

EUROPEAN TECHNICAL ASSESSMENT

ETA 13/0335**Version 01****Date of issue: 2017-08-07**

UBA^{tc} Assessment Operator:
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Technical Assessment Body issuing the European Technical Assessment: UBA^{tc}.
UBA^{tc} has been designated according to Article 29 of Regulation (EU) No 305/2011
and is member of EOTA (European Organisation for Technical Assessment)

**Trade name of the
construction product:**

Firecryl FR

**Product family to which the
construction product belongs:**

Fire stopping sealant for fire stopping of linear gap seals

Manufacturer:

SOUDAL NV
Everdongenlaan 18 - 20
B-2300 TURNHOUT
Belgium

Manufacturing plant(s):

SOUDAL NV
Plant 2 – Schietstandlaan 2
B-2300 TURNHOUT
Belgium

Website:

www.soudal.com

**This European Technical
Assessment is issued in
accordance with Regulation
(EU) No 305/2011, on the
basis of:**

European Assessment Document (EAD) :

Guideline for European technical approval, ETAG 026-3,
used as European Assessment Document (EAD)

This version replaces:

ETA 13/0335 issued on 2013/06/27

**This European Technical
Assessment contains:**

9 pages, with 3 annexes which form an integral part of this
European Technical Assessment



**European Organisation
for Technical Assessment**

Legal bases and general conditions

- 1 This European Technical Assessment is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:
 - Regulation (EU) No 305/2011¹ of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
 - Commission Implementing Regulation (EU) No 1062/2013² of 30 October 2013 on the format of the European Technical Assessment for construction products
 - Guideline for European technical approval, ETAG 026-3, used as European Assessment Document (EAD)
- 2 Under the provisions of Regulation (EU) No 3205/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.
- 3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.
- 4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.
- 5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance for the construction product.
- 6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance.
- 7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.
- 8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment relates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.
- 9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use which the manufacturer has submitted to the responsible Technical Assessment Body for the issuing of the European Technical Assessment.
- 10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance.
- 11 All rights of exploitation in any form and by any means of this European Technical Assessment are reserved for UBAtc and the ETA-holder, subject to the provisions of the applicable UBAtc regulations.
- 12 Reproduction of this European Technical Assessment including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of UBAtc. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European Technical Assessment.
- 13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.
14. A European Technical Approval (ETA) was first issued by UBAtc on 27 June 2013. This ETA is superseded by the current European Technical Assessment, but comprises no technical changes compared with the European Technical Approval.

¹ OJEU, L 88 of 2011/04/04

² OJEU, L 289 of 2013/10/31

Technical Provisions

1. Technical description of the product

1.1. Characteristics of the products

This European Technical Assessment is being issued for Firecrl FR on the basis of agreed data/information, deposited with the UBAtc, which identifies the product that has been assessed. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the UBAtc before the changes are introduced. The UBAtc will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment/alterations to the ETA, shall be necessary.

The provisions made in this European Technical Assessment are based on an assumed intended working life of 10 years.

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or the UBAtc, but are to be regarded only as a means for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

1.2 Firecrl FR

Firecrl FR is a one component fire retardant sealant based on a water based acrylic dispersion with plasto-elastic properties. It is delivered in white and grey.

Installation of Firecrl FR: see clause 2.3.2.

2. Specification of the intended use in accordance with the applicable EAD

2.1 Intended use

Firecrl FR is intended to be used as a fire stopping sealant for non-movement joints and seals in rigid walls and floors (see Annex III).

The specific elements of construction for which Firecrl FR may be used to provide a linear joint seal, are as follows:

- Rigid walls: the wall shall have a minimum thickness of 100 mm and comprise concrete or masonry with a minimum density of 550 kg/m³.
- Rigid floors: the floor shall have a minimum thickness of 150 mm and comprise concrete with a minimum density of 600 kg/m³.

The supporting construction shall be classified according to EN 13501-2 for the required fire resistance period.

As backfilling material, Soudafoam FR or a backer rod based on polyethylene (PE) or polyurethane (PU) may be used. For a specification of the suitable material see Annex II.

2.2 Use Category

The use category for Firecrl FR is Z_{2(+5/+40)} intended for use the following environmental conditions

Table 1: intended use

Environmental conditions	ETAG 026-3 Type
Internal conditions with humidity classes other than Z ₁ , excluding temperatures	Z ₂

below 0°C

2.3 Assumptions under which the product was assessed

2.3.1 Manufacturing directives

The fire stopping and sealing product Firecrl FR is manufactured and packaged by Soudal NV in Turnhout, Belgium.

2.3.2 Installation

Installation shall be performed by trained installers.

Preparation of the surface:

- Firecrl FR adheres to most substrates (concrete, masonry, gypsum, etc.) without a primer. Very porous substrates shall be pre-treated with a coating based on Firecrl FR diluted with water.
- The surface shall be clean, dry, and free of dust, oil and grease.

