

# INTU FR WRAP

*Intumescent pipe wrap*

TDS TECHNICAL DATA SHEET



CE

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### ➔ PRODUCT DESCRIPTION

The firestop wrap **INTU FR WRAP** is made of a graphite-based material which swells during a fire, preventing the spread of fire and creating a barrier that ensures the partition maintains tightness and insulation up to EI 240.

### ➔ APPLICATION

The **INTU FR WRAP** band is used for fire protection of plastic, composite and multilayer composite pipes passing through fire separation partitions individually or in bundles, as well as flammable and non-flammable pipes in insulation.

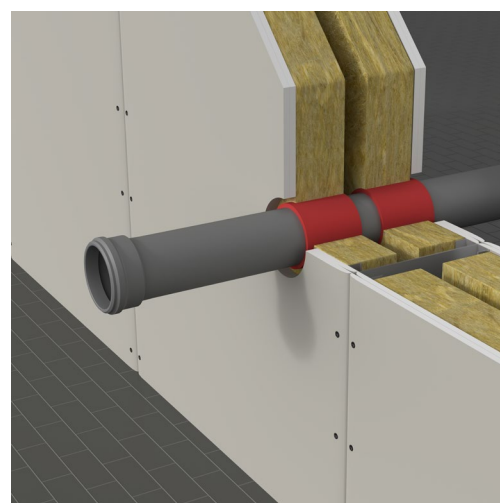
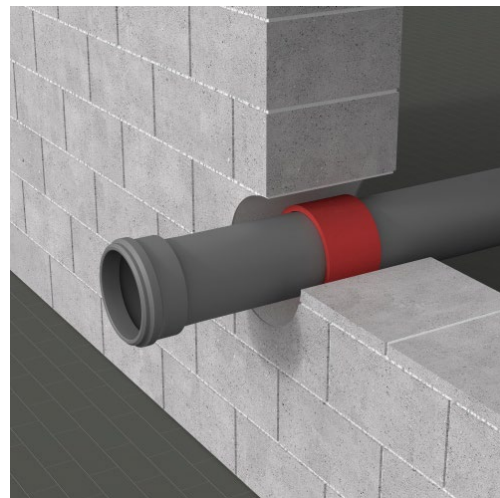
<b>Flexible walls:</b>	The wall must be 100 mm minimum thickness. Must have steel profile structure covered on both sides with minimum 2 layers of boards with thickness 12,5 mm.
<b>Rigid walls:</b>	The wall must be 150 mm minimum thickness. Must have concrete, cellular concrete or masonry structure, with minimum density 450 kg/m <sup>3</sup> .
<b>Rigid floors:</b>	The floor must be 150 mm minimum thickness. Must have concrete, cellular concrete or masonry structure, with minimum density 550 kg/m <sup>3</sup> .

### ➔ AVAILABILITY

Product	Type	Box	Article no.
INTU FR WRAP	32mm	50	INWR32
	40mm	50	INWR40
	55mm	50	INWR55
	63mm	50	INWR63
	75mm	50	INWR75
	82mm	50	INWR82
	110mm	50	INWR110
	125mm	40	INWR125
	160mm	20	INWR160
200mm	20	INWR200	

### ➔ TRANSPORT AND STORAGE

It is recommended to store in dry internal conditions at temperatures between + 5°C and + 35°C.



### ➔ COMPLIANCE:

- Test standard:  
**EN 1366-3 / EAD 350454-00-1104**
- European Technical Assessment:  
**ETA 18/0593 of 31/12/2018**
- Declaration of Performance:  
**DoP 1/2019**
- Certificate of Constancy of Performance  
**1488-CPR-0722/W**



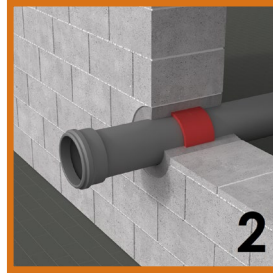
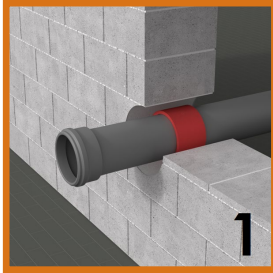
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#### ➔ INSTALLATION METHOD



1. Wrap the pipe. Slide the INTU FR WRAP into the partition.

2. Fill the gap with cement mortar.

#### ➔ TECHNICAL DATA

Table 1 Product specification

WRAP type	Insert dimensions		Number of intumescent insert in one INTU FR WRAP [pcs.]
	Thickness [mm]	Width [mm]	
32mm	2,0	60	1
40mm	2,0	60	1
55mm	2,0	60	1
63mm	2,0	60	1
75mm	2,0	60	1
82mm	2 x 2,0	60	2
110mm	2 x 2,0	60	2
125mm	4 x 2,0	100	4
160mm	5 x 2,0	100	5
200mm	8 x 2,0	100	8

