



UL INTERNATIONAL (UK) LTD
Wonersh House, Building C, The
Guildway,
Old Portsmouth Road,
Guildford. GU3 1LR.
United Kingdom.

Phone : +44 1483 302130
Fax : +44 1483 302230
Email : Inform.NB@uk.ul.com
Website : <http://www.ul-europe.com>



Member of EOTA

European Technical Approval ETA-13/0991

UL Project No. 13CA37583
[Original version in English language]

Trade name

JOINTS FIRE ACRYL PRO+ Paloakryyli

Manufacturing Plant

A/003

Holder of approval

**Joints L.R. Oy.
Teollisuustie 6
51200 Kangasniemi
Finland**

Generic type and use
of construction product

Fire Stopping and Sealing Product:
• **Linear Joint and Gap Seals**

Validity: from
to

**2013-06-26
2018-06-20**

This Approval contains

17 pages including 2 Annexes



European Organisation for Technical Approvals

UL International (UK) Ltd.



Table of Contents

I.	LEGAL BASES AND GENERAL CONDITIONS	3
II.	SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL	4
1	Definition of product and intended use	4
1.1	Definition of the construction product	4
1.2	Intended use and use category	4
2	Characteristics of product(s) and methods of verification	6
2.1	Reaction to fire	7
2.2	Resistance to fire	7
2.3	Air permeability	7
2.4	Water permeability	7
2.5	Dangerous substances	7
2.6	Mechanical resistance and stability	8
2.7	Resistance to impact/movement	8
2.8	Adhesion	8
2.9	Airborne sound insulation	8
2.10	Impact sound insulation	8
2.11	Thermal properties	8
2.12	Water vapour permeability	8
2.13	Durability and serviceability	8
3	Evaluation of Conformity and CE marking	9
3.1	Attestation of Conformity system	9
3.2	Responsibilities	9
3.3	CE marking	11
4	Assumptions under which the fitness of the product(s) for the intended use was favourably assessed	11
4.1	Manufacturing	11
4.2	Installation	11
5	Indications to the manufacturer	12
5.1	Packaging, transport and storage	12
5.2	Recommendations on use, maintenance and repair	12
6	Signatories	13
ANNEX A	– Reference Documents	14
A.1	References to standards mentioned in the ETA:	14
A.2	Other reference documents:	14
ANNEX B	– Resistance to Fire Classification – JOINTS FIRE ACRYL PRO+ Paloakryyli	15
B.1	Flexible wall constructions according to 1.2.1 with wall thickness of minimum 100 mm	15
B.1.1	Linear joint seals, between head of flexible wall and soffit of concrete floor and vertical end of flexible wall and concrete wall	15
B.2	Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm	16
B.2.1	Linear joint or gap seal, between head of rigid wall and soffit of concrete floor and between rigid walls	16
B.3	Rigid floor constructions according to 1.2.1 with floor thickness of minimum 150 mm	17
B.3.1	Linear joint or gap seal, between floor slabs or between floor slab and wall with sealant to the top face of the floor only	17



I. LEGAL BASES AND GENERAL CONDITIONS

- 1** This European Technical Approval is issued by UL International (UK) Ltd in accordance with:
 - The Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products¹ modified by Council Directive 93/68/EEC² and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council³
 - UK implementation of CPD Statutory Instruments 1991, No 1620 Building and Buildings The Construction Products Regulations 1991- made 15 July 1991, laid before Parliament 22 July 1991, coming into force 27 December 1991, and amended by The Construction Products (Amendment) Regulations 1994 (Statutory Instruments 1994, No 3051)
 - Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex to Commission Decision 94/23/EC⁴
 - Guideline for European Technical Approval of Fire Stopping and Fire Sealing Products: ETAG 026 Part 1: "General" and Part 3: "Linear Joint and Gap Seals"
- 2** UL International (UK) Ltd is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant(s). Nevertheless, the responsibility for the conformity of the products to the European Technical Approval and for their fitness for intended use remains with the holder of the European Technical Approval.
- 3** This European Technical Approval is not to be transferred to other manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1 of this European Technical Approval.
- 4** This European Technical Approval may be withdrawn by UL International (UK) Ltd pursuant to Article 5.1 of the Council Directive 89/106/EEC.
- 5** Reproduction of this European technical approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of UL International (UK) Ltd. 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 approval.
- 6** The European technical approval is issued by the approval body in its official language of English. These versions should correspond fully to the version used by EOTA for circulation. Translations in other languages have to be designated as such.

