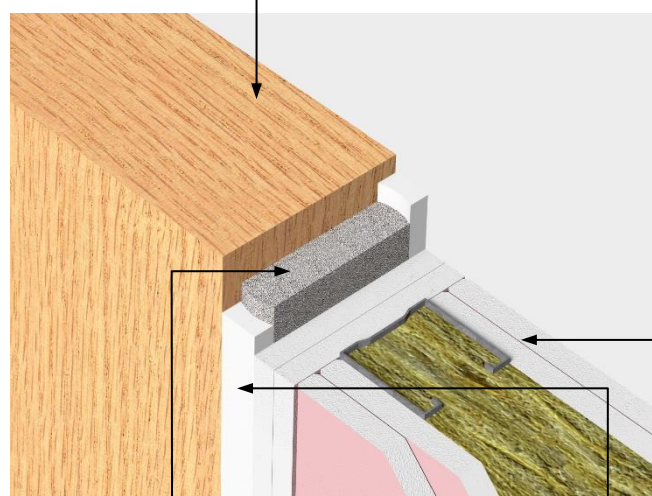
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B10: Vertical linear joint caulking (Application of two faces on a mixed wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Wall)
Rigid floor: **Lumber wood / Framework**
Th. ≥ 100 mm | Density ≥ 450 kg/m³

Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

Linear joint opening
Minimum: **05** mm | Maximum: **50** mm

Mastic thickness
Cf. Classification hereinbelow

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**




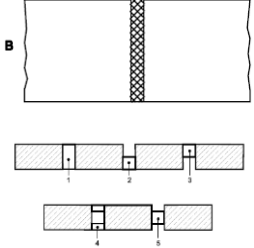
Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Fire direction
Front / Back
Indifferent

Induced Movement
< not applicable >

Permissible orientation
The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1** of fig. 17 of the standard).

Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - X - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI60 - V - X - B - W20 to W50
(Mastic min. Th.: Ratio 2:1)

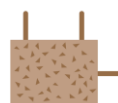
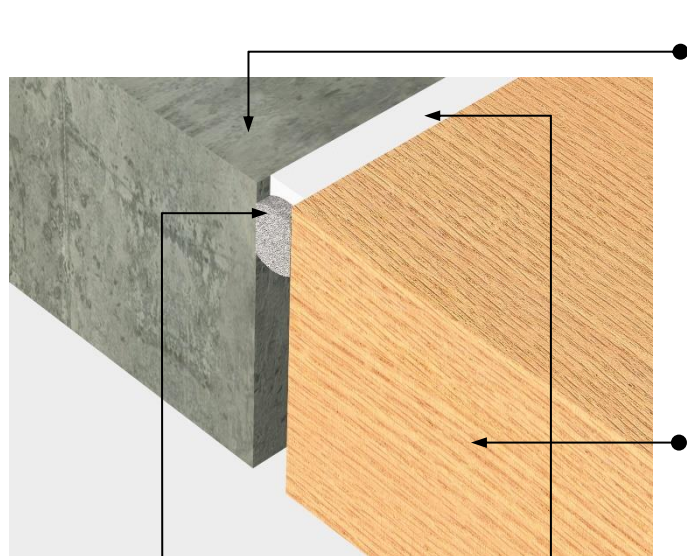
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B11: Horizontal linear joint caulking (Application on one face on a mixed floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete**

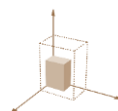
Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³



Permissible substrate structure (Floor)

Rigid floor: **Lumber wood / Framework**

Th. ≥ 150 mm | Density ≥ 450 kg/m³



Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

Cf. Classification hereinbelow



Fire Direction

Underside of the floor

Characteristics of the support material

Combustible joint bottom: **PE / PU**

Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening x 2**

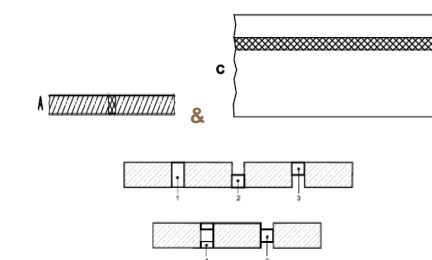
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Permissible orientation

The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

Permissible position

The linear joint caulking can be implemented only the from the upper face of the substrate structure (**Position 3** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI90 - H - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI60 - H - X - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

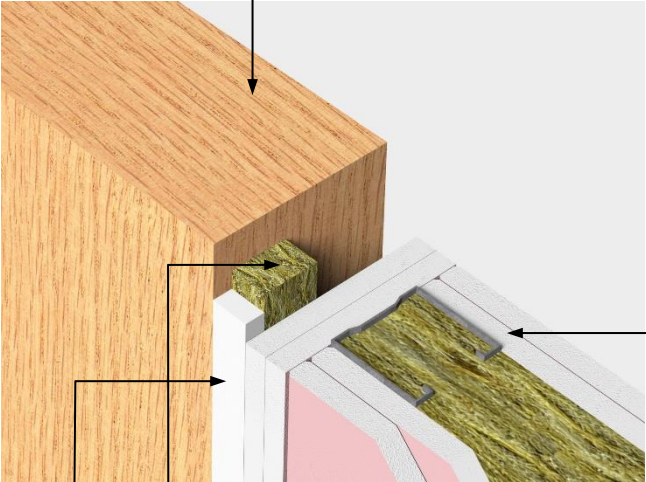
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B12: Vertical linear joint caulking (Application on one face on a mixed wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Linear joint opening
Minimum: 05 mm | Maximum: 50 mm

Mastic thickness
Cf. Classification hereinbelow

Characteristics of the support material

- Incombustible joint bottom: **Rock wool**
- Overall dim.: **Width of the opening x 2**
- Th. ≥ 45 mm | Density ≥ 33 kg/m³

Permissible orientation
The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).

Permissible position
The linear joint caulking can be implemented only on one face of the substrate structure (**Position 2, 3 and 5** of fig. 17 of the standard), with the mastic oriented on the face exposed to the fire

Permissible substrate structure (Wall)
Rigid floor: **Lumber wood / Framework**
Th. ≥ 100 mm | Density ≥ 450 kg/m³

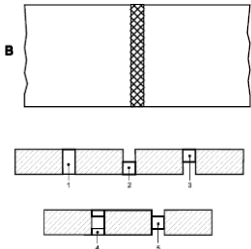
Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

Fire Direction
Mastic Side

Induced Movement
< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - X - B – W05 to W50
(Mastic min. Th.: 25 mm)

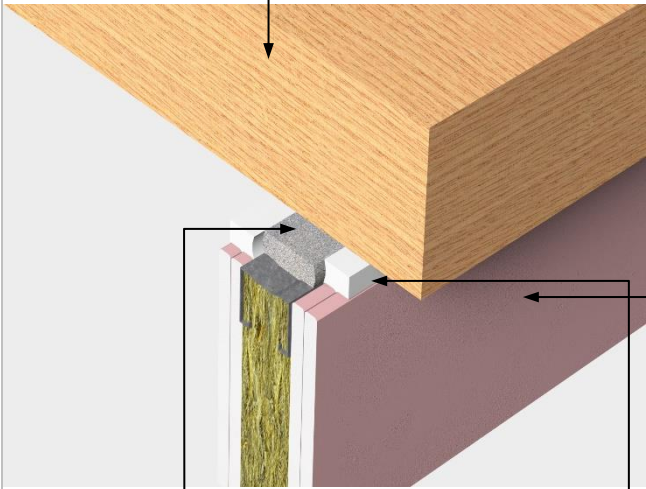
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B13: Horizontal linear joint caulking (Application on two faces on wall top)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)
Rigid floor: **Lumber wood / Framework**
Th. ≥ 150 mm | Density ≥ 450 kg/m³

Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

Linear joint opening
Minimum: **05** mm | Maximum: **50** mm

Mastic thickness
Cf. Classification hereinbelow

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

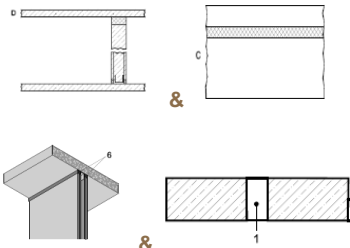
Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Fire direction
Front / Back
Indifferent

Induced Movement
< not applicable >

Permissible orientation
The horizontal linear caulking can be implemented abutting against a floor, a ceiling or roof (wall top or foot of the wall, **Case D**) or horizontally in a vertical construction (**Case C**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1 and 6** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - T - X - B – W05 to W50
(Mastic min. Th.: Ratio 2:1)

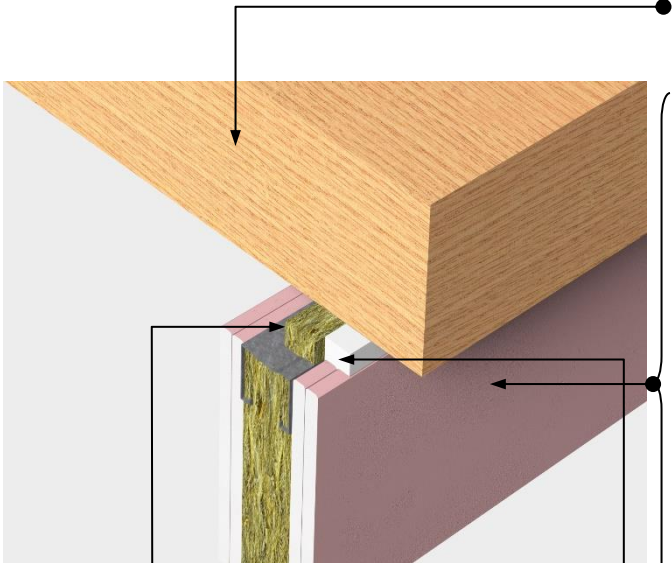
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B14: Horizontal linear joint caulking (Application on one face on wall top)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)
Rigid floor: **Lumber wood / Framework**
Th. ≥ 150 mm | Density ≥ 450 kg/m³

Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

Characteristics of the support material
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening $\times 2$**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Linear joint opening
Minimum: **05** mm | Maximum: **50** mm

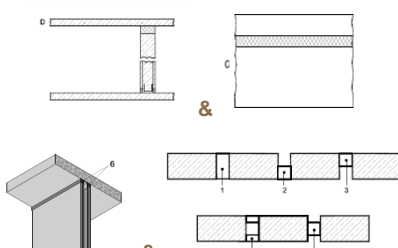
Mastic thickness
Cf. Classification hereinbelow

Fire Direction
Mastic Side

Permissible orientation
The horizontal linear caulking can be implemented abutting against a floor, a ceiling or roof (wall top or foot of the wall, **Case D**) or horizontally in a vertical construction (**Case C**).

Permissible position
The linear joint caulking can be implemented only on one faces of the substrate structure (**Position 2, 3, 5 and 6** of fig. 17 of the standard) with the mastic oriented on the face exposed to the fire.

Induced Movement
< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI45 - T - X - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI60 - T - X - B - W05 to W50
(Mastic min. Th.: 25 mm)

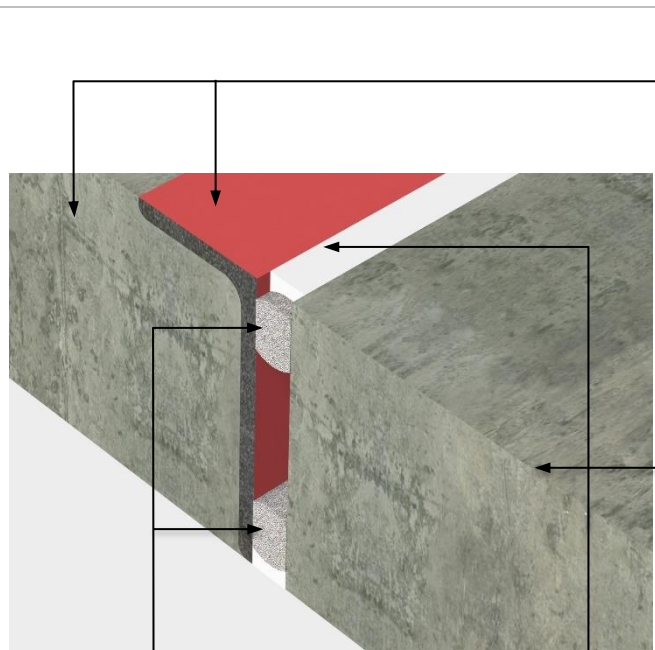
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B15: Horizontal linear joint caulking (Application of two faces on a mixed floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete** (Density $\geq 2400 \pm 200 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$
Th. $\geq 150 \text{ mm}$

Or

Rigid floor: **Masonry in concrete blocks or aerated concrete** (Density $\geq 350 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$
Th. $\geq 150 \text{ mm}$

Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete**
Th. $\geq 150 \text{ mm}$ | Density $\geq 2400 \pm 200 \text{ kg/m}^3$

Characteristics of the support material

Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening $\times 2$**
Th. $\geq 45 \text{ mm}$ | Density $\geq 33 \text{ kg/m}^3$

Linear joint opening

Minimum: **05 mm** | Maximum: **50 mm**

Mastic thickness

Cf. Classification hereinbelow

Fire Direction

Underside of the floor

Induced Movement

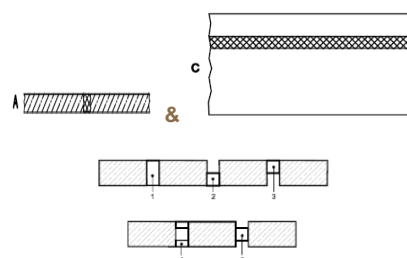
< not applicable >

Permissible orientation

The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

Permissible position

The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 4** of fig. 17 the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI120 - H - X - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI45 - H - X - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

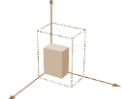
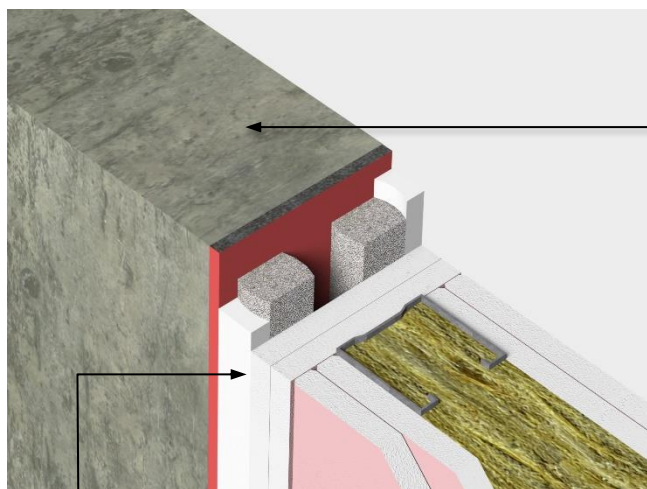
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B16: Vertical linear joint caulking (Application of two faces on a mixed wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Linear joint opening

Minimum: 05 mm | Maximum: 50 mm

Mastic thickness

Cf. Classification hereinbelow

Characteristics of the support material

Combustible joint bottom: PE / PU

Overall dim.: Width of the opening +10

Or

Incombustible joint bottom: Rock wool

Overall dim.: Width of the opening x 2

Th. ≥ 45 mm | Density ≥ 33 kg/m³



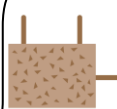
Permissible orientation

The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).



