DECLARATION OF PERFORMANCE

Nr: DoP 2/2019

1. Unique identification code of product-type:

INTU FR COLLAR

2. Intended uses:

Fireproof sealing of installation penetrations of plastic pipes

3. Manufacturer:

INTUSEAL Sp. z o.o.
ul. Kineskopowa 1, 05-500 Piaseczno

4. Authorized representative:

Not applicable

5. System or systems of Assessment and Verification of Constancy of Performance (AVCP):

System 1

6a.	Harmonised standard:	**Not applicable**
	Notified body or bodies:	**Not applicable**
6b.	European Assessment Document:	**EAD 350454-00-1104**
	European Technical Assessment:	**ETA-19/0844 of 05/08/2020**
	Technical Assessment Body:	**ITB, ul. Filtrowa 1, 00-611 Warszawa**
	Notified body or bodies:	**Nr 1488**

7. Declared performance:

Table 1.

Intended use: Sealing of installation passages	
Basic requirements	Performance characteristics
BWR 1 Mechanical resistance and stability	
-	Not applicable
BWR 2 Safety in case to fire	
Reaction to fire	Class E
Resistance to fire	According to the Annex A – DoP 2/2019
BWR 3 Hygiene, heath and the environment	
Air permeability	NPD
Water permeability	NPD
Content, emission, release of dangerous substances	No release of dangerous substances
BWR 4 Safety and accessibility in use	
Mechanical resistance and stability	NPD
Resistance to impact/movement	NPD
Adhesion	NPD
BWR 5 Protection against noise	
Aireborne sound insulation	NPD
BWR 6 Energy economy and heat retention	
Thermal properties	NPD
Water vapour permeability	NPD
Use category	
Use category	Z_2

8. Appropriate technical documentation or special technical documentation:

Not applicable

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:
Name: Michał Szyjkowski
Position: Vice-President of the Management Board

INTUSEAL Sp. z o.o.
V-ce Prezes Zarządu

Michał Szyjkowski

Signature

Piaseczno, 15.06.2022
Place, date

Annex A - Classification in terms of fire resistance

Fire resistance class of PE-HD, PE, ABS or SAN + PVC pipes penetration seal in flexible or rigid wall thickness of: 100 mm ≤ t < 125 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	2,0	–	30 x 4,0	EI 120 – U/C EI 120 – C/C EI 120 – C/C
	2,1 – 6,8	–	30 x 6,0	EI 60 / E 90 – U/C EI 60 / E 90 – C/C EI 60 / E 90 – C/C
32 < D ≤ 40	2,2 – 6,8	–	30 x 6,0	EI 60 / E 90 – U/C EI 60 / E 90 – C/C EI 60 / E 90 – C/C
40 < D ≤ 50	2,5 – 6,8	–	30 x 6,0	EI 60 / E 90 – U/C EI 60 / E 90 – C/C EI 60 / E 90 – C/C
50 < D ≤ 55	2,6 – 6,8	–	30 x 6,0	EI 60 / E 90 – U/C EI 60 / E 90 – C/C EI 60 / E 90 – C/C
55 < D ≤ 63	2,8 – 6,8	–	30 x 6,0	EI 60 / E 90 – U/C EI 60 / E 90 – C/C EI 60 / E 90 – C/C
63 < D ≤ 75	3,0 – 6,8	–	30 x 6,0	EI 60 / E 90 – U/C EI 60 / E 90 – C/C EI 60 / E 90 – C/C
75 < D ≤ 90	3,6 – 8,2	–	30 x 8,0	EI 60 – U/C EI 60 – C/C EI 60 – C/C
90 < D ≤ 110	4,2 – 10,0	–	30 x 10,0	EI 60 – U/C EI 60 – C/C EI 60 – C/C
110 < D ≤ 125	4,8 – 9,9	–	40 x 14,0	EI 60 – U/C EI 60 – C/C EI 60 – C/C
125 < D ≤ 160	6,2 – 9,5	–	40 x 18,0	EI 60 – U/C EI 60 – C/C EI 60 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP pipes penetration seal in flexible or rigid wall thickness of: 100 mm ≤ t < 125 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8	–	30 x 4,0	**EI 90 – U/C** **EI 90 – C/C**
	1,9 – 12,5	–	30 x 6,0	**EI 60 – U/C** **EI 60 – C/C**
32 < D ≤ 40	1,8	–	30 x 4,0	**EI 90 – U/C** **EI 90 – C/C**
	1,9 – 12,5	–	30 x 6,0	**EI 60 – U/C** **EI 60 – C/C**
40 < D ≤ 50	1,8	–	30 x 4,0	**EI 90 – U/C** **EI 90 – C/C**
	1,9 – 12,5	–	30 x 6,0	**EI 60 – U/C** **EI 60 – C/C**
50 < D ≤ 55	1,9 – 12,5	–	30 x 6,0	**EI 60 – U/C** **EI 60 – C/C**
55 < D ≤ 63	1,9 – 12,5	–	30 x 6,0	**EI 60 – U/C** **EI 60 – C/C**
63 < D ≤ 75	1,9 – 12,5	–	30 x 6,0	**EI 60 – U/C** **EI 60 – C/C**
75 < D ≤ 90	2,3 – 15,1	–	30 x 8,0	**EI 60 – U/C** **EI 60 – C/C**
90 < D ≤ 110	2,7 – 18,4	–	30 x 10,0	**EI 60 – U/C** **EI 60 – C/C**
110 < D ≤ 125	4,1 – 15,1	–	40 x 14,0	**EI 60 – U/C** **EI 60 – C/C**
125 < D ≤ 160	7,3	–	40 x 18,0	**EI 60 – U/C** **EI 60 – C/C**

