FIRE RESISTANCE CLASSIFICATION REPORT No. 19660D

OWNER OF THE CLASSIFICATION REPORT

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INTRODUCTION

This classification report defines the classification assigned to linear joint seals,

type: Fire Silicone® B1 FR;

in rigid wall and floor supporting constructions, in accordance with the procedures given in EN 13501-2:2016: Fire classification of products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services.

This classification report consists of 8 pages and 1 annex and may only be used or reproduced in its entirety.

1 Details of classified product

1.1 General

The product – type: Fire Silicone® B1 FR – is defined as a linear joint seal

1.2 Description

The elements, linear joint seals, are fully described below, in support of this classification. The drawings of the test element as it was tested, are enclosed in annex 1 of this classification report.

1.2.1 Composition of the test specimen

1.2.1.1 Linear joint seals

1.2.1.1.1 Fire Silicone® B1 FR sealant on a PU backer rod

Backer rod – material: soft polyurethane (PU) foam – diameter: according to the joint width.

- position:
  - pushed gently inside the joint until the wanted depth (20 mm) has been reached at the unexposed side or at both sides of the supporting construction;
- number:
  - 1 rod at either the exposed or unexposed side;
  - 2 rods at both sides of the supporting construction;
- fixing:
  - the rod must be slightly wider than the joint so it is fixed by clamping;
  - the backfilling will be covered by silicone sealant.

Silicone sealant – brand and type: Fire Silicone® B1 FR – material: polysiloxane – thickness: 20 mm –width: see § 3.2.1 – ETA no. 13/0336 – DoP no. 230016.

- position:
  - applied on backer rod(s) in the voids after positioning the backer rod(s) at the right installation depth;
  - finished flush with the supporting construction surface(s);
- number:
  - 1 layer at either the exposed or unexposed side;
  - 2 layers both sides of the supporting construction;

- fixing: self-adhesive.

1.2.1.2 Standard supporting construction

1.2.1.2.1 Rigid aerated concrete wall (thickness: 100 mm)

The supporting construction consists of a rigid aerated concrete wall (density: 550 kg/m³; thickness: 100 mm) according to European Standard EN 1366-4:2006+A1:2010 §7.2.2.1.

1.2.1.2.2 Rigid aerated concrete wall (thickness: 200 mm)

The supporting construction consists of a rigid aerated concrete wall (density: 550 kg/m³; thickness: 200 mm) according to European Standard EN 1366-4:2006+A1:2010 §7.2.2.1.

1.2.1.2.3 Rigid aerated concrete floor (thickness: 150 mm)

The supporting construction consists of a rigid aerated concrete floor (density: 550 kg/m³; thickness: 150 mm) according to European Standard EN 1366-4:2006+A1:2010 §7.2.2.1.

2 Test reports/EXAP reports and test results in support of the classification

2.1 Test reports/EXAP reports

Name of the laboratory	Report ref. no.	Name of the owner	Date of the test	Method
WFRGENT nv	19660A	Soudal NV	14/05/2019	EN 1366-4:2006+A1:2010
WFRGENT nv	19659A	Soudal NV	17/05/2019	EN 1366-4:2006+A1:2010
WFRGENT nv	19658A	Soudal NV	15/05/2019	EN 1366-4:2006+A1:2010

Exposure conditions during the fire resistance test:

Temperature/time curve: standard as in EN 1363-1:2012.

Direction of exposure:

- vertical supporting construction: the linear joint seals are exposed to the fire from one side;
- horizontal supporting construction: the linear joint seals are exposed to the fire from below.

The joint edges are symmetrical, the joint seals can be asymmetrical.

The joint seals are not subjected to a mechanically induced movement.

2.2 Test results

See the test reports listed in § 2.1.

3 Classification and field of application

3.1 Reference of classification

This classification has been carried out in accordance with clause 7 of EN 13501-2:2016.

3.2 Classification

The product, sealant – type: Fire Silicone® B1 FR – is classified according to the following combinations of performance parameters and classes as appropriate. No other linear joint type classifications are permitted.

All classifications (insulation and/or integrity rating) cover lower classifications as well.

