

# Declaration of Performance

According to Annex III of the Regulation (EU) Nr.305/2011 (Construction Products Regulation).

## Pacifyre® MK II Fire Sleeve

Nr. 0843-CPR-17-0163.

### 1. Unique identification code of the product-type:

- Pacifyre® MK II Fire Sleeve.

### 2. Intended use of the construction product:

- Fire Stopping and Sealing Products for Penetration Seals, see ETA-17/0163.

Pipe Penetrations

Plastic and Multilayer pipes

The field of application has to comply with the content of the ETA-17/0163.

### 3. Name and contact address:

- J. van Walraven Holding B.V. - Industrieweg 5 - 3641RK Mijdrecht - The Netherlands.

### 4. System of assessment and verification of constancy of performance (AVCP) of the construction product:

- System 1.

### 5. In case of the declaration of performance concerning a construction product covered by a harmonized standard:

- Not applicable.

### 6. European Assessment Document, European Technical Assessment, Technical Assessment Body & Notified Body:

EAD	ETA	TAB	NB
ETAG 026-2	ETA-17/0163	UBATc	UL International (UK) Ltd, No. 0843

### 7. Declared performance:

Essential characteristics	Declared performance / Harmonised technical specification
Reaction to fire	Class E according EN 13501-1
Resistance to fire	In accordance with EN 13501-2. See annex
Dangerous substances	See annex
Durability and serviceability	Use category Type Z <sub>1</sub>
Other	Not applicable / No performance determined

### 8. The performance of the product identified in points 1 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3.

Signed for and on behalf of the manufacturer by:



Frank Nijdam

Group Director Product Marketing & Innovation

Mijdrecht, 25.04.2017

J. van Walraven Holding B.V

# Annex

## Release of dangerous substances

The holder of the assessment has submitted a written declaration stating that the Pacifyre® MKII Firesleeve contains no dangerous substances according to EC-database, known at the date of issuing. 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 the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

## Resistance to Fire: Pacifyre® MKII Fire Sleeve – General considerations

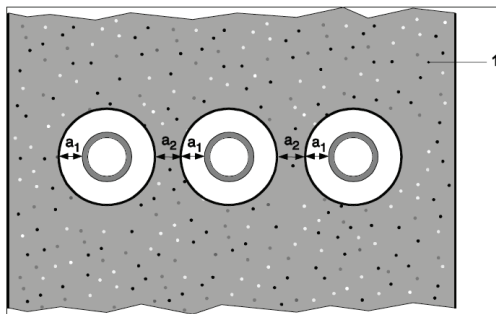
This annex reports fire resistance classification of Pacifyre® MKII Firesleeve used as a single pipe penetration seal and its field of application. The classification may not be extended to a multiple penetration seal.

The classification U/C covers pipe end configurations U/C and C/C.

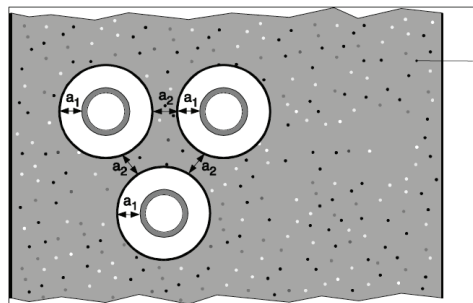
Unless specially mentioned otherwise, the classification is only applicable for pipes installed perpendicular to the penetration seal.

The annular space between the pipe and the supporting construction ( $a_1$ ) are based on fig E.2 of EN 1366-3:2009. The classification is also valid for clustered pipes, provided that the separations  $a_2$  are respected. The values of  $a_1$  and  $a_2$  are given in the annexes.

Option 1



Option 2



### Key

1 Supporting construction.

$a_1$  Pipe / edge of seal separation (annular).

$a_2$  Separation between penetration seals.