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PVC-U or PVC-C pipes penetration seal in flexible or rigid wall thickness of: 100 mm ≤ t < 125 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
	1,9 – 3,6	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
32 < D ≤ 40	1,8	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
	1,9 – 3,6	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
40 < D ≤ 50	1,8	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
	1,9 – 3,6	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
50 < D ≤ 55	1,9 – 3,5	–	30 x 6,0	EI 90 – U/C EI 90 – C/C
	3,6	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
55 < D ≤ 63	1,9 – 3,5	–	30 x 6,0	EI 90 – U/C EI 90 – C/C
	3,6	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
63 < D ≤ 75	1,9 – 3,5	–	30 x 6,0	EI 90 – U/C EI 90 – C/C
	3,6	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
75 < D ≤ 90	2,1 – 2,2	–	30 x 8,0	EI 90 – U/C EI 90 – C/C
	2,3 – 3,9	–	30 x 8,0	EI 60 – U/C EI 60 – C/C
90 < D ≤ 110	2,2	–	30 x 10,0	EI 90 – U/C EI 90 – C/C
	2,3 – 4,2	–	30 x 10,0	EI 60 – U/C EI 60 – C/C
110 < D ≤ 125	2,5 – 3,2	–	40 x 14,0	EI 90 – U/C EI 90 – C/C
125 < D ≤ 160	3,2 – 6,2	–	40 x 18,0	EI 90 – U/C EI 90 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PE-HD, PE, ABS or SAN + PVC pipes penetration seal in flexible or rigid wall thickness of: 125 mm ≤ t < 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	2,0 – 4,6	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
32 < D ≤ 40	2,2 – 6,8	–	30 x 6,0	**EI 90 – U/C** **EI 90 – C/C**
40 < D ≤ 50	2,5 – 6,8	–	30 x 6,0	**EI 90 – U/C** **EI 90 – C/C**
50 < D ≤ 55	2,6 – 6,8	–	30 x 6,0	**EI 90 – U/C** **EI 90 – C/C**
55 < D ≤ 63	2,8 – 6,8	–	30 x 6,0	**EI 90 – U/C** **EI 90 – C/C**
63 < D ≤ 75	3,0 – 6,8	–	30 x 6,0	**EI 90 – U/C** **EI 90 – C/C**
75 < D ≤ 90	3,6 – 4,2	–	30 x 8,0	**EI 90 – U/C** **EI 90 – C/C**
	4,3 – 8,2	–	30 x 8,0	**EI 60 – U/C** **EI 60 – C/C**
90 < D ≤ 110	4,2	–	30 x 10,0	**EI 90 – U/C** **EI 90 – C/C**
	4,3 – 10,0	–	30 x 10,0	**EI 60 – U/C** **EI 60 – C/C**
110 < D ≤ 125	4,8 – 9,9	–	40 x 14,0	**EI 60 – U/C** **EI 60 – C/C**
125 < D ≤ 160	6,2	–	40 x 18,0	**EI 120 – U/C** **EI 120 – C/C**
	6,3 – 9,5	–	40 x 18,0	**EI 60 – U/C** **EI 60 – C/C**