¹ Official Journal of the European Communities N° L40, 11.2.1989, p. 12

² Official Journal of the European Communities N° L 220, 30.08.1993, p. 1

³ Official Journal of the European Union N° L 284, 31.10.2003, p. 1

⁴ Official Journal of the European Communities N° L17, 20.1.1994, p. 34



II. SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of product and intended use

1.1 Definition of the construction product

- 1) JOINTS FIRE ACRYL PRO+ Paloakryyli is a sealant used to form linear gap seals where gaps are present in wall and floor constructions and linear joint seals where wall and floor constructions abut.
- 2) The JOINTS FIRE ACRYL PRO+ Paloakryyli is supplied in liquid form contained within 310 ml cartridges. The sealant is gunned into the aperture in the separating element/elements and around the service or services, to a specified depth utilising mineral fibre insulation backing material.
- 3) JOINTS FIRE ACRYL PRO+ Paloakryyli contains no carcinogenic substances or mutagenic substances, flame retardants or antimicrobiological agents.
- 4) Installation of the system JOINTS FIRE ACRYL PRO+ Paloakryyli – See 4.2

1.2 Intended use and use category

1.2.1 Intended Use – Linear Joint/Gap Seal

The intended use of system JOINTS FIRE ACRYL PRO+ Paloakryyli 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.

- 1) The specific elements of construction that the system JOINTS FIRE ACRYL PRO+ Paloakryyli may be used to provide a gap or joint seal in, are as follows:

Flexible walls:	The wall must have a minimum thickness of 10 mm and comprise steel studs lined on both faces with minimum 2 layers of 12.5 mm thick boards.
Rigid walls:	The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m ³ .
Rigid floors:	The floor must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m ³ .

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.
- 2) The system JOINTS FIRE ACRYL PRO+ Paloakryyli may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex B).
- 3) The maximum permitted joint/gap width for system JOINTS FIRE ACRYL PRO+ Paloakryyli is 100 mm .
- 4) The maximum movement capability of system JOINTS FIRE ACRYL PRO+ Paloakryyli is ≤ 7.5%



European technical approval ETA-13/0991, with validity from
26/06/2013 to 20/06/2018

Page 5 of 17

The provisions made in this European Technical Approval are based on an assumed working life of the JOINTS FIRE ACRYL PRO+ Paloakryyli of 10 years, provided that the conditions laid down in sections 4.2/5.1/5.2 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, 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.

- 1.2.2** Type Z₂: Intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV.



2 Characteristics of product(s) and methods of verification

The identification tests and the assessment of the fitness for use according to the Essential Requirements were carried out in compliance with the “ETA Guidance no. 026-Part 3” concerning Linear Joint and Gap Seals – Progress File August 2011 .

ETAG 026-3 Clause No.	ETA Clause No.	Characteristic	Assessment of characteristic
Mechanical resistance and stability			
		None	Not relevant
Safety in case of fire			
2.4.1	2.1	Reaction to fire	Class F according to EN 13501-1F
2.4.2	2.2	Resistance to fire	See Annex B
Hygiene, health and environment			
2.4.3	2.3	Air permeability (material property)	No performance determined
2.4.4	2.4	Water permeability (material property)	No performance determined
2.4.5	2.5	Release of dangerous substances	Declaration of manufacturer
Safety in use			
2.4.6	2.6	Mechanical resistance and stability	No performance determined
2.4.7	2.7	Resistance to impact/movement	No performance determined
2.4.8	2.8	Adhesion	No performance determined
Protection against noise			
2.4.9	2.9	Airborne sound insulation	No performance determined
2.4.10	2.10	Impact sound insulation	No performance determined
Energy economy and heat retention			
2.4.11	2.11	Thermal properties	No performance determined
2.4.12	2.12	Water vapour permeability	No performance determined
General aspects relating to fitness for use			
2.4.13	2.13	Durability and serviceability	Z ₂



