



BUILDING RESEARCH INSTITUTE

00-611 Warszawa, ul. Filtrowa 1, POLAND, phone: (+48 22) 825-04-71, fax: (+48 22) 825-52-86,
Director, phone: (+48 22) 825-13-03, 825-28-85, fax: (+48 22) 825-77-30
02-656 Warszawa, ul. Ksawewów 21, POLAND, phone: (+48 22) 843-14-71, fax: (+48 22) 843-29-31

www.itb.pl

e-mail: itb@itb.pl

Fire Research
Department
02-656 Warszawa, ul. Ksawerów 21
POLAND
phone: (+48 22) 853-34-27
fax: (+48 22) 847-23-11
e-mail: fire@itb.pl

CLASSIFICATION OF FIRE RESISTANCE IN ACCORDANCE WITH EN 13501-2:2007 (English Version)

Sponsor: SOUDAL Sp. z o.o.
ul. Gdańska 7
Czosnów Mazowiecki
05-152 Czosnów

Prepared by: Fire Research Department
Building Research Institute
Filtrowa St. 1
PL 00-611 Warsaw

Product name: Linear joint seals

Classification report No.: NP-02491.1/2009/ML

Issue number: 1

Date of issue: 2010.02.22

This classification report consists of twelve pages and may only be used or reproduced in its entirety. Appendix No. 1 to this classification report consists of thirteen pages.

Regon: 000063650

NIP 525-000-93-58
VAT UE PL 5250009358

Bank: BPH S.A. O/Warszawa, al. Jerozolimskie 27, 00-508 Warszawa, POLAND,
Account no: PLN – 87 1060 0076 0000 3210 0016 6236, EUR – 43 1060 0076 0000 3210 0016 6252

1. Introduction

This classification report defines the resistance to fire classification assigned to the elements – SOUDAL linear joint seals in accordance with the procedures given in EN 13501-2:2007.

2. Details of classified product

2.1. General

The element, SOUDAL linear joint seal is defined as vertical and horizontal linear joints seals in vertical building supporting construction.

2.2. Description

The element, linear joint seals of SOUDAL Company is fully described below.

Linear joint seals are made of:

- SOUDASEAL FR - neutral, elastic, one-component sealant based on hybrid polymer technology,
- PU Backing Rod,
- FIRESILICONE FR - neutral, elastic, one-component sealant based on silicones,
- FIRECRYL FR - plasto-elastic one-component joint sealant based on acrylic dispersion,
- SOUDAFOAM FR - one-component, selfexpanding, ready to use polyurethane foam with propellants which are completely harmless to the ozone layer,
- MINERAL WOOL 80 – stone mineral wool plates - wool density 80 kg/m³.

Details of the joint seals constructions are shown in figures No. 1-14 in Appendix 1.

3. Test reports/extended application reports and test results in support of the classification

3.1. Test reports/extended application reports

Name of Laboratory	Name of sponsor	Report ref. no	Test method
Fire Research Laboratory of Building Research Institute	SOUDAL Sp. z o.o.	LP-02491.1/09	EN 1366-4:2006

3.2. Test results

Test method, number and date	Parameter	Results
EN 1366-4:2006 LP-02491.1/09 09.12.2009	Linear joint seal Type A – see Fig. 1 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 30 mm	
	supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 123 minutes
	Linear joint seal Type B – see Fig. 2 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 20 mm	
	supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 70 minutes
	Linear joint seal Type C – see Fig. 3 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 25 mm	
	supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 89 minutes
	Linear joint seal Type D – see Fig. 4 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 40 mm	
	supporting construction integrity cotton pad gap gauges	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure

	sustained flaming	158 minutes no failure
insulation		158 minutes no failure
Linear joint seal Type D' – see Fig. 4 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 50 mm		
supporting construction		G = 11,5 cm thick wall made of aerated concrete blocks
integrity		
	cotton pad	71 minutes
	gap gauges	71 minutes
	sustained flaming	71 minutes no failure
insulation		70 minutes
Linear joint seal Type E – see Fig. 5 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 40 mm		
supporting construction		G = 11,5 cm thick wall made of aerated concrete blocks
integrity		
	cotton pad	158 minutes no failure
	gap gauges	158 minutes no failure
	sustained flaming	158 minutes no failure
insulation		129 minutes

Linear joint seal Type F – see Fig. 6 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 30 mm		
supporting construction		G = 11,5 cm thick wall made of aerated concrete blocks
integrity		
	cotton pad	148 minutes
	gap gauges	148 minutes
	sustained flaming	148 minutes no failure
insulation		135 minutes
Linear joint seal Type G – see Fig. 7 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 20 mm		
supporting construction		G = 11,5 cm thick wall made of aerated concrete blocks
integrity		
	cotton pad	118 minutes
	gap gauges	118 minutes
	sustained flaming	118 minutes no failure

insulation	70 minutes
Linear joint seal Type H – see Fig. 8 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 60 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 129 minutes no failure 129 minutes 129 minutes 68 minutes
Linear joint seal Type I – see Fig. 9 in Appendix 1 Orientation – vertical joint in vertical building supporting construction - width of joint – W = 100 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 158 minutes no failure

Linear joint seal Type J – see Fig. 10 in Appendix 1 Orientation – horizontal joint in vertical building supporting construction - width of joint – W = 20 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 158 minutes no failure
Linear joint seal Type K – see Fig. 11 in Appendix 1 Orientation – horizontal joint in vertical building supporting construction - width of joint – W = 25 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 158 minutes no failure