*The given classification does not cover insulated pipes.*

## List of abbreviations used in Annex 1.1 to

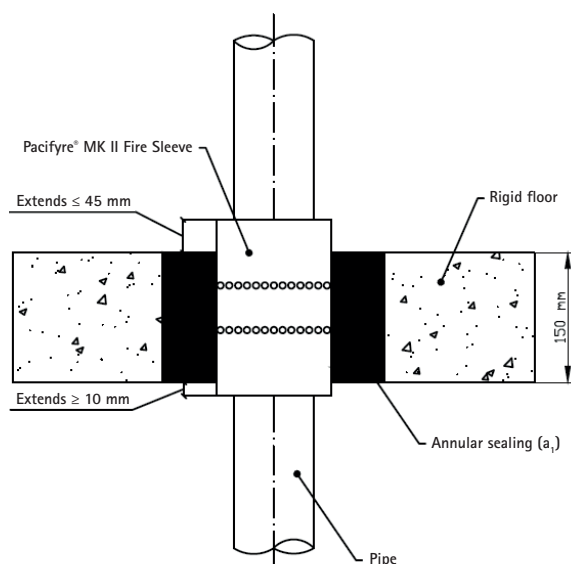
Abbreviation	Explanation
PP	Polypropylene pipes according to EN ISO 1873-1, ÖNORM B 5174 and DIN 8077/8087
PE	Polyethylene pipes (PE 100 / PE 80) according to EN ISO 1872-1, EN 13244, DIN 8074/8075, EN 12201-2, EN 1622, EN ISO 15494 or EN 12201
PVC	Polyvinyl Chloride Pipes (PVC-U) according to EN ISO 1452, EN ISO 15493, DIN 8061/8062, EN ISO 1453, KOMO-BRL 2023, EN 1329-1, EN 1453-2, EN 1452-1 and PVC-C pipes according to EN 1566-1
Durability and serviceability	Use category Type Z <sub>1</sub>
PP-R	PP fiber reinforced pipes like Aquatherm – SDR 7.4 according to ISO 21003
Kit	Pacifyre® A (acrylic), Pacifyre® S (Silicone), Pacifyre® H (Hybrid) or Tangit Fire Protection FP 430 Acrylic provided with a stone wool backfilling
Mortar	Pacifyre® FPM mortar
Gypsum	Gypsum mortar

## ANNEX 1.1

### Pacifyre® MKII Firesleeve used in a rigid floor construction

This annex reports fire resistance classification of Pacifyre® MKII Firesleeve used in a rigid floor construction. It can be applied to a concrete or masonry floor of a thickness of  $\geq 150$  mm and a density of  $\geq 550$  kg/m<sup>3</sup>.

The distance from the floor surface to the nearest support position is  $\leq 400$  mm.



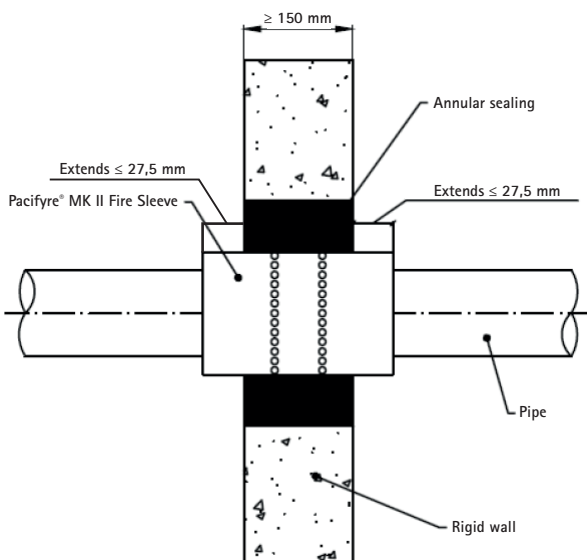
Pipe type	Pipe diameter (mm)	Pipe thickness (mm)	Annular seal	Annular space $a_1$ (mm)	Design group	Separation $a_2$ (mm)	Fire resistance	ETA 17/0163 page:
PVC	32 to 110	1.9/2.2 to 8.1	Mortar	0 – 120	A	$\geq 200$	EI120 / E120 U/C	11
PVC	32 to 110	1.6/2.2 to 8.1	Kit	0 – 35	A	$\geq 200$	EI120 / E120 U/C	16
PVC	125 to 160	2.5/3.2 to 11.8	Mortar	0 – 100	B	$\geq 0$	EI120 / E120 U/C	11
PVC	125 to 160	2.5/3.2	Kit	10 – 30	B	$\geq 200$	EI120 / E120 U/C	16
PVC	125 to 160	2.5/3.2 to 11.8	Kit	10 – 30	B	$\geq 200$	EI90 / E90 U/C	16
PP	32 to 110	2.0/2.7 to 15.1	Mortar	0 – 110	A	$\geq 0$	EI120 / E120 U/C	9
PP	32 to 110	2.0/2.7 to 15.1	Kit	0 – 30	A	$\geq 200$	EI120 / E120 U/C	12
PP	125 to 160	3.1/4.0	Mortar	0 – 110	B	$\geq 200$	EI120 / E120 U/C	9
PP	125 to 160	3.1/4.0 to 14.6	Mortar	0 – 110	B	$\geq 200$	EI60 / E60 U/C	9
PP	125 to 160	3.1/4.0	Kit	5 – 30	B	$\geq 200$	EI60 / E60 U/C	12
PP	125 to 160	3.1/4.0 to 14.6	Kit	5 – 30	B	$\geq 200$	EI45 / E45 U/C	12
PE	32 to 110	2.7 to 15.1	Mortar	0 – 70	A	$\geq 0$	EI120 / E120 U/C	10
PE	32 to 110	2.0/2.7 to 15.1	Mortar	0 – 70	A	$\geq 200$	EI120 / E120 U/C	10
PE	32 to 110	2.0/2.7 to 15.1	Kit	0 – 30	A	$\geq 200$	EI120 / E120 U/C	14
PE	125 to 160	3.1/4.0 to 9.5	Mortar	0 – 110	B	$\geq 200$	EI120 / E120 U/C	10
PE	125 to 160	3.1/4.0 to 14.6	Mortar	0 – 110	B	$\geq 200$	EI60 / E60 U/C	10
PE	125 to 160	3.1/4.0	Kit	10 – 20	B	$\geq 200$	EI90 / E90 U/C	14
PE	125 to 160	3.1/4.0 to 14.6	Kit	10 – 20	B	$\geq 200$	EI60 / E60 U/C	14
ML	32 to 75	3.0 to 7.5	Mortar	0 – 100	A	$\geq 200$	EI120 / E120 U/C	17
ML	32 to 75	3.0 to 7.5	Kit	0 – 30	A	$\geq 200$	EI60 / E120 U/C	18