2.1 Reaction to fire

System JOINTS FIRE ACRYL PRO+ Paloakryyli has not been subjected to reaction to fire testing and therefore is classified 'F' in accordance with EN 13501-1.

2.2 Resistance to fire

2.2.1 Linear Joint/Gap Seals

System JOINTS FIRE ACRYL PRO+ Paloakryyli has been tested in accordance with EN 1366-4: 2006 and based upon the test results and the field of direct application specified within EN 1366-4: 2006, the system JOINTS FIRE ACRYL PRO+ Paloakryyli has been classified in accordance with EN 13501-2, as given in Annex B.

The seals may only be used in the elements of construction described in Annex B and against the substrates described in Annex B.

Provisions shall be taken such that floor joint seals cannot be stepped on e.g. by covering with wire mesh or floor finishes.

The linear joint seals were tested without mechanically induced movement so the movement capability of a linear joint seals are < 7.5 %.

2.3 Air permeability

No performance determined

2.4 Water permeability

No performance determined

2.5 Dangerous substances

The approval holder has submitted a written declaration that JOINTS FIRE ACRYL PRO+ Paloakryyli 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.

In addition to the specific clauses relating to dangerous substances contained in this European technical approval, 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.



European technical approval ETA-13/0991, with validity from 26/06/2013 to 20/06/2018

Page 8 of 17

2.6 Mechanical resistance and stability

No performance determined

2.7 Resistance to impact/movement

No performance determined

2.8 Adhesion

No performance determined

2.9 Airborne sound insulation

No performance determined

2.10 Impact sound insulation

No performance determined

2.11 Thermal properties

No performance determined

2.12 Water vapour permeability

No performance determined

2.13 Durability and serviceability

JOINTS FIRE ACRYL PRO+ Paloakryyli has been tested in accordance with BS EN ISO 8339: 2005, BS EN ISO 9046: 2004 & ISO 7389: 2003 with the Type Z₂ conditions as specified in ETAG 026-2, and the results of the tests have demonstrated suitability for joint seals in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV.



3 Evaluation of Conformity and CE marking

3.1 Attestation of Conformity system

System 1 of attestation of conformity (CDP Annex III) applies, as laid down by the European Commission. This system of attestation of conformity is defined as follows:

- (1) factory production control;
 - (2) further testing of samples taken at the factory by the manufacturer in accordance with a prescribed test plan;
- (b) Tasks for the notified body
- (1) initial type-testing of the product;
 - (2) initial inspection of factory and of factory production control;
 - (3) continuous surveillance, assessment and approval of factory production control.

3.2 Responsibilities

3.2.1 Tasks of the manufacturer:

3.2.1.1 Factory production control

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 European technical approval.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this European technical approval.

The factory production control shall be in accordance with the Control Plan of 8th April 2013 relating to the European technical approval ETA 13/0991 issued on 26/06/2013 which is part of the technical documentation of this European technical approval. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (UK) Ltd.

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



3.2.1.2 Other tasks of the manufacturer

Additional information

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

(a) Technical data sheet:

- Field of application:
- Building elements for which the linear joint seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the joint seal.
- Construction of the linear joint seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

The manufacturer shall, on the basis of a contract, involve a body which is approved for the tasks referred to in section 3.1 in the field of penetration seals in order to undertake the actions laid down in section 3.3. For this purpose, the "control plan" referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body or bodies involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of the European technical approval ETA 13/0991 issued on 26/06/2013.