#### ➔ FIRE RESISTANCE CLASSIFICATION

Table 2 Fire resistance class. penetration seal for PP pipes

Pipe material: PP					
INTU FR WRAP type	Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE* <sup>1</sup> / RIGID WALL
			EI classification		
			U/C or C/C configuration		
32 mm	Ø ≤ 32	1,8	240	240	120
		1,9 - 12,5	180	-	-
		12,6 - 18,4			
40 mm	32 < Ø ≤ 40	1,8	240	240	120
		1,9 - 12,5	180	-	-
		12,6 - 18,4			
50 mm	40 < Ø ≤ 50	1,8	240	240	120
		1,9 - 12,5	180	-	-
		12,6 - 18,4			

\*1 For flexible wall use INTU FR WRAP L in two rows according with SOLUTION DETAILS below

Table 3 Fire resistance class. penetration seal for PE-RT, PE-RT/AI/PE-RT, PE-X

Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR
		EI classification	
		U/C or C/C configuration	
Pipe material: PE-RT			
Ø ≤ 20	2,0	240	-
Pipe material: PE-RT/AI/PE-RT			
Ø ≤ 20	2,0	240	240
	2,1-7,5		180
20 < Ø ≤ 75	7,5		
Pipe material: PE-X			
Ø ≤ 20	2,0	240	-

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Table 2, Cont. Fire resistance class. penetration seal for PP pipes

Pipe material: PP								
INTU FR WRAP type	Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE*1 / RIGID WALL			
						EI classification		
						U/C or C/C configuration		
55 mm	50 < Ø ≤ 55	1,9 - 12,5	180	240	120			
		12,6 - 18,4		-	-			
63 mm	55 < Ø ≤ 63	1,9 - 12,5	180	240	120			
		12,6 - 18,4		-	-			
75 mm	63 < Ø ≤ 75	1,9 - 12,5	180	240	120			
		12,6 - 18,4		-	-			
82 mm	75 < Ø ≤ 82	2,3 - 8,3	180	240	120			
		8,4 - 18,4		-	90			
110 mm	82 < Ø ≤ 110	2,7	180	240	120			
		2,8 - 18,4		-	90			
125 mm	110 < Ø ≤ 125	3,6 - 3,7	-	45	-			
		3,8 - 14,8	60	90				
		14,9 - 16,7		45				
160 mm	125 < Ø ≤ 160	5,5 - 6,1	60	90	-			
		6,2		90				
200 mm	160 < Ø ≤ 200	7,7	60	45	-			

\*1 For flexible wall use INTU FR WRAP L in two rows according with SOLUTION DETAILS below

Table 5 Fire resistance classification penetration seal for PE-HD, PE, ABS or SAN+PVC pipes

Pipe material: PE-HD, PE, ABS or SAN+PVC								
INTU FR WRAP type	Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE*1 / RIGID WALL			
						EI classification		
						U/C or C/C configuration		
32 mm	Ø ≤ 32	2,0 - 3,0	240	240	120			
		3,1 - 6,8		-	-			
		6,9 - 10,0		120	-			
40 mm	32 < Ø ≤ 40	2,2	-	-	120			
		2,3 - 3,0	120	240	90			
		3,1 - 6,7		240	-			
		6,8	120	-	-			
50 mm	40 < Ø ≤ 50	2,5	-	-	120			
		2,6 - 3,0	120	240	90			
		3,1 - 6,7		240	-			
		6,8	120	-	-			
50 mm	40 < Ø ≤ 50	6,9 - 10,0	120	-	-			

\*1 For flexible wall use INTU FR WRAP L in two rows according with SOLUTION DETAILS below

Table 4 Fire resistance class. penetration seal for PE-X/Al/PE-X, PP-R, PP-R/Al/PP-R, PP-R/PP-R-GF/PP-R

Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR
		EI classification	
		U/C or C/C configuration	
Pipe material: PE-X/Al/PE-X			
Ø ≤ 75	2,0 - 7,4	-	240
	7,5	120	
20 < Ø ≤ 75	7,5	-	-
Pipe material: PP-R			
Ø ≤ 20	3,4	240	-
Pipe material: PP-R/Al/PP-R			
Ø ≤ 20	3,4 - 12,4	-	240
	12,6 - 18,4		-
20 < Ø ≤ 75	12,5	-	240
	12,6 - 18,4		-
20 < Ø ≤ 110	18,3	240	-
	18,4	-	240
PP-R/PP-R-GF/PP-R			
Ø ≤ 20	2,8 - 12,5	-	240
20 < Ø ≤ 75	12,5		-
Ø ≤ 110	12,5	-	-
	12,6 - 18,2		-
	18,3		180
	18,4		-

Table 6 Fire resistance classification penetration seal for PVC-U or PVC-C pipes

Pipe material: PVC-U or PVC-C								
INTU FR WRAP type	Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE*1 / RIGID WALL			
						EI classification		
						U/C or C/C configuration		
32 mm	Ø ≤ 32	1,8 - 3,6	240	240	120			
		3,7 - 4,2	180	-	-			
40 mm	32 < Ø ≤ 40	1,8 - 3,6	240	240	120			
		3,7 - 4,2	180	-	-			
50 mm	40 < Ø ≤ 50	1,8 - 3,6	240	240	120			
		3,7 - 4,2	180	-	-			
55 mm	50 < Ø ≤ 55	1,9 - 3,5	240	240	120			
		3,6		-	-			
55 mm	50 < Ø ≤ 55	3,7 - 4,2	180	240	-			
		1,9 - 3,5		240	120			
63 mm	55 < Ø ≤ 63	3,6	240	240	120			
		3,7 - 4,2		180	-			