Permissible position

The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1** of fig. 17 of the standard).



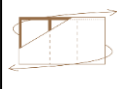
Permissible substrate structure (Wall)

Rigid wall: Reinforced concrete (Density ≥ 2400 ± 200 kg/m³) provided with a lip or cladding made of steel with a thickness ≥ 5 mm - Th. ≥ 100 mm



Or

Rigid wall: Masonry in concrete blocks or aerated concrete (Density ≥ 350 kg/m³) provided with a lip or cladding made of steel with a thickness ≥ 5 mm - Th. ≥ 100 mm



Permissible substrate structure (Wall)

Flexible wall: Plasterboard partition on a steel stud or timber frame with or without thermal insulation justifying higher or equal fire resistance performance.

Th. ≥ 98 mm

No. of skin ≥ 2 | Th. Sheet ≥ 12,5 mm



Or

Rigid wall: Masonry in concrete blocks or aerated concrete

Th. ≥ 98 mm | Density ≥ 350 kg/m³



Or

Rigid wall: Reinforced concrete

Th. ≥ 98 mm | Density ≥ 2400 ± 200 kg/m³

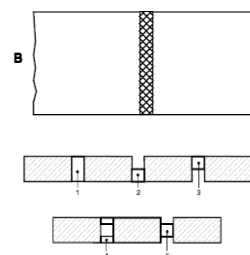


Fire direction

Front / Back
Indifferent

Induced Movement

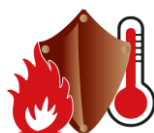
< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - x - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI45 - V - x - B - W05 to W50

(Mastic min. Th.: 25 mm)

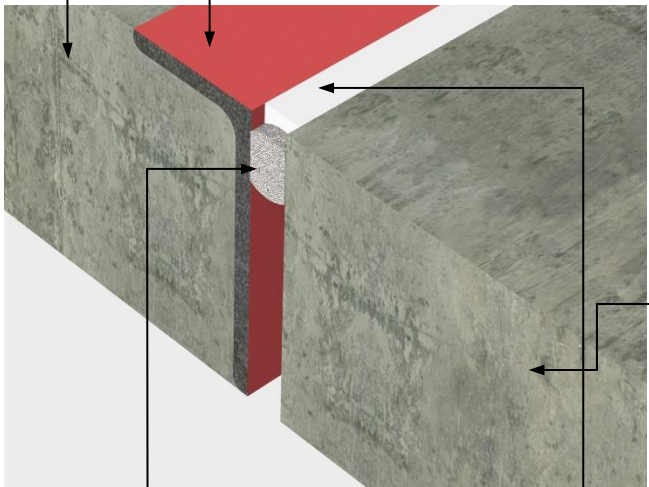
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B17: Horizontal linear joint caulking (Application on one face on a mixed floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete** (Density $\geq 2400 \pm 200 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$ - Th. $\geq 150 \text{ mm}$

Or
Rigid floor: **Masonry in concrete blocks or aerated concrete** (Density $\geq 350 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$
Th. $\geq 150 \text{ mm}$

Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete**
Th. $\geq 150 \text{ mm}$ | Density $\geq 2400 \pm 200 \text{ kg/m}^3$

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening $\times 2$**
Th. $\geq 45 \text{ mm}$ | Density $\geq 33 \text{ kg/m}^3$

Linear joint opening
Minimum: **05 mm** | Maximum: **50 mm**

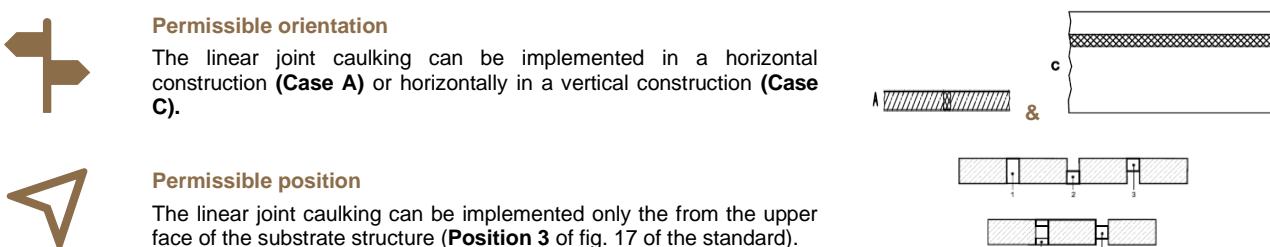
Mastic thickness
Cf. Classification hereinbelow

Fire Direction
Underside of the floor

Induced Movement
< not applicable >

Permissible orientation
The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

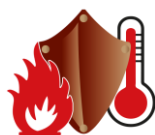
Permissible position
The linear joint caulking can be implemented only the from the upper face of the substrate structure (**Position 3** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - H - x - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI30 - H - x - B - W20 to W50
(Mastic min. Th.: Ratio 2:1)

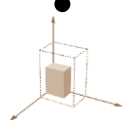
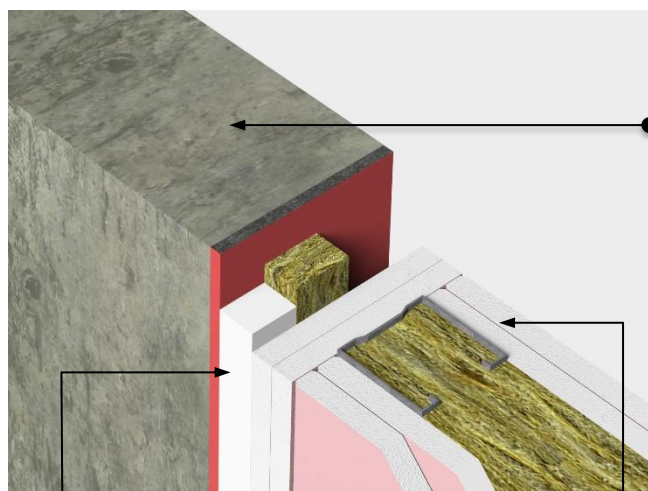
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B18: Vertical linear joint caulking (Application on one face on a mixed wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Linear joint opening

Minimum: 05 mm | Maximum: 50 mm

Mastic thickness

Cf. Classification hereinbelow

Characteristics of the support material

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening × 2**

Th. ≥ 45 mm | Density ≥ 33 kg/m³



Fire Direction

Mastic Side



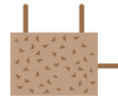
Permissible orientation

The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).