Tasks of the Notified Bodies:

3.2.2 Tasks of approved bodies

The approved body shall perform the

- initial type-testing of the product,
- initial inspection of factory and of factory production control,
- continuous surveillance, assessment and approval of factory production control, in accordance with the provisions laid down in the "Control Plan of 8th April 2013 relating to the European technical approval ETA 13/0991 issued on 26/06/2013.

The approved body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report. The approved certification body involved by the manufacturer shall issue an EC certificate of conformity of the product stating the conformity with the provisions of this European technical approval. 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 UL International (UK) Ltd without delay.



3.3 CE marking

The CE marking shall consist of the letters 'CE' in the form laid down in Council Directive 93/68/EEC, followed by the identification number of the notified certification body.

The CE marking shall be affixed on a visible part of the product, a label attached to the product, the packaging or on accompanying commercial documents. The CE marking shall be accompanied by the following information:

- the name and address of the producer or the authorised representative established in the EEA,
- the last two digits of the year in which the CE marking was affixed,
- the number of the EC certificate of conformity for the product,
- the number of the European Technical Approval,
- number of the ETAG used
- intended use, use category as relevant

4 Assumptions under which the fitness of the product(s) for the intended use was favourably assessed.

4.1 Manufacturing

The European technical approval is issued for JOINTS FIRE ACRYL PRO+ Paloakryyli on the basis of agreed data/information, deposited with UL International (UK) Ltd, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to UL International (UK) Ltd before the changes are introduced. UL International (UK) Ltd 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 or alterations to the ETA, shall be necessary.

4.2 Installation

Installation of system JOINTS FIRE ACRYL PRO+ Paloakryyli shall be conducted as follows:

1. Before installing JOINTS FIRE ACRYL PRO+ Paloakryyli ensure that the surface of the surrounding construction is free from all loose contaminants, dust and grease.
2. Make sure that the gap to be sealed is wide enough to accommodate the correct backing material where this is a requirement. In practice, this should not be less than 10mm.
3. When installing any backing material, cut this slightly oversize and insert into the gap ensuring a tight friction fit. Make sure the correct depth is achieved.
4. Fill the gap or joint with JOINTS FIRE ACRYL PRO+ Paloakryyli to the required depth. For type of sealing and necessary depth of the joint, see the tables on the left and the drawings in Annex B.
5. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.



6. Where JOINTS FIRE ACRYL PRO+ Paloakryyli is to be installed against surfaces that cannot tolerate direct contact, appropriate surface preparation should be taken (contact Joints L.R. Oy. for guidance in these cases). For paints sensitive to sealing compounds, priming with a PVA primer is recommended.
7. JOINTS FIRE ACRYL PRO+ Paloakryyli can be overpainted with most emulsion or alkyd (gloss) paints.
8. As JOINTS FIRE ACRYL PRO+ Paloakryyli is water based, in cases where corrosion protection is a problem, some metals may require a barrier between the sealant and the surface.
9. When installing the sealant in gypsum boards, the exposed edges of the board can be wetted with water, or JOINTS FIRE ACRYL PRO+ Paloakryyli diluted with water to prevent excessive joint shrinkage.
10. When installing JOINTS FIRE ACRYL PRO+ Paloakryyli in hollow floor slabs or planks, fire sealing should be carried out from the soffit of the floor assuming there is sufficient thickness of concrete below the void. Where this is not the case, the tubular voids should be filled with stone wool normally the same thickness as the depth of the floor slab. Alternatively, simply fire seal on both sides.

5 Indications to the manufacturer

5.1 Packaging, transport and storage

The following measures should be adopted with regard to handling and storage of the JOINTS FIRE ACRYL PRO+ Paloakryyli:

- Handling
 - Information for safe handling: No special measures required.
 - Information about protection against explosions and fires: No special measures required.
- Storage
 - Don't store the product under 5°C and not over +35 °C

5.2 Recommendations on use, maintenance and repair

The system JOINTS FIRE ACRYL PRO+ Paloakryyli should be installed and used as described earlier in this document.