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP pipes penetration seal in flexible or rigid wall thickness of: 125 mm ≤ t < 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8 – 8,3	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
32 < D ≤ 40	1,8 – 8,3	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
40 < D ≤ 50	1,8 – 8,3	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
50 < D ≤ 55	1,9 – 12,5	–	30 x 6,0	**EI 120 – U/C** **EI 120 – C/C**
55 < D ≤ 63	1,9 – 12,5	–	30 x 6,0	**EI 120 – U/C** **EI 120 – C/C**
63 < D ≤ 75	1,9 – 12,5	–	30 x 6,0	**EI 120 – U/C** **EI 120 – C/C**
75 < D ≤ 90	2,3 – 8,3	–	30 x 8,0	**EI 120 – U/C** **EI 120 – C/C**
	8,4 – 15,1	–	30 x 8,0	**EI 90 / E 120 – U/C** **EI 90 / E 120 – C/C**
90 < D ≤ 110	2,7	–	30 x 10,0	**EI 120 – U/C** **EI 120 – C/C**
	2,8 – 18,4	–	30 x 10,0	**EI 90 / E 120 – U/C** **EI 90 / E 120 – C/C**
110 < D ≤ 125	4,1 – 15,1	–	40 x 14,0	**EI 60 / E 90 – U/C** **EI 60 / E 90 – C/C**
125 < D ≤ 160	7,3	–	40 x 18,0	**EI 60 / E 90 – U/C** **EI 60 / E 90 – C/C**

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PVC-U or PVC-C pipes penetration seal in flexible or rigid wall thickness of: 125 mm ≤ t < 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8 – 3,6	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
32 < D ≤ 40	1,8 – 3,6	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
40 < D ≤ 50	1,8 – 3,6	–	30 x 4,0	**EI 120 – U/C** **EI 120 – C/C**
50 < D ≤ 55	1,9 – 3,6	–	30 x 6,0	**EI 120 – U/C** **EI 120 – C/C**
55 < D ≤ 63	1,9 – 3,6	–	30 x 6,0	**EI 120 – U/C** **EI 120 – C/C**
63 < D ≤ 75	1,9 – 3,6	–	30 x 6,0	**EI 120 – U/C** **EI 120 – C/C**
75 < D ≤ 90	2,1 – 3,9	–	30 x 8,0	**EI 120 – U/C** **EI 120 – C/C**
90 < D ≤ 110	2,2 – 4,2	–	30 x 10,0	**EI 120 – U/C** **EI 120 – C/C**
110 < D ≤ 125	2,5 – 3,9	–	40 x 14,0	**EI 120 – U/C** **EI 120 – C/C**
	4,0 – 4,8	–	40 x 14,0	**EI 90 / E 120 – U/C** **EI 90 / E 120 – C/C**
125 < D ≤ 160	3,2	–	40 x 18,0	**EI 120 – U/C** **EI 120 – C/C**
	3,3 – 6,2	–	40 x 18,0	**EI 90 / E 120 – U/C** **EI 90 / E 120 – C/C**