Permissible position

The linear joint caulking can be implemented only on one faces of the substrate structure (**Position 2, 3 et 5** of fig. 17 of the standard) with the mastic oriented on the face exposed to the fire.



Permissible substrate structure (Wall)

Rigid wall: **Reinforced concrete** (Density ≥ 2400 ± 200 kg/m³) provided with a lip or cladding made of steel with a thickness ≥ 5 mm - Th. ≥ 100 mm

Or



Rigid wall: **Masonry in concrete blocks or aerated concrete** (Density ≥ 350 kg/m³) provided with a lip or cladding made of steel with a thickness ≥ 5 mm - Th. ≥ 100 mm



Permissible substrate structure (Wall)

Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.

Th. ≥ 98 mm

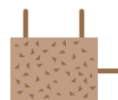
No. of skin ≥ 2 | Th. Sheet ≥ 12,5 mm



Or

Rigid wall: **Masonry in concrete blocks or aerated concrete**

Th. ≥ 98 mm | Density ≥ 350 kg/m³



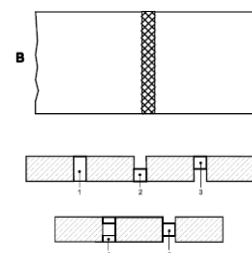
Or

Rigid wall: **Reinforced concrete**

Th. ≥ 98 mm | Density ≥ 2400 ± 200 kg/m³

Induced Movement

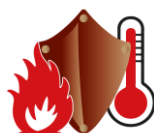
< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI45 - V - x - B - W05 to W50

(Mastic min. Th.: 25 mm)

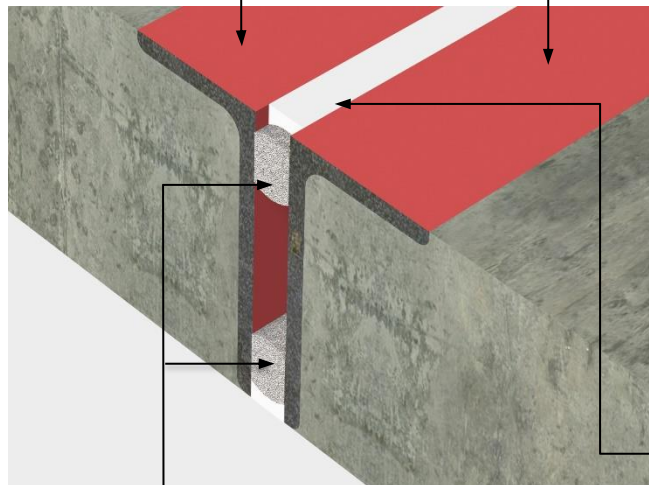
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B19: Horizontal linear joint caulking (Application of two faces on identical floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete** (Density $\geq 2400 \pm 200 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$ - Th. $\geq 150 \text{ mm}$

Or
Rigid floor: **Masonry in concrete blocks or aerated concrete** (Density $\geq 350 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$
Th. $\geq 150 \text{ mm}$

Linear joint opening
Minimum: **05 mm** | Maximum: **50 mm**
Mastic thickness
Cf. Classification hereinbelow

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

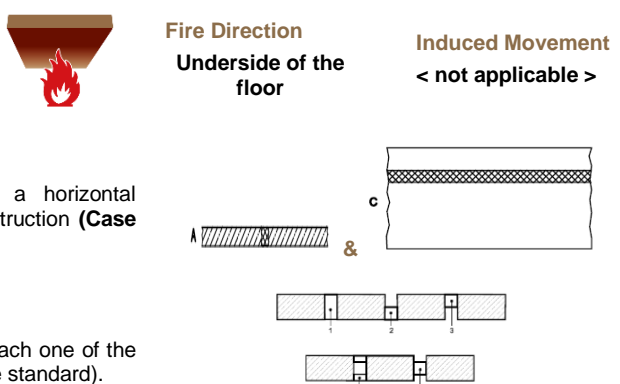
Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening $\times 2$**
Th. $\geq 45 \text{ mm}$ | Density $\geq 33 \text{ kg/m}^3$

Permissible orientation
The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 4** of fig. 17 the standard).

Fire Direction
Underside of the floor

Induced Movement
< not applicable >



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI90 - H - x - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI60 - H - x - B - W20 to W50
(Mastic min. Th.: Ratio 2:1)

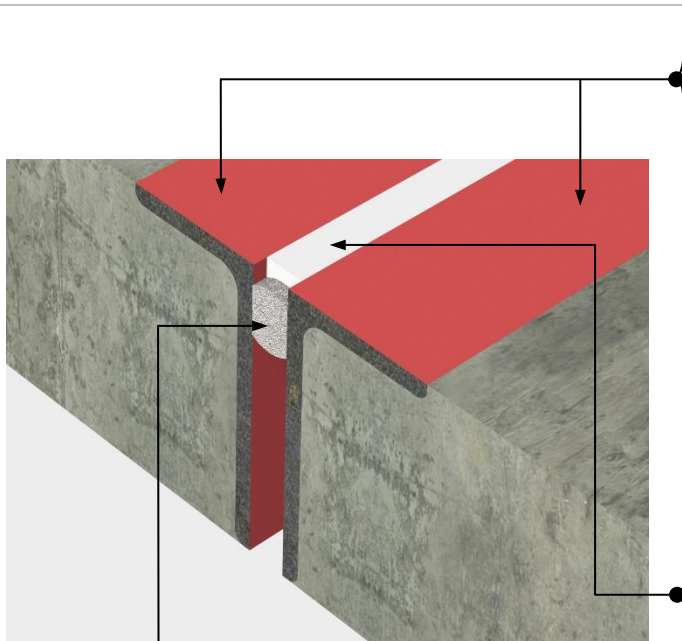
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B20: Horizontal linear joint caulking (Application on one face on an identical floor)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete** (Density $\geq 2400 \pm 200 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$ - Th. $\geq 150 \text{ mm}$

Or

Rigid floor: **Masonry in concrete blocks or aerated concrete** (Density $\geq 350 \text{ kg/m}^3$) provided with a lip or cladding made of steel with a thickness $\geq 5 \text{ mm}$

Th. $\geq 150 \text{ mm}$

Linear joint opening

Minimum: **05 mm** | Maximum: **50 mm**

Mastic thickness

Cf. Classification hereinbelow

Characteristics of the support material

Combustible joint bottom: **PE / PU**

Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening $\times 2$**

Th. $\geq 45 \text{ mm}$ | Density $\geq 33 \text{ kg/m}^3$



Fire Direction

Underside of the floor

Induced Movement

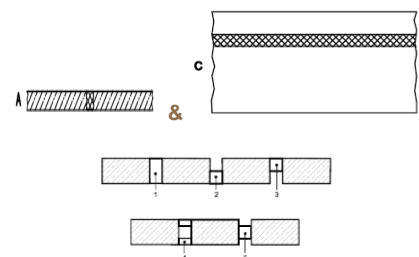
< not applicable >

Permissible orientation

The linear joint caulking can be implemented in a horizontal construction (**Case A**) or horizontally in a vertical construction (**Case C**).