3.2.1 Fire Silicone® B1 FR sealant on a PU backer rod

Linear joint seal			Classification	
Width [mm]	Sealant		EI	E
	Depth [mm]	Application side		
Rigid wall (thickness ≥ 100 mm)				
10	≥20	Exposed	EI120-V-X-F-W10	E120-V-X-F-W10
10	≥20	Unexposed	EI90-V-X-F-W10	E120-V-X-F-W10
20	≥20	Unexposed	EI30-V-X-F-W20	E120-V-X-F-W20
10 to 20	**≥20**	**Unexposed**	**EI30-V-X-F-W10 to W20**	**E120-V-X-F-W10 to W20**
10	≥20	Symmetrical	EI120-V-X-F-W10	E120-V-X-F-W10
30	≥20	Symmetrical	EI120-V-X-F-W30	E120-V-X-F-W30
10 to 30	**≥20**	**Symmetrical**	**EI120-V-X-F-W10 to W30**	**E120-V-X-F-W10 to W30**
Rigid wall (thickness ≥ 200 mm)				
10	≥20	Exposed	EI180-V-X-F-W10	E240-V-X-F-W10
10	≥20	Unexposed	EI240-V-X-F-W10	E240-V-X-F-W10
20	≥20	Unexposed	EI90-V-X-F-W20	E240-V-X-F-W20
10 to 20	**≥20**	**Unexposed**	**EI90-V-X-F-W10 to W20**	**E240-V-X-F-W10 to W20**
10	≥20	Symmetrical	EI240-V-X-F-W10	E240-V-X-F-W10
40	≥20	Symmetrical	EI240-V-X-F-W40	E240-V-X-F-W40
10 to 40	**≥20**	**Symmetrical**	**EI240-V-X-F-W10 to W40**	**E240-V-X-F-W10 to W40**
Rigid floor (thickness ≥ 150 mm)				
20	≥20	Unexposed	EI120-H-X-F-W20	E120-H-X-F-W20
30	≥20	Unexposed	EI120-H-X-F-W30	E120-H-X-F-W30
20 to 30	**≥20**	**Unexposed**	**EI120-H-X-F-W20 to W30**	**E120-H-X-F-W20 to W30**
30	≥20	Symmetrical	EI120-H-X-F-W50	E120-H-X-F-W50

Explanation	
V	Vertical joint seal in a wall construction
H	Joint seal in a floor construction
X	No movement applied during test
F	Field: type of splices in the joint seal
Ww1 to Ww2	Joint widths range [mm]. w1 is the lower and w2 is the higher width limit

3.3 Field of direct application

This classification is valid for the following end use applications according to EN 1366-4:2006+A1:2010.

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability:

a) orientation
   - The classifications for vertical linear joints in a vertical test construction (wall), tested without shear movement don't cover other orientations;
   - The classifications for linear joints in a horizontal test construction (floor), tested without shear movement, are also valid for:
     - horizontal wall joints abutting a floor, ceiling or roof.

b) supporting construction
   - **rigid wall**
     The test results obtained with autoclaved aerated concrete standard supporting constructions apply to concrete, block work and masonry separating elements of a thickness and density equal or greater than that tested.
     - density supporting construction ≥ 550 kg/m³;
     - thickness supporting construction ≥ 100 mm or ≥ 200 mm.
   - **rigid floor**
     The test results obtained with autoclaved aerated concrete standard supporting constructions apply to concrete, block work and masonry separating elements of a thickness and density equal or greater than that tested.
     - density supporting construction ≥ 550 kg/m³;
     - thickness supporting construction ≥ 150 mm.

c) seal position

   Where the linear joint seal was applied flush with the surface of the supporting construction and is exposed to the fire, the result will also be applicable for

positioning the seal inside the supporting construction at an offset from the exposed side up until it's flush with the unexposed side.

d) mechanical induced movement

- If the movement capability of a linear joint seal is less than ±7.5%, the linear joint seal may be tested without mechanically induced movement and the result applies to the movement capability reported.

4 Limitations

This classification report does not represent type approval nor certification of the products

The classification assigned to the products in this report is appropriate to a Declaration of Performance (DoP) of the essential characteristics of the construction product by the manufacturer within the context of System 1 Assessment and Verification of Constancy of Performance (AVCP).

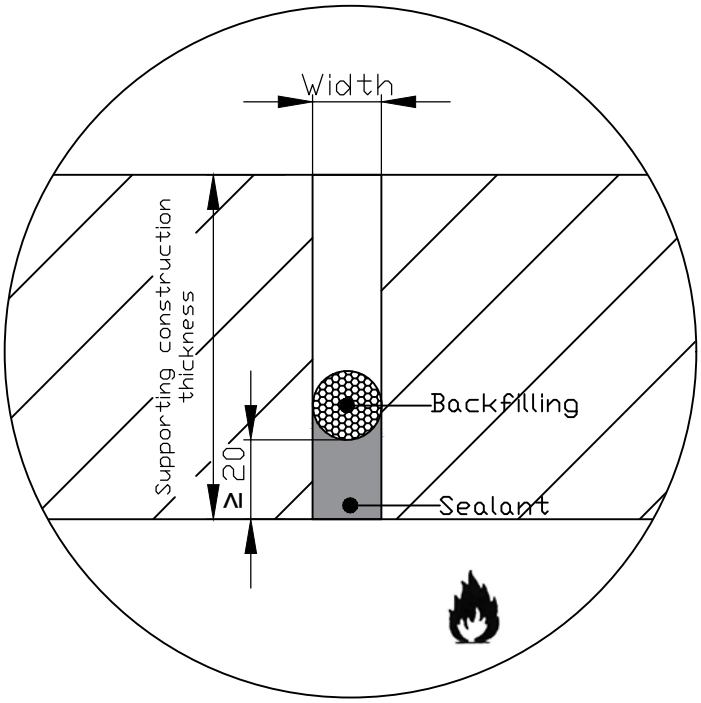
Under the Construction Products Regulation (CPR: EU 305/2011), such a Declaration of Performance (DoP) is a requirement for affixing the CE marking.