System JOINTS FIRE ACRYL PRO+ Paloakryyli seals which are damaged after installation, should be removed and replaced with undamaged seals.

In the area covered by the ETA when the set up recommendation have been followed there is no maintenance protocol to be followed. The product does not need any maintenance in the life time indicated in the ETA.



European technical approval ETA-13/0991, with validity from
26/06/2013 to 20/06/2018

Page **13** of **17**

6 Signatories

Report by:

A handwritten signature in blue ink, appearing to read 'C. Johnson'.

C. Johnson

Staff Engineer
Product Safety

For and on behalf of UL International (UK) Ltd.

Reviewed by:

A handwritten signature in blue ink, appearing to read 'C. W. Miles'.

C. W. Miles

Business Manager – Europe & Latin America
Built Environment Sector



European technical approval ETA-13/0991, with validity from
26/06/2013 to 20/06/2018

Page 14 of 17

ANNEX A – Reference Documents

A.1 References to standards mentioned in the ETA:

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

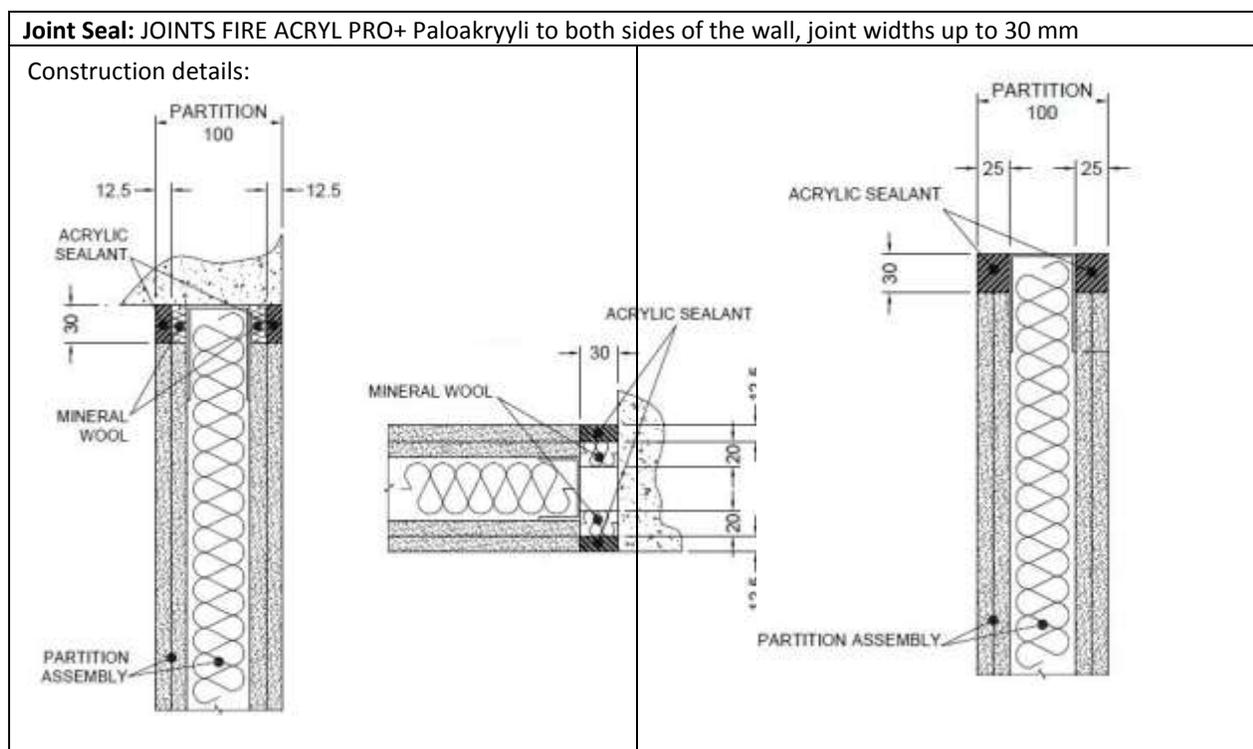
A.2 Other reference documents:

EOTA TR 024 Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products

ANNEX B – Resistance to Fire Classification – JOINTS FIRE ACRYL PRO+ Paloakryyli

B.1 Flexible wall constructions according to 1.2.1 with wall thickness of minimum 100 mm

B.1.1 Linear joint seals, between head of flexible wall and soffit of concrete floor and vertical end of flexible wall and concrete wall



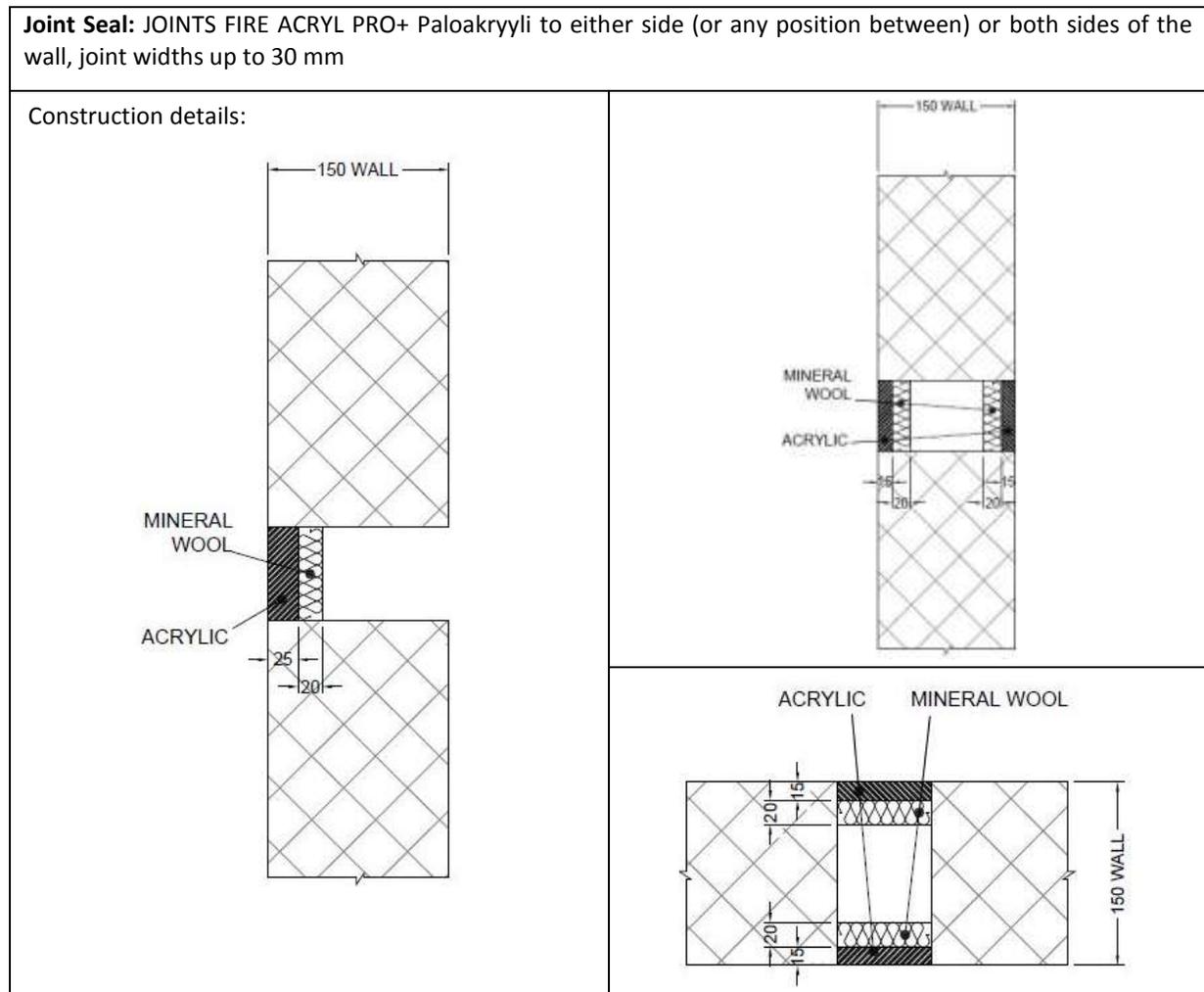
B.1.1.1

Substrate	Depth (mm)	Backing	Classification
Plasterboard/ concrete	12.5 min.	12.5 mm Stone wool 35 kg/m ³ plus 50 mm steel partition head track	EI 120 – T – X – F – W 00 to 30
		20 mm Stone wool 35 kg/m ³ *	EI 120 – V – X – F – W 00 to 30
	25 min.	50 mm steel partition head track	EI 120 – T – X – F – W 00 to 30

* Maximum partition/wall height of 3 metres

B.2 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm

B.2.1 Linear joint or gap seal, between head of rigid wall and soffit of concrete floor and between rigid walls



B.2.1.1

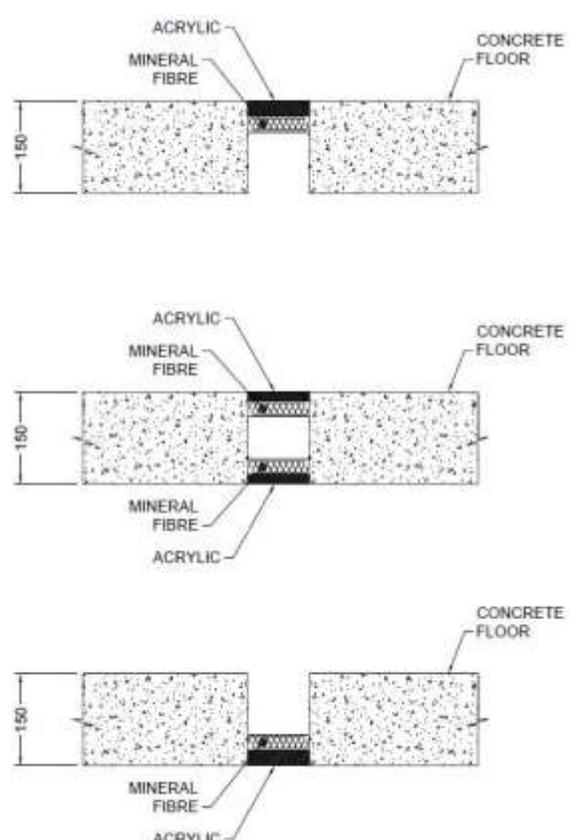