Permissible position

The linear joint caulking can be implemented only the from the upper face of the substrate structure (**Position 3** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI45 - H - x - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI30 - H - x - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

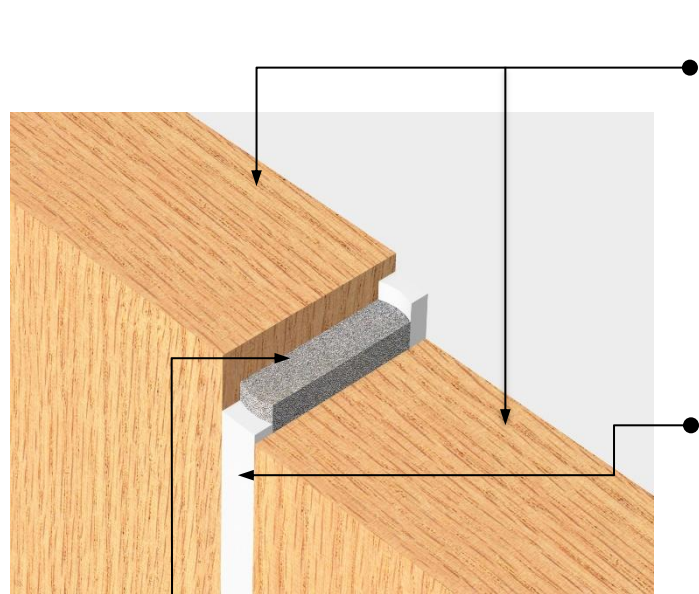
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B21: Vertical linear joint caulking (Application on one face on identical wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Wall)
Rigid floor: **Lumber wood / Framework**
Th. ≥ 100 mm | Density ≥ 450 kg/m³

Linear joint opening
Minimum: **05** mm | Maximum: **50** mm
Mastic thickness
Cf. Classification hereinbelow

Characteristics of the support material
Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

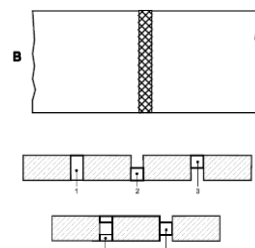
Or
Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Fire direction
Front / Back - Indifferent

Induced Movement
< not applicable >

Permissible orientation
The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI30 - V - x - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI60 - V - x - B - W05 to W50
(Mastic min. Th.: 25 mm)

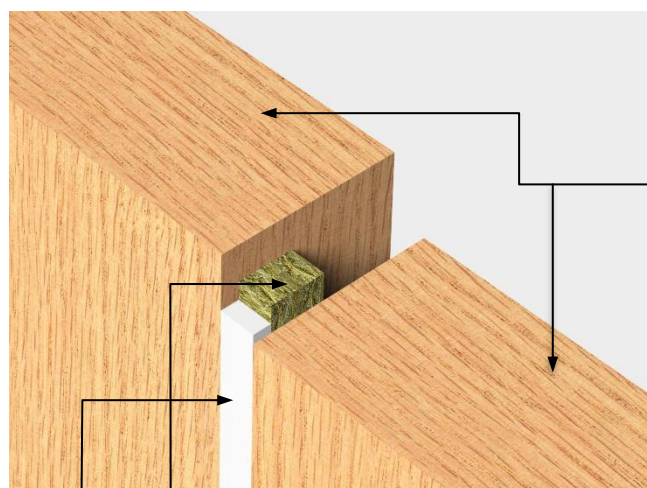
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

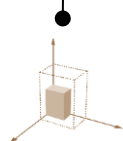
B22: Vertical linear joint caulking (Application on one face on identical wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Wall)

Rigid floor: **Lumber wood / Framework**
Th. ≥ 100 mm | Density ≥ 450 kg/m³



Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

Cf. Classification hereinbelow

Characteristics of the support material

Incombustible joint bottom: **Rock wool**

Overall dim.: **Width of the opening x 2**

Th. ≥ 45 mm | Density ≥ 33 kg/m³



Fire Direction

Mastic Side

Induced Movement

< not applicable >



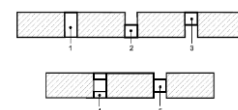
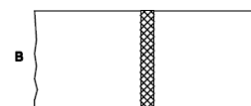
Permissible orientation

The vertical linear joint caulking can be implemented in a vertical construction (**Case B**).



Permissible position

The linear joint caulking can be implemented only on one face of the substrate structure (**Position 2, 3 and 5** of fig. 17 of the standard), with the mastic oriented on the face exposed to the fire



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - V - x - B – W05 to W50

(Mastic min. Th.: 25 mm)

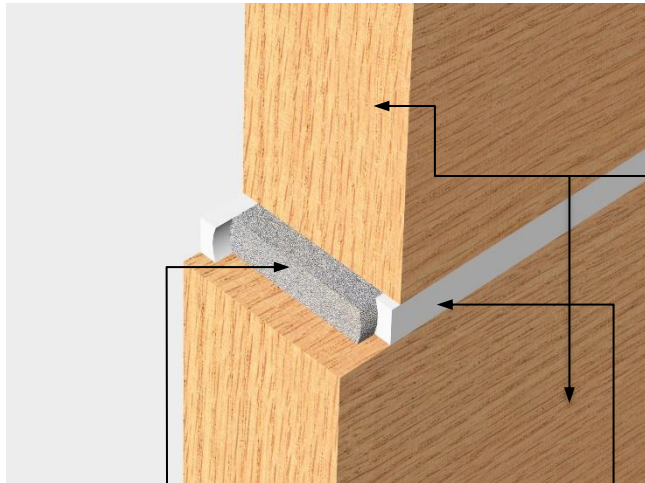
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

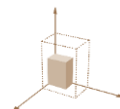
B23: Horizontal linear joint caulking (Application on two faces on an identical wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Wall)

Rigid floor: **Lumber wood / Framework**
Th. ≥ 100 mm | Density ≥ 450 kg/m³



Linear joint opening

Minimum: **05** mm | Maximum: **50** mm

Mastic thickness

Cf. Classification hereinbelow



Fire direction

Front / Back - Indifferent

Characteristics of the support material

Combustible joint bottom: **PE / PU**
Overall dim.: **Width of the opening +10**

Or

Incombustible joint bottom: **Rock wool**
Overall dim.: **Width of the opening x 2**
Th. ≥ 45 mm | Density ≥ 33 kg/m³

Induced Movement

< not applicable >



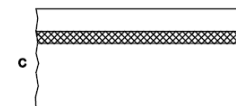
Permissible orientation

The horizontal linear joint caulking can be implemented horizontally in a vertical construction (**Case C**).