Joint size:

- Width: 5 mm to 20 mm;
- Depth: the same as thickness of the wall or floor.

Application of the Firecrl FR

- Application temperature: between +5°C and + 30°C
- Insert backing material
- Apply the sealant. The minimal thickness of the joint is 5 mm.
- Smoothen the sealant surface before skin formation with a moist brush or spatula.

2.3.3 Packaging, transport and storage

Firecrl FR is available in cartridges (310 ml) and foil bags (600 ml).

The product has a shelf life of at least 12 months in unopened packaging when stored in a dry place between +5°C and +25°C.

2.3.4 Use, maintenance and repair

Firecrl FR does not need any maintenance during the working life indicated in this ETA.

Local repairs may be performed according to the manufacturer instructions.

3. Performance of the product and references to the methods used for its assessment

3.1 Safety in the case of fire

3.1.1 Reaction to fire

The reaction to fire classification of Firecrl FR is class E according to EN 13501-1.

3.1.2 Resistance to fire

Firecrl FR has been tested in accordance with EN 1366-4:2006, installed in linear joint seals in rigid walls and floors. As backfilling material Soudafoam FR, a PU or PE backer rod has been used.

Based upon these test results and the field of direct application specified in EN 1366-4:2006, Firecrl FR has been classified in accordance with EN 13501-2:2007 (see Annex III).

3.2 Hygiene, health and environment

3.2.1 Air permeability

No performance assessed.

3.2.2 Water permeability

No performance assessed.

3.2.3 Dangerous substances

Soudal NV has presented a Material Safety Data Sheet and a declaration that the product is in compliance with Regulation (EC) N° 1907/2006, as amended (REACH).

Soudal NV has declared that no toxic, carcinogenic, toxic for reproduction or mutagenic chemical substances of category 1 of 2 $\geq 0,1$ % w/w according to Regulation (EC) N° 1272/2008, as amended, and listed in the "indicative list on dangerous substances" of the EC Expert Group on Dangerous Substances (EGDS) - taking into account the installation conditions of the construction product and the release scenarios resulting from there that would lead to classification T and sentences R45 and/or R46 and that all other dangerous substances have been considered for the classification of the product according to the Regulation (EC) N° 1272/2008.

Note: In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, 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 Regulation (EU) N° 305/2011, these requirements need also to be complied with, when and where they apply.

3.3 Safety in use

3.3.1 Mechanical resistance and stability

The maximum joint width is smaller than 150 mm and impact tests are not required according to ETAG 026-3.

3.3.2 Resistance to impact/movement

This test not required as the maximum joint width is less than 150 mm.

3.3.3 Adhesion

Adhesion has been assessed according to EN ISO 11600. Firecrl FR is a sealant classified as 12,5P.

3.4 Protection against noise

3.4.1 Airborne sound insulation

No performance assessed.

3.4.2 Impact sound insulation

No performance assessed.

3.5 Energy economy and heat retention

3.5.1 Thermal properties

No performance assessed.

3.5.2 Water vapour permeability

No performance assessed.

3.6 General aspects

3.6.1 Durability

Firecrl FR has been tested in accordance with EOTA Technical Report TR 024 – Edition November 2006, table 4.1 for the use category Z_{2(+5/+40)}.

3.6.2 Serviceability

Curing behaviour

- Curing rate: physical drying.
- Skin formation time: Approx. 20 min.
- Volume shrinkage: Approx. 15%

Movement capability

Classification according to EN ISO 11600: 12,5P

³ OJEU, L 396 of 2006/12/30

⁴ OJEU, L 353 of 2008/12/31

4. Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with Regulation (EU) N° 305/2011⁵, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.

The system of assessment and verification of constancy of performance, specified in the Decision of the Commission 1999/454/EC of 1999/07/14⁶, as amended, is specified in the following Table.

Table 2 – System of assessment and verification of constancy of performance applicable to Firecryl FR

Product(s)	Intended use(s)	Level(s) or class(es)	Assessment and verification of constancy of performance system(s)*
Fire Stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1
* See Annex V to Regulation (EU) N° 305/2011			

In addition, according to the decision 1999/454/EC of the European Commission, as amended, and Commission Delegated Regulation (EU) 2016/364⁷, the systems of assessment and verification of constancy of performance specified in Table 3 apply to fire stopping and fire sealing products with regard to reaction to fire.