The test laboratory has played no part in sampling the products for the test, although it holds appropriate references, supplied by the manufacturer, to provide evidence for the traceability of the samples tested.

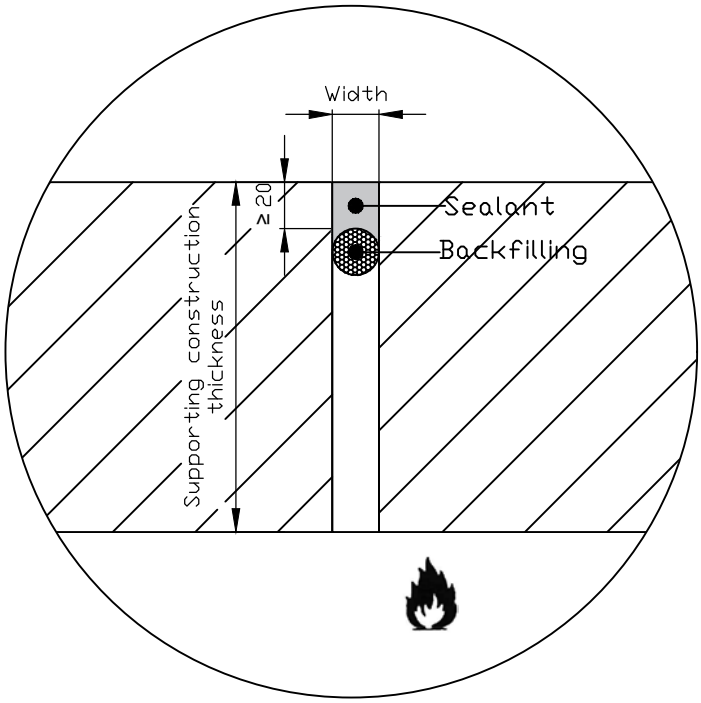
SIGNED	APPROVED
Stephanie Van Bockhaven (Signature) Project Assistant Ghent 2019.09.19 12:54:47 +02'00'	Peter Tack (Signature) Project Leader Ghent 2019.09.20 12:02:42 +02'00'

This document is the original version of the classification report and is written in English.

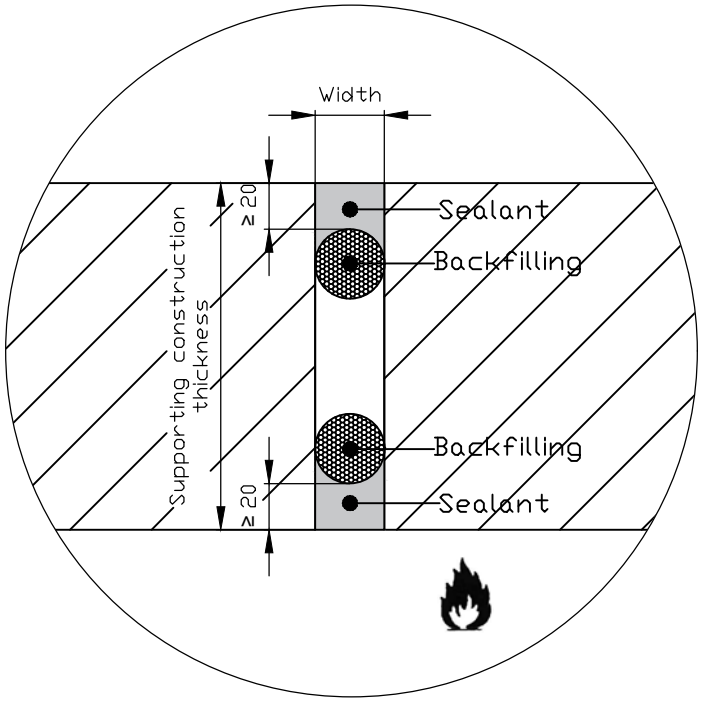
Linear joint seal types



PU foam backfilling at an offset of 20 mm from the exposed side, finished with sealant flush with the exposed side.



PU foam backfilling at an offset of 20 mm from the unexposed side, finished with sealant flush with the unexposed side.



PU foam backfilling at an offset of 20 mm from both the exposed as the unexposed side, finished with sealant flush with the supporting construction surfaces.