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PE-HD, PE, ABS or SAN + PVC pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	2,0	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
	2,1 – 4,8	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
32 < D ≤ 40	2,5 – 4,8	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
40 < D ≤ 50	3,0 – 4,8	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
50 < D ≤ 55	3,0 – 3,5	–	30 x 6,0	EI 90 – U/C EI 90 – C/C
	3,6	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	3,7 – 6,8	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
55 < D ≤ 63	3,0 – 3,5	–	30 x 6,0	EI 90 – U/C EI 90 – C/C
	3,6	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	3,7 – 6,8	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
63 < D ≤ 75	3,0 – 3,5	–	30 x 6,0	EI 90 – U/C EI 90 – C/C
	3,6	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	3,7 – 6,8	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
75 < D ≤ 90	3,6 – 3,8	–	30 x 8,0	EI 90 – U/C EI 90 – C/C
	3,9 – 8,2	–	30 x 8,0	EI 120 – U/C EI 120 – C/C
90 < D ≤ 110	4,2 – 9,9	–	30 x 10,0	EI 120 – U/C EI 120 – C/C
	10,0	–	30 x 10,0	EI 240 – U/C EI 240 – C/C
110 < D ≤ 125	4,8 – 6,1	–	40 x 14,0	EI 90 – U/C EI 90 – C/C
	6,2 – 9,0	–	40 x 14,0	EI 120 – U/C EI 120 – C/C
125 < D ≤ 160	6,2 – 9,4	–	40 x 18,0	EI 120 – U/C EI 120 – C/C
	9,5	–	40 x 18,0	EI 180 – U/C EI 180 – C/C
160 < D ≤ 170	6,6 – 9,1	–	50 x 20,0	EI 60 – U/C EI 60 – C/C
170 < D ≤ 185	7,2 – 8,4	–	50 x 20,0	EI 60 – U/C EI 60 – C/C
185 < D ≤ 200	7,7	–	50 x 20,0	EI 60 – U/C EI 60 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
	1,9 – 8,3	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
32 < D ≤ 40	1,8	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
	1,9 – 8,3	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
40 < D ≤ 50	1,8	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
	1,9 – 8,3	–	30 x 4,0	EI 120 – U/C EI 120 – C/C
50 < D ≤ 55	1,9 – 12,5	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
55 < D ≤ 63	1,9 – 12,5	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
63 < D ≤ 75	1,9 – 12,5	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
75 < D ≤ 90	2,3 – 15,1	–	30 x 8,0	EI 120 – U/C EI 120 – C/C
90 < D ≤ 110	2,7 – 18,3	–	30 x 10,0	EI 120 – U/C EI 120 – C/C
	18,4	–	30 x 10,0	EI 240 – U/C EI 240 – C/C
110 < D ≤ 125	3,8 – 14,8	–	40 x 14,0	EI 120 – U/C EI 120 – C/C
	14,9 – 15,2	–	40 x 14,0	EI 60 – U/C EI 60 – C/C
125 < D ≤ 160	6,2	–	40 x 18,0	EI 180 – U/C EI 180 – C/C
	6,3 – 7,7	–	40 x 18,0	EI 60 – U/C EI 60 – C/C
160 < D ≤ 170	6,6 – 7,6	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
	7,7	–	60 x 20,0	EI 180 – U/C EI 180 – C/C
170 < D ≤ 185	7,2 – 7,6	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
	7,7	–	60 x 20,0	EI 180 – U/C EI 180 – C/C
185 < D ≤ 200	7,7	–	60 x 20,0	EI 180 – U/C EI 180 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range

Fire resistance class of PVC-U or PVC-C pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8 – 3,6	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
32 < D ≤ 40	1,8 – 3,6	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
40 < D ≤ 50	1,8 – 3,6	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
50 < D ≤ 55	1,9 – 3,6	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
55 < D ≤ 63	1,9 – 3,6	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
63 < D ≤ 75	1,9 – 3,6	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
75 < D ≤ 90	2,1 – 3,9	–	30 x 8,0	EI 180 – U/C EI 180 – C/C
90 < D ≤ 110	2,2	–	30 x 10,0	EI 240 – U/C EI 240 – C/C
	2,3 – 4,2	–	30 x 10,0	EI 180 – U/C EI 180 – C/C
110 < D ≤ 125	2,5 – 4,8	–	40 x 14,0	EI 120 – U/C EI 120 – C/C
125 < D ≤ 160	3,2	–	40 x 18,0	EI 240 – U/C EI 240 – C/C
	3,3 – 6,2	–	40 x 18,0	EI 120 / E 180 – U/C EI 120 / E 180 – C/C
160 < D ≤ 170	3,4 – 5,4	–	50 x 20,0	EI 90 – U/C EI 90 – C/C
	5,5	–	50 x 20,0	EI 180 / E 240 – U/C EI 180 / E 240 – C/C
	5,6 – 7,7	–	60 x 20,0	EI 180 – U/C EI 180 – C/C
170 < D ≤ 185	3,7 – 5,4	–	50 x 20,0	EI 90 – U/C EI 90 – C/C
	5,5	–	50 x 20,0	EI 180 / E 240 – U/C EI 180 / E 240 – C/C
	5,6 – 7,7	–	60 x 20,0	EI 180 – U/C EI 180 – C/C
185 < D ≤ 200	3,9 – 5,4	–	50 x 20,0	EI 90 – U/C EI 90 – C/C
	5,5	–	50 x 20,0	EI 180 / E 240 – U/C EI 180 / E 240 – C/C
	5,6 – 7,7	–	60 x 20,0	EI 180 – U/C EI 180 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PVC-U or PVC-C pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
200 < D ≤ 225	4,8 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
225 < D ≤ 250	5,7 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
250 < D ≤ 275	6,6 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
275 < D ≤ 300	7,5 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
300 < D ≤ 315	8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PE-RT pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	2,0	–	30 x 4,0	EI 240 – U/C EI 240 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PE-X pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	2,0	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
D ≤ 20	2,1 – 7,5	–	30 x 6,0	EI 120 / E 240 – U/C EI 120 / E 240 – C/C
20 < D ≤ 75	7,5	–	30 x 6,0	EI 120 / E 240 – U/C EI 120 / E 240 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP-R/Al/PP-R pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	3,4	–	30 x 4,0	EI 180 / E 240 – U/C EI 180 / E 240 – C/C
	3,5 – 18,3	–	30 x 10,0	EI 90 / E 180 – U/C EI 90 / E 180 – C/C
20 < D ≤ 110	18,3	–	30 x 10,0	EI 90 / E 180 – U/C EI 90 / E 180 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP-R/PP-R-GF/PP-R pipes penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	3,4	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
	3,5 – 18,3	–	30 x 10,0	EI 90 / E 120 – U/C EI 90 / E 120 – C/C
20 < D ≤ 110	18,3	–	30 x 10,0	EI 90 / E 120 – U/C EI 90 / E 120 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of bundle of max. 3 plastic pipes (max. 3 x PE, D ≤ 32 mm x t = 2,0 mm) penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR with intumescent material width x thickness 30 x 4,0 mm