Linear joint seal Type L – see Fig. 12 in Appendix 1 Orientation – horizontal joint in vertical building supporting construction - width of joint – W = 25 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 99 minutes
Linear joint seal Type M – see Fig. 13 in Appendix 1 Orientation – horizontal joint in vertical building supporting construction - width of joint – W = 30 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 11,5 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 158 minutes no failure

Linear joint seal Type M' – see Fig. 13 in Appendix 1 Orientation – horizontal joint in vertical building supporting construction - width of joint – W = 50 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 24 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 158 minutes no failure
Linear joint seal Type N – see Fig. 14 in Appendix 1 Orientation – horizontal joint in vertical building supporting construction - width of joint – W = 100 mm	
supporting construction integrity cotton pad gap gauges sustained flaming insulation	G = 24 cm thick wall made of aerated concrete blocks 158 minutes no failure 158 minutes no failure 158 minutes no failure 158 minutes no failure

4. Classification and field of application

4.1. Reference of classification

This classification has been carried out in accordance with Clause 7 of EN 13501-2:2007.

4.2. Classification

The element, SOUDAL linear joint seals is classified according to the following combinations of performance parameters and classes as appropriate.

*) Key:

E - fire integrity

I - fire insulation

V - orientation: vertical construction – vertical joint

T - orientation: vertical construction – horizontal joint

X - movement capacity – no movement

F - type of splices - field

W - joint widths range (in mm)

4.2.1.1. Linear joint seal Type A see Fig. 1 in Appendix 1

– joint width from 0 to 30 mm

– minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	120													
		120												

Resistance to fire class: EI 120 – V – X – F – W 0 to 30

*)

4.2.1.2. Linear joint seal Type B see Fig. 2 in Appendix 1

– joint width from 0 to 20 mm

– minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	120													
		60												

Resistance to fire class: EI 60/E120 – V – X – F – W 0 to 20

*)

4.2.1.3. Linear joint seal Type C see Fig. 3 in Appendix 1

Resistance to fire class: EI 120-V-X-F-W 0 to 40 *)

4.2.1.6. Linear joint seal Type F see Fig. 6 in Appendix 1

– joint width from 0 to 30 mm

– minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	120													
		120												

Resistance to fire class: EI 120-V-X-F-W 0 to 30 *)

4.2.1.7. Linear joint seal Type G see Fig. 7 in Appendix 1

– joint width from 0 to 20 mm

– minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	90													
		60												

Resistance to fire class: EI 60/E 90-V-X-F-W 0 to 20 *)

4.2.1.8. Linear joint seal Type H see Fig. 8 in Appendix 1

– joint width from 0 to 60 mm

– minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	120													
		60												

Resistance to fire class: EI 60/E 120-V-X-F-W 0 to 60 *)

4.2.1.9. Linear joint seal Type J see Fig. 9 in Appendix 1

– joint width from 0 to 100 mm

– minimum wall thickness – 11,5 cm

Resistance to fire class: EI 90/E 120 – T – X – F – W 0 to 25 *)

4.2.2.4. Linear joint seal Type M see Fig. 13 in Appendix 1

- joint width from 0 to 50 mm
- minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	120													
		120												

Resistance to fire class: EI 120 – T – X – F – W 0 to 50 *)

4.2.2.5. Linear joint seal Type N see Fig. 14 in Appendix 1

- joint width from 0 to 100 mm
- minimum wall thickness – 11,5 cm

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	120													
		120												

Resistance to fire class: EI 120 – T – X – F – W 0 to 100 *)

4.3. Field of application

This classification is valid for the following end use applications:

4.3.1. Permitted orientation in accordance with EN 1366-4:2006:

- **B** – vertical linear joint seals in vertical supporting construction – joints seals classified in 4.2.1.1 - 4.2.1.9,
- **C** – horizontal linear joint seals in vertical supporting construction – joints seals classified in 4.2.2.1 - 4.2.2.5,

4.3.2. Application to supporting constructions elements in accordance with 13.2 of EN 1366-4:2006 made of aerated concrete blocks, concrete, concrete works and masonry with full filled mortar density at least 600 kg/m^3 and thickness given in 4.2.

4.3.3. Application to straight linear joints with parallel surfaces of elements sealed edges in accordance with Fig. 3.

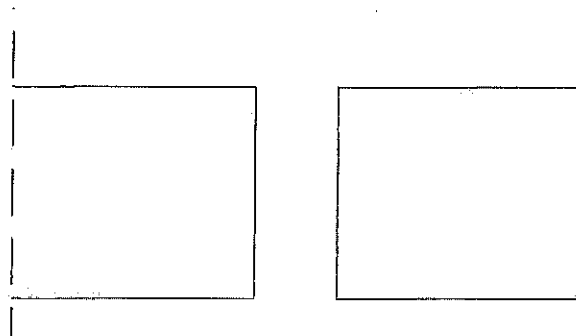
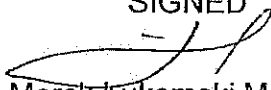


Fig. 3.

5. Limitations

This classification document does not represent type approval or certification of the product.

SIGNED


Marek Łukomski M.Sc. Civil Eng.

APPROVED

Head of Fire Research Department


Andrzej Borowy Ph.D.