## ANNEX 1.2

### Pacifyre® MKII Firesleeve used in a rigid wall construction

This annex reports fire resistance classification of Pacifyre® MKII Firesleeve used in a rigid wall construction. It can be applied to a concrete or masonry wall of a thickness  $\geq 150$  mm and a density  $\geq 550$  kg/m<sup>3</sup>.

The distance from the wall surface to the nearest support position is  $\leq 380$  mm.



Pipe type	Pipe diameter (mm)	Pipe thickness (mm)	Annular seal	Annular space $a_1$ (mm)	Design group	Separation $a_2$ (mm)	Fire resistance	ETA 17/0163 page:
PVC	32 to 110	1.9/2.2 to 8.1	Mortar	0 – 100	A	$\geq 200$	EI120 / E120 U/C	22
PVC	125 to 160	2.5/3.2 to 11.8	Mortar	0 – 90	B	$\geq 200$	EI120 / E120 U/C	22
PP	32 to 110	2.0/2.7 to 15.1	Mortar	0 – 100	A	$\geq 0$	EI120 / E120 U/C	20
PP	125 to 160	3.1/4.0	Mortar	0 – 90	B	$\geq 200$	EI120 / E120 U/C	20
PP	125 to 160	3.1/4.0 to 14.6	Mortar	0 – 90	B	$\geq 200$	EI60 / E60 U/C	20
PE	32 to 110	2.0/2.7 to 15.1	Mortar	5 – 95	A	$\geq 0$	EI120 / E120 U/C	21
PE	125 to 160	3.1/4.0 to 9.5	Mortar	5 – 85	B	$\geq 200$	EI120 / E120 U/C	21
PE	125 to 160	3.1/4.0 to 14.6	Mortar	5 – 85	B	$\geq 200$	EI60 / E60 U/C	21
ML	32 to 75	3.0 to 7.5	Mortar	0 – 35	A	$\geq 200$	EI120 / E120 U/C	23
ML	32 to 75	3.0 to 7.5	Kit	8 – 35	A	$\geq 200$	EI120 / E120 U/C	24

## ANNEX 1.3

### Pacifyre® MKII Firesleeve used in a flexible wall construction

This annex reports fire resistance classification of Pacifyre® MKII Firesleeve used in a flexible wall construction. It can be applied to all flexible wall constructions with a 90 minutes fire resistance classification provided.

- The construction is classified in accordance with EN 13501-2.
- The construction has an overall thickness of  $\geq 100$  mm.
- Two layers of gypsum boards, overall board layer thickness of 12.5 mm, are applied on both sides of the construction.
- Flexible walls with timber studs are constructed with two layers of gypsum boards on both sides, no part of the penetration seal is closer than  $\geq 100$  mm to the stud, the cavity is closed between the penetration seal and the stud, and minimum  $\geq 100$  mm of insulation of class A1 or A2 according to EN 13501-1 is provided within the cavity between the penetration seal and the stud.

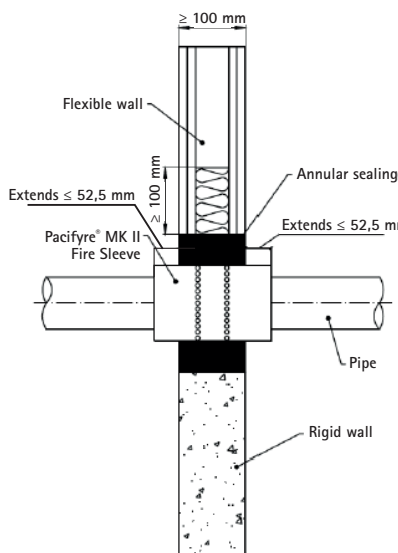
This annex covers applications with or without aperture framing.