Permissible position

The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 1** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - H - x - B - W05 to W20

(Mastic min. Th.: 10 mm)

EI60 - H - x - B - W20 to W50

(Mastic min. Th.: Ratio 2:1)

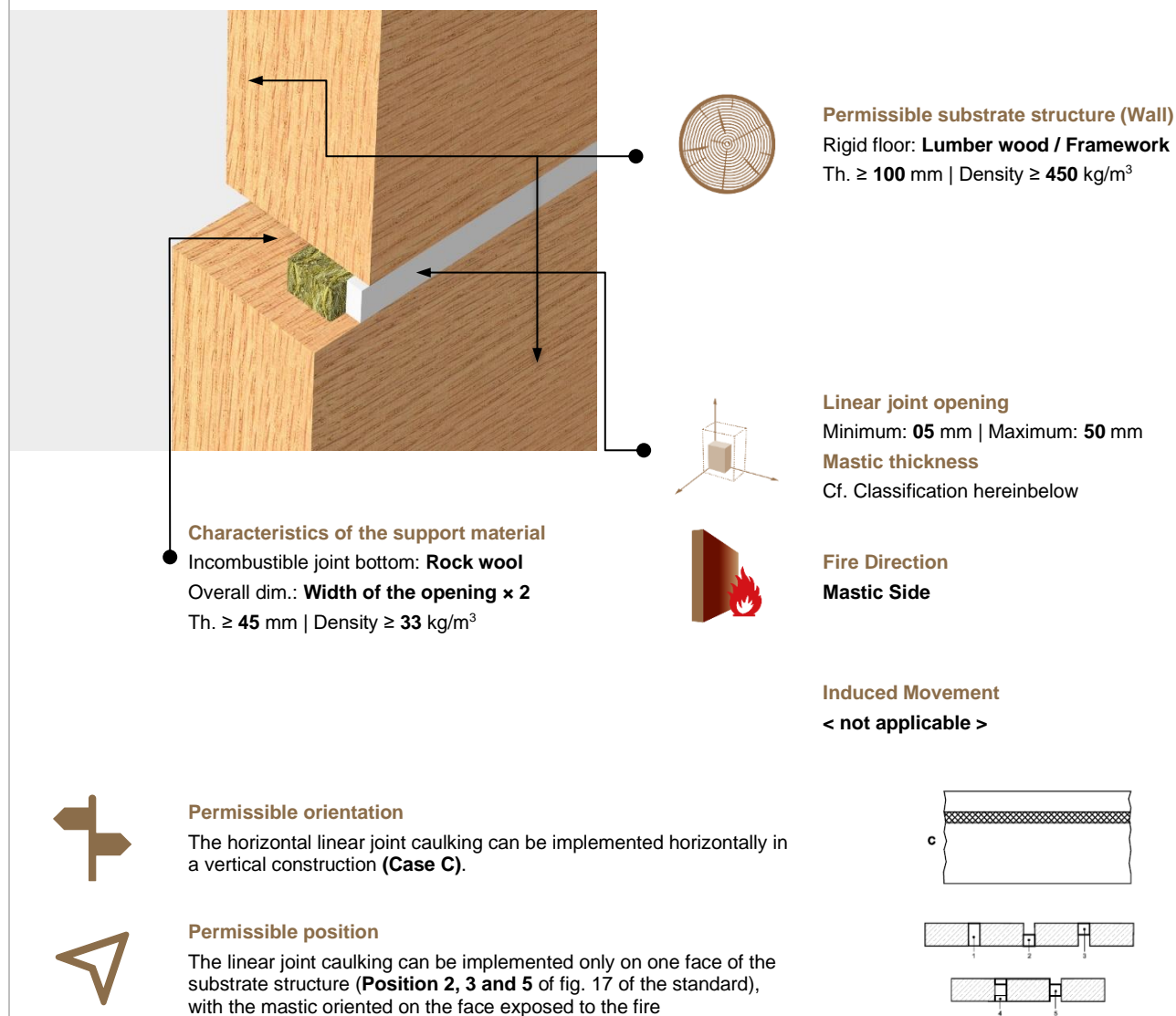
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B24: Horizontal linear joint caulking (Application on one face on identical wall)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI60 - H - x - B - W05 to W20
(Mastic min. Th.: 10 mm)

EI60 - H - x - B - W20 to W50
(Mastic min. Th.: Ratio 2:1)

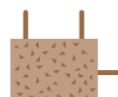
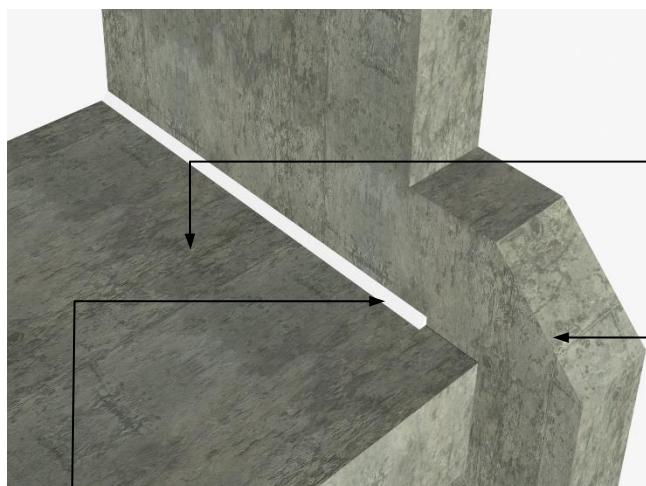
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B25: Horizontal linear joint caulking (Application on a floor / wall junction face)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Permissible substrate structure (Floor)

Rigid floor: **Reinforced concrete**

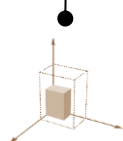
Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³



Permissible substrate structure (Wall)

Rigid wall: **Reinforced concrete**

Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³



Linear joint opening

Minimum: **01** mm | Maximum: **5** mm

Mastic thickness

Cf. Classification hereinbelow



Fire Direction

Underside of the floor

Induced Movement

< not applicable >



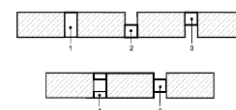
Permissible orientation

The linear joint caulking can be implemented only in a horizontal construction (**Case A**).



Permissible position

The linear joint caulking can be implemented only the from the upper face of the substrate structure (**Position 3** of fig. 17 of the standard).



Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI120 - H - x - B – W01 to W05

(Mastic min. Th.: 10 x 10 mm smoothed at 45°)

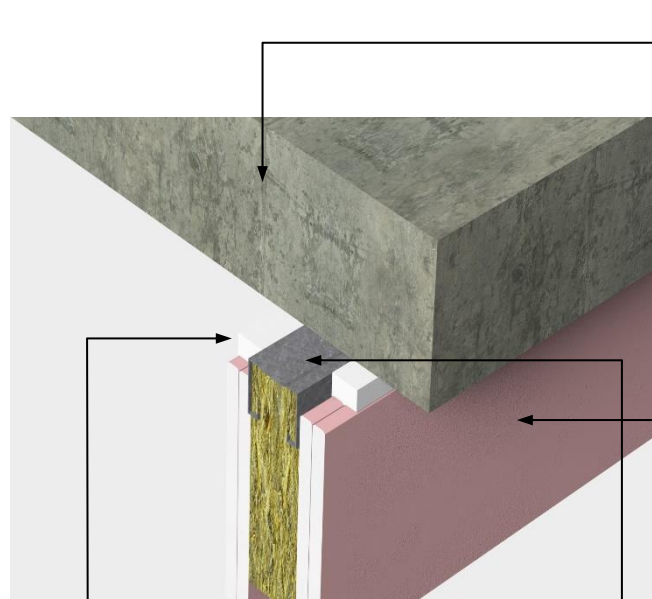
Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

B26: Horizontal linear joint caulking (Application on two faces on wall top)

Note: The application field hereinbelow is established in accordance with the provision of §13 of EN 13664-4:2021-02 and the P-Bref© - CSTB Method.



Linear joint opening
Minimum: 05 mm | Maximum: 20 mm

Mastic thickness
Cf. Classification hereinbelow

Fire direction
Front / Back - Indifferent

Permissible orientation
The horizontal linear caulking can be implemented abutting against a floor, a ceiling or roof (wall top or foot of the wall, **Case D**).