Fire resistance: EI 240 – C/U EI 240 – C/C

Fire resistance class of bundle of max. 3 plastic pipes (max. 3 x PE-HD, PE, ABS or SAN + PVC, D ≤ 32 mm x t = 2,0 mm) penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR with intumescent material width x thickness 30 x 4,0 mm

Fire resistance: EI 120 / E 180 – C/U EI 120 / E 180 – C/C

Fire resistance class of bundle of max. 3 plastic pipes (max. 2 x PE-HD, PE, ABS or SAN + PVC, D ≤ 32 mm x t = 2,0 mm + max. 1 x PVC-U or PVC-C, D ≤ 50 mm x t = 1,8 mm) penetration seal in rigid wall thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Fire resistance: EI 120 – C/U EI 120 – C/C

Fire resistance class of PE-HD, PE, ABS or SAN + PVC pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8 – 4,8	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
32 < D ≤ 40	2,4 – 4,8	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
40 < D ≤ 50	3,0 – 4,8	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
50 < D ≤ 55	2,8 – 3,5	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
	3,6	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	3,7 – 6,8	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
55 < D ≤ 63	3,1 – 3,5	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
	3,6	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	3,7 – 6,8	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
63 < D ≤ 75	3,6	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	3,7 – 6,8	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
75 < D ≤ 90	3,9 – 8,2	–	30 x 8,0	EI 120 – U/C EI 120 – C/C
90 < D ≤ 110	4,2 – 10,0	–	30 x 10,0	EI 120 – U/C EI 120 – C/C
110 < D ≤ 125	4,8 –9,9	–	40 x 14,0	EI 120 – U/C EI 120 – C/C
125 < D ≤ 160	6,2 – 9,4	–	40 x 18,0	EI 120 – U/C EI 120 – C/C
	9,5	–	40 x 18,0	EI 180 / E 240 – U/C EI 180 / E 240 – C/C
160 < D ≤ 170	6,6 – 9,1	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
	9,2 – 11,0	–	60 x 20.0	EI 90 – U/C EI 90 – C/C
	11,1 – 11,3	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
170 < D ≤ 185	7,2 – 8,4	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
	8,5 – 11,0	–	60 x 20.0	EI 90 – U/C EI 90 – C/C
	11,1 – 11,3	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
185 < D ≤ 200	7,7	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
	7,8 – 11,0	–	60 x 20,0	EI 90 – U/C EI 90 – C/C
	11,1 – 11,3	–	60 x 20,0	EI 60 – U/C EI 60 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8 – 8,3	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
32 < D ≤ 40	1,8 – 8,3	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
40 < D ≤ 50	1,8 – 8,3	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
50 < D ≤ 55	1,9	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
	2,0 – 12,5	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
55 < D ≤ 63	1,9	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
	2,0 – 12,5	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
63 < D ≤ 75	1,9	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
	2,0 – 12,5	–	30 x 6,0	EI 120 – U/C EI 120 – C/C
75 < D ≤ 90	2,3 – 15,1	–	30 x 8,0	EI 120 – U/C EI 120 – C/C
90 < D ≤ 110	2,7	–	30 x 10,0	EI 180 – U/C EI 180 – C/C
	2,8 –18,4	–	30 x 10,0	EI 120 – U/C EI 120 – C/C
110 < D ≤ 125	3,8 – 15,1	–	40 x 14,0	EI 120 – U/C EI 120 – C/C
125 < D ≤ 160	6,2 – 7,3	–	40 x 18,0	EI 120 – U/C EI 120 – C/C
160 < D ≤ 170	6,3 – 6,5	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
	6,6 – 7,4	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