This annex does not cover sandwich panel constructions and flexible walls where the lining does not cover the studs on both sides.

This annex may be applied to concrete or masonry elements of an overall thickness  $\geq 100$ .

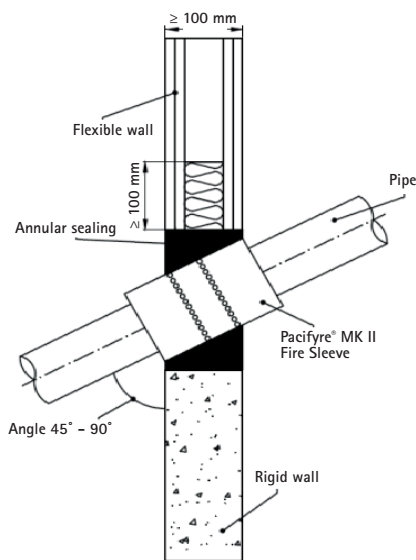
The classification is applicable for pipes installed perpendicular to the penetration seal, when indicated in the tables, for pipes installed between 45° and 90° to the penetration seal in horizontal way.

The distance from the wall surface to the nearest support position is  $\leq 350$  mm.



Pipe type	Pipe diameter (mm)	Pipe thickness (mm)	Annular seal	Annular space $a_1$ (mm)	Design group	Separation $a_2$ (mm)	Fire resistance	ETA 17/0163 page:
PVC	110	5.3/10.0	Kit	0 – 20	A	$\geq 200$	EI90 / E90 U/C	30
PVC	32 to 110	1.6/2.0 to 8.1	Kit	19 – 20	A	$\geq 200$	EI90 / E90 U/C	30
PVC	125 to 160	2.5/3.2 to 11.8	Kit	20 – 21	B	$\geq 200$	EI90 / E90 U/C	30
PVC	125 to 180	2.5/3.6 to 13.3	Kit	20 – 21	B	$\geq 200$	EI60 / E60 U/C	30
PVC	160 to 180	3.2/3.6	Kit	20 – 21	B	$\geq 200$	EI90 / E90 U/C	30
PP-R	110	15.1	Gypsum	10 – 35	A	$\geq 200$	EI90 / E90 U/C	32
PP	32 to 110	2.0 to 2.7	Kit	20 – 21	A	$\geq 0$	EI90 / E90 U/C	26
PP	32 to 110	2.0/2.7 to 10.0	Kit	20	A	$\geq 200$	EI90 / E90 U/C	26
PP	125	3.1	Kit	17-25	B	$\geq 200$	EI 90 / E 90	26
PP	125 to 160	3.1/4.4	Kit	16 – 21	B	$\geq 200$	EI60 / E90 U/C	26
PP	125 to 180	3.1/4.4 to 16.4	Kit	20	B	$\geq 200$	EI60 / E60 U/C	26
PE	32 to 110	2.0 to 2.7	Kit	12 – 26	A	$\geq 0$	EI90 / E90 U/C	28
PE	110	4.2 to 10.0	Kit	0 – 20	A	$\geq 200$	EI120 / E120 U/C	28
PE	32 to 110	2.5/2.7 to 10.0	Kit	12 – 20	A	$\geq 200$	EI90 / E90 U/C	28
PE	125 to 180	3.1/4.4	Kit	20 – 22	B	$\geq 200$	EI90 / E90 U/C	28
PE	125 to 180	3.1/4.4 to 24.6	Kit	20	B	$\geq 200$	EI90 / E90 U/C	28
ML	32	3.0	Kit	19 – 23	A	$\geq 200$	EI90 / E90 U/C	35
ML	32 to 75	3.0 to 7.5	Kit	19 – 23	A	$\geq 200$	EI45 / E90 U/C	35

The classification is applicable for pipes installed perpendicular to the penetration seal, when indicated in the tables, for pipes installed between 45° and 90° to the penetration seal in horizontal way.



Pipe type	Pipe diameter (mm)	Pipe thickness (mm)	Annular seal	Annular space $a_1$ (mm)	Design group	Separation $a_2$ (mm)	Fire resistance	ETA 17/0163 page:
PVC	110	8.1	Gypsum	18 – 20	A	$\geq 200$	EI90 / E90 U/C	34
PE	110	2.7	Gypsum	10 – 30	A	$\geq 200$	EI90 / E90 U/C	33