Permissible position
The linear joint caulking can be implemented only on each one of the faces of the substrate structure (**Position 6** of fig. 17 of the standard).

Permissible substrate structure (Floor)
Rigid floor: **Reinforced concrete**
Th. ≥ 150 mm | Density $\geq 2400 \pm 200$ kg/m³

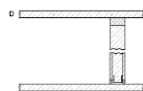
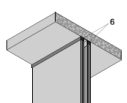
Permissible substrate structure (Wall)
Flexible wall: **Plasterboard partition on a steel stud or timber frame with or without thermal insulation** justifying higher or equal fire resistance performance.
Th. ≥ 98 mm
No. of skin ≥ 2 | Th. Sheet $\geq 12,5$ mm

Or
Rigid wall: **Masonry in concrete blocks or aerated concrete**
Th. ≥ 98 mm | Density ≥ 350 kg/m³

Or
Rigid wall: **Reinforced concrete**
Th. ≥ 98 mm | Density $\geq 2400 \pm 200$ kg/m³

Characteristics of the support material
Metal rail (Frame of the partition)

Induced Movement
< not applicable >

Fire Resistance Classification

The designation « sn » means exposure to a semi-natural fire, the designation « IncSlow » designates the heating curve, the designation « ef » designates the external fire resistance performance and constant temperature where applicable.

To conserve the validity of the classification hereinabove, no dimensional or configuration modification can be applied and no modification in the constitution of the element can be made without the issuance of a classification extension, or a project notice issued by an approved laboratory.



EI120 - T - x - B - W05 to W20
(Mastic min. Th.: 25 mm)

Nullifire FS704 Hybrid Sealant

Fire resistance classification

Annex B

C01: Safety Data Sheet (MSDS) 1/9

Note: The Safety Data Sheet (M.SDS) above is given as an indication, only the Safety Data Sheets supplied and/or available on the manufacturer's website are authentic

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Safety data sheet acc. (EC) 1907/2006, as amended by UK SI 2019/758

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Smart Protection

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: **Nullifire FS704**

MSDS code: T-N-FS704

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture

Adhesives

Spacings sealant

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Tremco CPG Germany GmbH

tremco illbruck GmbH

Zweigniederlassung Traunreut

Traunring 65, D - 83301 Traunreut

T: +49 (0) 8669 34100, F: +49 (0) 8669 9784

msds@cpg-europe.com

Further information obtainable from:

Tremco CPG UK Ltd

Coupland Road, Hindley Green, Wigan, WN2 4HT

T: +44 (0) 1942251400, F: +44 (0) 1942251410

www.cpg-europe.com, info.uk@cpg-europe.com

1.4 Emergency telephone number:

During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), your local GP/pharmacist (NI), 01 809 2166 (ROI), or otherwise to contact a doctor.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified, according to the GB CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

Supplemental information:

EUH208 Contains trimethoxyvinylsilane. May produce an allergic reaction.

EUH210 Safety data sheet available on request.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

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GB

Nullifire FS704 Hybrid Sealant

Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 2/9

Note: The Safety Data Sheet (M.SDS) above is given as an indication, only the Safety Data Sheets supplied and/or available on the manufacturer's website are authentic

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Trade name: Nullifire FS704

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· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Silane-terminated, hydrocarbon-based polymer with inorganic fillers

· **Dangerous components:**

CAS: 2768-02-7	trimethoxyvinylsilane	0.1-<1%
EINECS: 220-449-8	Fam. Liq. 3, H226; Acute Tox. 4, H332; Skin Sens. 1B,	
Reg.nr.: 01-2119513215-52-xxxx	H317	

· EU SVHC see Section 15

· GB SVHC see Section 15

· **Additional information:**

For the wording of the listed hazard phrases refer to section 16.

While curing the following substances are formed and released by a reaction with atmospheric humidity:

Methanol (CAS 67-56-1)

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** Take affected persons out into the fresh air.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Remove from the skin using a cloth or paper. Then clean with water and soap.

If skin irritation continues, consult a doctor.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **Information for doctor:** No further relevant information available.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· 5.2 Special hazards arising from the substance or mixture

No further relevant information available.

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

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(Contd. on page 3)

Nullifire FS704 Hybrid Sealant

Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 3/9

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
- **6.2 Environmental precautions:**
No special measures required.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
By a reaction with atmospheric humidity by-products are released. See chapter 8.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
Requirements to be met by storerooms and receptacles: No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Ingredients with biological limit values:**
- **Additional Occupational Exposure Limit Values for possible hazards during processing:**
While curing the following substances are formed and released by a reaction with atmospheric humidity:

CAS: 67-56-1 methanol

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
Sk	

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.

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GB

Nullifire FS704 Hybrid Sealant

Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 4/9

Note: The Safety Data Sheet (M.SDS) above is given as an indication, only the Safety Data Sheets supplied and/or available on the manufacturer's website are authentic

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Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

- The usual precautionary measures are to be adhered to when handling chemicals.
- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.
- Do not eat, drink, smoke or sniff while working.

Respiratory protection:

- Not necessary if room is well-ventilated.
- Filter AX
- Use suitable respiratory protective device in case of insufficient ventilation.
- For further guidance, please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".

Hand protection



Protective gloves

Material of gloves

- Nitrile rubber, NBR
- Butyl rubber, BR

Penetration time of glove material

- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection Safety glasses

Body protection:



Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

- Colour: According to product specification
- Odour: Characteristic
- Melting point/freezing point: Undetermined.
- Flash point: >151 °C
- Solubility
- water: Immiscible / difficult to mix.
- Vapour pressure at 50 °C: 0 hPa
- Density and/or relative density
- Density at 20 °C: 1.56 g/cm³

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GB

Nullifire FS704 Hybrid Sealant

Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 5/9

Note: The Safety Data Sheet (M.SDS) above is given as an indication, only the Safety Data Sheets supplied and/or available on the manufacturer's website are authentic

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Trade name: Nullifire FS704

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9.2 Other information

- Appearance:
- Form: Pasty
- Important information on protection of health and environment, and on safety.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.
- Solvent content:
- Organic solvents: 0.0 %
- VOC (EU) 0.2 g/l
- VOC (EC) 0.01 %

Information with regard to physical hazard classes

- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Void
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: None if stored according to specifications.

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Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 6/9

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Beginning at approx. 150 °C small amounts of formaldehyde are formed by an oxidative decomposition. (Contd. of page 5)

SECTION 11: Toxicological information

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- Acute toxicity Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

CAS: 2768-02-7 trimethoxyvinylsilane

Inhalative LC50/4 h 16.8 mg/L (rat)

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Slight irritation possible.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.
- 11.2 Information on other hazards

- Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- Other information: The product is not biodegradable.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Endocrine disrupting properties
- The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation
- Uncured product may not be disposed of together with household waste and may not reach sewage system. To dispose of, open product containers and let them stand in open air until the reaction is finished totally (means there is no more smell). After that, waste can be disposed of as the cured product.

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Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 7/9

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Cured product can be deposited together with domestic waste. Observe the specific related regulations of local authorities.

- European waste catalogue

08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09

- Uncleaned packaging:

- Recommendation:

Empty packages totally (without drops or grains, cleaned with a spatula). Under observation of the relevant local respectively national regulations re-use or recycling is preferred.