Table 3 – Systems of assessment and verification of constancy of performance with respect to the reaction to fire

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	Assessment and verification of constancy of performance system(s) ^a
Fire Stopping and Fire Sealing Products	For uses subject to regulations on reaction to fire	(A1, A2, B, C) ^b	1
		(A1, A2, B, C) ^c , D, E, F	3
		(A1 to F) ^d , NPD ^e	4
^a Systems 1, 3 and 4 : See Regulation (EU) N° 305/2011, Annex V			
^b Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)			
^c Products/materials not covered by footnote (b)			
^d Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of class A1 according to Commission Decision 96/603/EC ⁸ , as amended)			
^e 'No Performance Declared' in accordance with Regulation (EU) N° 305/2011, Article 6(f)			

5. Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD

5.1 Tasks for the ETA-holder

5.1.1 Factory production control (FPC)

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this ETA.

The manufacturer may only use constituent materials stated in the technical documentation of this ETA.

The factory production control shall be in accordance with the "Control Plan" relating to the ETA which is part of the technical documentation of this ETA. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at the UBAtc.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the "Control Plan".

5.1.2 Other tasks of manufacturer

Technical data sheet: the manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

- Field of application: Building elements for which the linear joint and gap seal is suitable, type and properties of the building elements like minimum thickness, density, limits in size, minimum thickness etc. of the linear joint seal.
- Construction of the linear joint seal including the backfilling material.

Installation instructions:

- Steps to be followed;
- Procedure in case of repair.

The manufacturer shall, on the basis of a contract, involve a body (bodies) which is (are) notified for the tasks referred to in this ETA, clause 4, in the field of linear joint and gap seals in order to undertake the actions laid down in this ETA, clause 5.2. For this purpose, the "Control Plan" referred to in this ETA, clause 5.1.1 shall be handed over by the manufacturer to the notified body or bodies involved.

5.2 Tasks of notified bodies

The notified body (bodies) shall perform the tasks specified in Regulation (EU) N° 305/2011, Annex V, clause 1.2 (b).

The notified body (bodies) shall retain the essential points of its (their) actions referred to above and state the results obtained and conclusions drawn in (a) written report (reports).

In cases where the provisions of the ETA and its "Control Plan" are no longer fulfilled the notified body shall inform the UBAtc without delay.

In cases where the provisions of the European technical approval and its "Control Plan" are no longer fulfilled the certification body shall withdraw the certificate of conformity and inform the UBAtc without delay.

⁵ OJEU, L 88 of 2011/04/04

⁶ OJEU, L 178 of 1999/07/14

⁷ OJEU L68/4 of 2016/03/15

⁸ OJEU L267 of 1996/10/19

Annex I: Reference documents

References to standards mentioned in the ETA:

ETAG 026-1	Fire Stopping and Fire Sealing Products - Part 1- General
ETAG 026-3	Fire Stopping and Fire Sealing Products - Part 3 - Linear Joint and Gap Seal
EN 1026	Windows and doors – Air permeability – Test method
EN 1366-4	Fire resistance tests for service installations - Part 4: Linear joint seals
EN 13501-1	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests
EN ISO 140-3	Acoustics – Measurement of sound insulation in buildings and of building elements – Part 3: Laboratory measurements of airborne sound insulation of building elements
EN ISO 140-10	Acoustics – Measurements of sound insulation in buildings and of building elements – Part 10: Laboratory measurement of airborne sound insulation of small building elements
EN ISO 717-1	Acoustics – Rating of sound insulation of buildings and of building elements – Part 1: Airborne sound insulation
EN 15651-1	Sealants for joints in building construction – Definitions, requirement and evaluation of conformity – Part 1: Sealants for facade
EN 15651-2:	Sealants for joints in building construction – Definitions, requirement and evaluation of conformity – Part 2: Sealants for glazing
EN ISO 11600	Building construction — Jointing products — Classification and requirements for sealants

Other reference documents:

EOTA TR 024	Characterization, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products
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Annex II: Description of the products

1. coating based on firecryl diluted in water

Coating based on Firecryl FR diluted with water for pre-treatment of very porous surfaces.

2. Backfilling materials

2.1 General

The backfilling materials only serve to limit the thickness of the sealant and have no influence on the fire resistance of the sealant.

2.2 Soudafoam FR

Soudafoam FR is one-component self-expanding fire retardant polyurethane foam, as specified in ETA 13/0280.

2.3 PE-backer rod

Round profiles from closed-cell polyethylene used as a non-adhesive backfilling to ensure the correct dimension of the joint.

Diameter: 10 – 25 mm.

2.4 PU-backer rod

Round profiles from open cell polyurethane foam used as a non-adhesive backfilling to ensure correct dimension of the joint.

Diameter: 15 – 50 mm.