170 < D ≤ 185	6,3 – 7,1	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
	7,2 – 7,6	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
185 < D ≤ 200	6,3 – 7,6	–	60 x 20,0	EI 60 – U/C EI 60 – C/C
	7,7	–	60 x 20,0	EI 120 – U/C EI 120 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PVC-U or PVC-C pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 32	1,8 – 2,5	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
32 < D ≤ 40	1,8 – 2,5	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
40 < D ≤ 50	1,8 – 2,5	–	30 x 4,0	EI 240 – U/C EI 240 – C/C
50 < D ≤ 55	1,9	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	2,0 – 3,6	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
55 < D ≤ 63	1,9	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	2,0 – 3,6	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
63 < D ≤ 75	1,9	–	30 x 6,0	EI 240 – U/C EI 240 – C/C
	2,0 – 3,6	–	30 x 6,0	EI 180 – U/C EI 180 – C/C
75 < D ≤ 90	2,1 – 3,1	–	30 x 8,0	EI 120 – U/C EI 120 – C/C
	3,2 – 4,2	–	30 x 8,0	EI 180 – U/C EI 180 – C/C
90 < D ≤ 110	2,1 – 3,1	–	30 x 10,0	EI 120 – U/C EI 120 – C/C
	3,2 – 4,2	–	30 x 10,0	EI 180 – U/C EI 180 – C/C
110 < D ≤ 125	2,5 – 3,1	–	40 x 14,0	EI 120 – U/C EI 120 – C/C
	3,2 – 7,7	–	40 x 14,0	EI 240 – U/C EI 240 – C/C
125 < D ≤ 160	3,2 – 7,7	–	40 x 18,0	EI 240 – U/C EI 240 – C/C
160 < D ≤ 170	3,4 – 7,7	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
170 < D ≤ 185	3,7 – 7,7	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
185 < D ≤ 200	3,9 – 7,7	–	60 x 20,0	EI 120 – U/C EI 120 – C/C
200 < D ≤ 225	4,8 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
	8,1 – 12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C
225 < D ≤ 250	5,7 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
	8,1 – 12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PVC-U or PVC-C pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
250 < D ≤ 275	6,6 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
	8,1 – 12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C
275 < D ≤ 300	7,5 – 8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
	8,1 – 12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C
300 < D ≤ 315	8,0	–	(2 x 75) x 30,0	EI 120 – U/C EI 120 – C/C
	8,1 – 12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C
315 < D ≤ 325	9,1 – 12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C
325 < D ≤ 355	12,1	–	(2 x 75) x 30,0	EI 90 – U/C EI 90 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PE-RT/Al/PE-RT pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	2,0	–	30 x 4,0	EI 240 – U/C EI 240 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PE-X/Al/PE-X pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	2,0	–	30 x 4,0	EI 240 – U/C EI 240 – C/C

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.

Fire resistance class of PP-R/Al/PP-R pipes penetration seal in rigid floor thickness of: t ≥ 150 mm, made with use of INTU FR COLLAR

Pipe thickness (mm)	Pipe wall thickness (mm)	Insulation thickness (mm)	Intumescent insert size (widthxthickness) (mm)]	Fire resistance
D ≤ 20	3,4	–	30 x 4,0	**EI 240 – U/C** **EI 240 – C/C**
	3,5 – 18,3	–	30 x 10,0	**EI 120 – U/C** **EI 120 – C/C**
20 < D ≤ 110	18,3	–	30 x 10,0	**EI 120 – U/C** **EI 120 – C/C**

Classifications given above for specific intumescent material dimensions are also valid for pipes with smaller pipe diameter and the same pipe wall thickness range.