SECTION 14: Transport information

- 14.1 UN number or ID number

- ADR, ADN, IMDG, IATA Void

- 14.2 UN proper shipping name

- ADR, ADN, IMDG, IATA Void

- 14.3 Transport hazard class(es)

- ADR, ADN, IMDG, IATA

- Class Void

- 14.4 Packing group

- ADR, IMDG, IATA Void

- 14.5 Environmental hazards:

- Marine pollutant: No

- 14.6 Special precautions for user

Not applicable.

- 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

- UN "Model Regulation":

Void

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
HSE EH40/2005 Workplace Exposure Limits (as amended)

Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)

"GB- CLP" UK SI 2019 No. 720 The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019

"UK- REACH" UK SI 2019 No. 758 The UK REACH etc. (Amendment etc.) (EU Exit) Regulations 2019

The Endocrine Disruptor Lists I, II, III (www.edlists.org)

- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

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Nullifire FS704 Hybrid Sealant

Content, emission and/or release of dangerous substances

Annex C

C01: Safety Data Sheet (MSDS) 8/9

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· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

· Other regulations, limitations and prohibitive regulations No further relevant information available.

· Substances of very high concern (SVHC) according to EU REACH, Article 57 Not applicable.

· Substances of very high concern (SVHC) according to UK REACH Not applicable.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

· Department issuing SDS:

Prepared and verified in accordance with Annex II, Part A, 0.2.3. of "UK- REACH" UK SI 2019 No. 758 The UK REACH etc. (Amendment etc.) (EU Exit) Regulations 2019

· Date of previous version: 10.11.2021

· Version number of previous version: 7

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

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Annex C

C01: Safety Data Sheet (MSDS) 9/9

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Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Sens. 1B: Skin sensitisation – Category 1B

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- * Data compared to the previous version altered.

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Nullifire FS704 Hybrid Sealant

Content, emission and/or release of dangerous substances

Annex C

D01: Air permeability

Product tested	This is a linear joint caulking consisting of a combustible joint bottom (polyethylene foam) and a thickness of Nullifire FS704 mastic applied in softwood timber sub-frame:		
	Overall dim. of the joint bottom:	50 × 25 × 1450 mm (w × d × h)	
	Overall dim. of the sealant:	50 × 10 × 1450 mm (w × d × h)	

Note: Testing carried out at 15,8°C and 81,7% RH. The perimeter length of the linear seal was 1,405 m. The overall area was 0,071 m².

Summary of testing procedure		Results	
Positive Pressure in Pa	Leakage in m³/h	Leakage in m³/h/m	Leakage in m³/h/m²
50	0,01	0,00	0,05
100	0,03	0,01	0,15
150	0,06	0,02	0,30
200	0,15	0,05	0,75
250	0,73	0,22	3,65
300	1,69	0,52	8,45
450	2,33	0,71	11,65
600	3,10	0,95	15,50

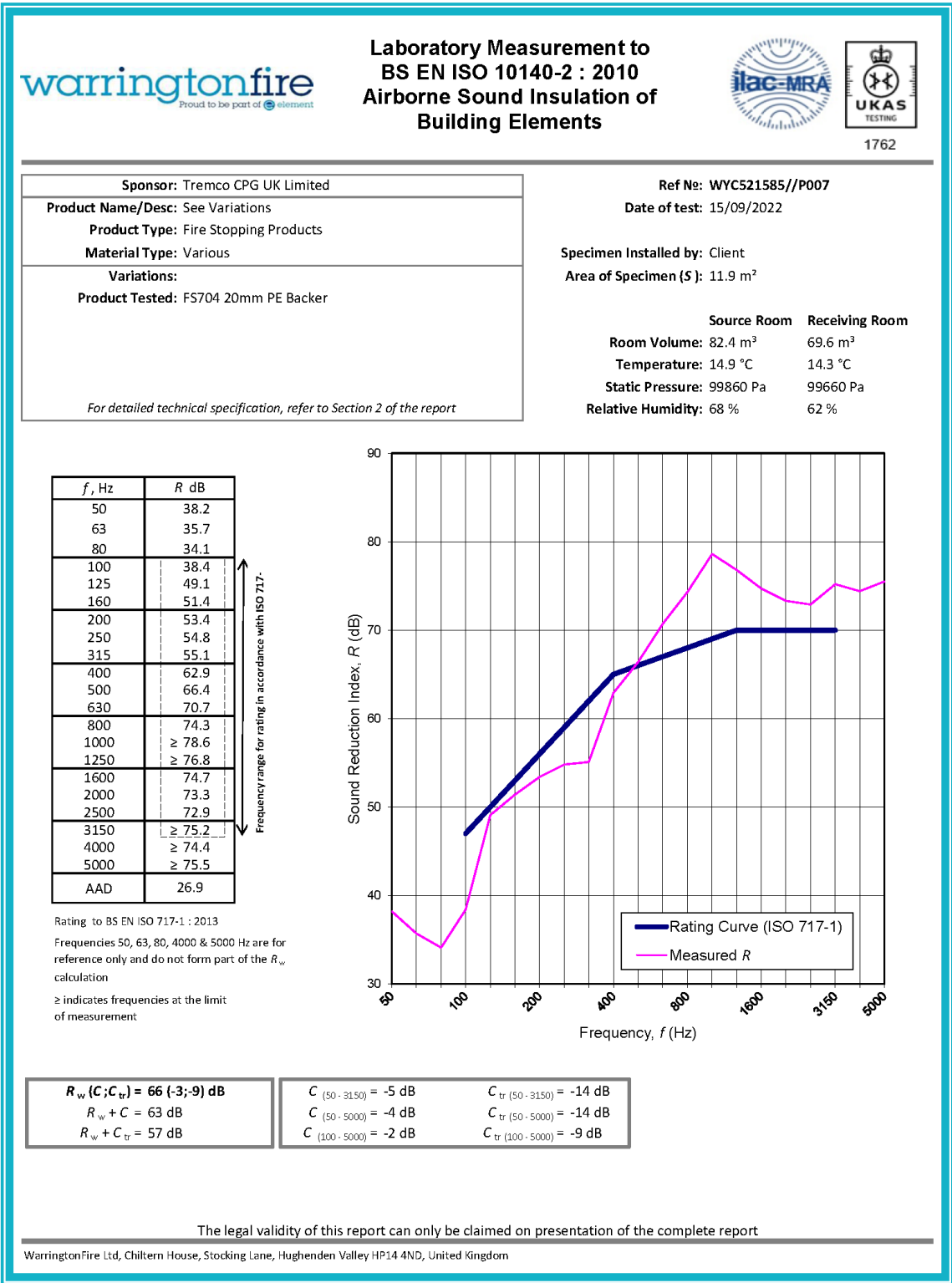
Summary of testing procedure		Results	
Positive Pressure in Pa	Leakage in m³/h	Leakage in m³/h/m	Leakage in m³/h/m²
50	0,02	0,01	0,10
100	0,04	0,01	0,20
150	0,06	0,02	0,30
200	0,07	0,02	0,35
250	0,42	0,13	2,10
300	1,84	0,56	9,20
450	2,09	0,64	10,45
600	2,57	0,78	12,85

Nullifire FS704 Hybrid Sealant

Air permeability

Annex D

E01: Airborne and sound insulation



Nullifire FS704 Hybrid Sealant

Airborne sound insulation

Annex E