Substrate	Depth (mm)	Backing	Classification
masonry/ concrete	25 min. (one side)	20 mm Stone wool 40 kg/m ³	E 240 – T – X – F – W 00 to 30 EI 60 – T – X – F – W 00 to 30
	15 min. (both sides)		EI 240 – V – X – F – W 00 to 30 EI 240 – T – X – F – W 00 to 30

B.3 Rigid floor constructions according to 1.2.1 with floor thickness of minimum 150 mm

B.3.1 Linear joint or gap seal, between floor slabs or between floor slab and wall with sealant to the top face of the floor only

Joint Seal: JOINTS FIRE ACRYL PRO+ Paloakryyli to either side (or any position between) or both sides of the floor, joint widths up to 100 mm

Construction details:



B.3.1.1

Substrate	Depth (mm)	Backing	Classification
masonry/ concrete	25 min. (any position)	25 mm AES Fibre $\geq 128\text{kg/m}^3$	E 120 – H – X – F – W 00 to 100
	25 min (top face)		EI 60 – H – X – F – W 00 to 100
	15 min. (both sides)	25 mm Stone wool 40 kg/m^3	EI 180 – H – X – F – W 00 to 100
		25 mm Stone wool 140 kg/m^3	EI 120 – H – X – F – W 00 to 100
			EI 180 – H – X – F – W 00 to 100