Annex III: Resistance to fire classification of linear joint seals made with Firecryl FR

1. Linear joints in rigid walls made of concrete or brick

1.1 Firecryl FR with Soudafoam FR as specified in Annex II as backfilling material

Thickness of the wall (mm)	Density of the wall (kg/m³)	Orientation of the joint	Symmetrical / Asymmetrical	Composition of the joint seal	Classification
115	600	Horizontal	Asymmetrical	The unexposed (*) side is filled throughout a depth of 20 mm with Firecryl FR and is further filled with Soudafoam FR	EI 120 – T – X – F – W 00 to 20
115	600	Horizontal	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 3 mm Firecryl FR and is further filled with Soudafoam FR	EI 120 – T – X – F – W 00 to 50
115	600	Vertical	Asymmetrical	The unexposed (*) side is filled throughout a depth of 25 mm with Firecryl FR and is further filled with Soudafoam FR	EI 120 – V – X – F – W 00 to 30
115	600	Vertical	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 3 mm Firecryl FR and is further filled with Soudafoam FR	EI 120 – V – X – F – W 00 to 40
115	600	Vertical	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 3 mm Firecryl FR and is further filled with Soudafoam FR	EI 60 – V – X – F – W 00 to 50
200	550	Vertical	Asymmetrical	The unexposed (*) side is filled throughout a depth of 25 mm with Firecryl FR and is further filled with Soudafoam FR	EI 240 – V – X – W 00 to 25
200	550	Horizontal	Asymmetrical	The unexposed (*) side is filled throughout a depth of 15 mm with Firecryl FR and is further filled with Soudafoam FR	EI 240 – V – X – W 00 to 15
(*) The unexposed side is the side that is on the opposite side of the fire.					

1.2 Firecryl FR with a PE-backer / PU-backer rod as specified in Annex II as backfilling material

Thickness of the wall (mm)	Density of the wall (kg/m³)	Orientation of the joint	Symmetrical / Asymmetrical	Composition of the joint seal	Classification
200	550	Vertical	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 20 mm Firecryl FR with a PU backer rod	EI 240 – V – X – W 00 to 20
100	550	Vertical	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 20 mm Firecryl FR with a PU backer rod	EI 180 – V – X – W 00 to 21 E 240 – V – X – W 00 to 21
100	550	Vertical	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 10 mm Firecryl FR with a PU backer rod	EI 180 – V – X – W 00 to 11 E 240 – V – X – W 00 to 11
115	600	Vertical	Asymmetrical	The unexposed (*) side is filled throughout a depth of 20 mm and is further provided with a compressed PU backer rod	EI 60 – V – X – F – W 00 to 20 E 90 – V – X – F – W 00 to 20
200	550	Vertical	Asymmetrical	The unexposed (*) side is filled throughout a depth of 15 mm and is further provided with a compressed PE backer rod.	EI 240 – V – X – W 00 to 15
(*) The unexposed side is the side that is on the opposite side of the fire.					

2. Linear joints in concrete floor constructions

2.1 Firecryl FR with Soudafoam FR as specified in Annex II as backfilling material

Thickness of the floor (mm)	Density of the floor (kg/m ³)	Orientation of the joint	Symmetrical / Asymmetrical	Composition of the joint seal	Classification
150	600	Horizontal	Symmetrical	Both the exposed and the unexposed (*) sides are filled with 3 mm Firecryl FR and is further filled with Soudafoam FR	EI 120 – H – X – F W 00 to 50
150	600	Horizontal	Asymmetrical	The unexposed (*) side is filled throughout a depth of 25 mm with Firecryl FR and is further filled with Soudafoam FR	EI 120 – H – X – F W 00 to 30

(*) The unexposed side is the side that is on the opposite side of the fire.

2.2 Firecryl FR with a PE-backer / PU-backer rod as specified in Annex II as backfilling material

Thickness of the floor (mm)	Density of the floor (kg/m ³)	Orientation of the joint	Symmetrical / Asymmetrical	Composition of the joint seal	Classification
150	600	Horizontal	Asymmetrical	The unexposed (*) side is filled throughout a depth of 20 mm and is further provided with a compressed PU backer rod	EI 120 – H – X – F W 00 to 20

(*) The unexposed side is the side that is on the opposite side of the fire.

UBAtc asbl is a non-profit organization according to Belgian law. It is a Technical Assessment Body notified by the Belgian notifying authority, the Federal Public Services Economy, SMEs, Self-Employed and Energy, on 17 July 2013 in the framework of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC and is member of the European Organisation for Technical Assessment, EOTA (www.eota.eu).

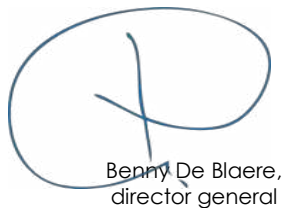
This European Technical Assessment has been issued by UBAtc asbl on the basis of the technical work carried out by the Assessment Operator, BCCA.

On behalf of UBAtc asbl,



Peter Wouters,
director

On behalf of the Assessment Operator, BCCA,
responsible for the technical content of the
ETA,



Benny De Blaere,
director general

The most recent version of this European Technical Assessment may be consulted on the UBAtc website (www.ubadc.be).