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Table 5, Cont. Fire resistance classification penetration seal for PE-HD, PE, ABS or SAN+PVC pipes

Pipe material: PE-HD, PE, ABS or SAN+PVC					
INTU FR WRAP type	Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE* <sup>1</sup> / RIGID WALL
			EI classification		
			U/C or C/C configuration		
55 mm	50 < Ø ≤ 55	2,6	-	240	120
		2,7 - 3,0	120		
		3,1 - 6,7			
		6,8	240	90	
		6,9 - 10,0	120	-	-
63 mm	55 < Ø ≤ 63	2,8	-	240	120
		2,9 - 3,0	120		
		3,1 - 6,7			
		6,8	240	90	
		6,9 - 10,0	120	-	-
75 mm	63 < Ø ≤ 75	3,0	-	240	90
		3,1 - 3,2	120		
		3,3 - 6,7			
		6,8	240	-	-
		6,9 - 10,0	120	-	-
82 mm	75 < Ø ≤ 82	3,6	-	240	120
		3,7 - 5,7	120	120	
		5,8 - 10,0		-	
110 mm	82 < Ø ≤ 110	4,2 - 5,6	120	240	120
		5,7		240	
		5,8 - 10,0		120	
		240			
125 mm	110 < Ø ≤ 125	4,8 - 5,8	120	120	-
		5,9 - 6,2			
		6,3 - 9,4			
		9,5		-	
		9,6 - 9,9		-	
160 mm	125 < Ø ≤ 160	6,2 - 9,4	120	240	-
		9,5	180		
200 mm	160 < Ø ≤ 200	6,6 - 7,7	90	90	-
		7,8 - 11,9	60		

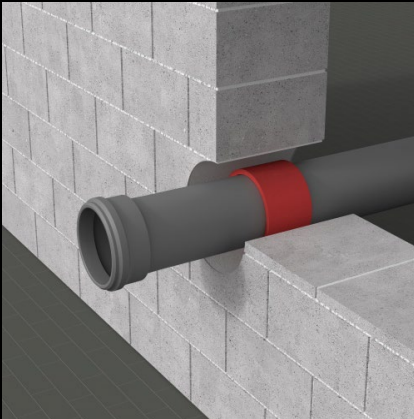
Table 6, Cont. Fire resistance classification penetration seal for PVC-U or PVC-C pipes

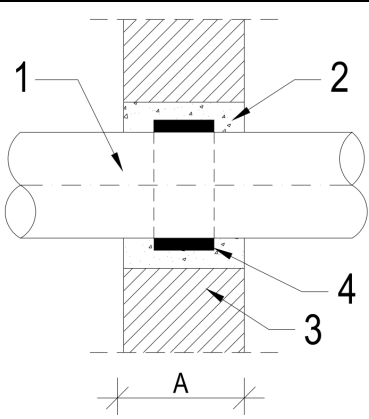
Pipe material: PVC-U or PVC-C					
INTU FR WRAP type	Diameter Ø [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE* <sup>1</sup> / RIGID WALL
			EI classification		
			U/C or C/C configuration		
75 mm	63 < Ø ≤ 75	1,9 - 3,5	-	240	120
		3,6	180		
		3,7 - 4,2	-		
82 mm	75 < Ø ≤ 82	2,1 - 3,4	120	240	120
		3,5			
		3,6		180	
		3,6 - 4,1		-	
110 mm	82 < Ø ≤ 110	2,2	120	240	120
		2,3 - 3,5			
		3,6			
		3,6 - 4,1		180	
		4,2			
125 mm	110 < Ø ≤ 125	2,5 - 3,3	120	120	-
		3,4 - 3,9			
		4,0 - 5,3			
		5,4 - 6,1		240	
		6,2		-	
160 mm	125 < Ø ≤ 160	3,2 - 6,1	120	180	-
		6,2			
		6,3 - 7,6			
		7,7		240	
		7,8 - 9,5		-	
200 mm	160 < Ø ≤ 200	4,4 - 5,8	120	240	120
		5,9			
		6,0 - 7,7			

\*1 For flexible wall use INTU FR WRAP L in two rows according with SOLUTION DETAILS below

### ➔ SOLUTION DETAILS

**COMBUSTIBLE PIPE penetration seal in RIGID WALLS**





**Fig. 1. Pipe in rigid wall A ≥ 150 mm**

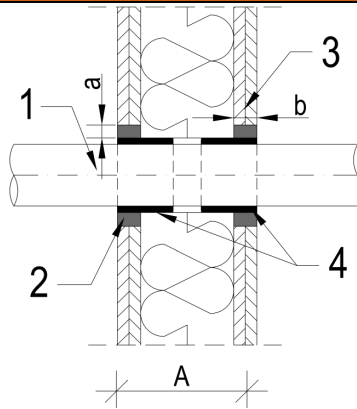
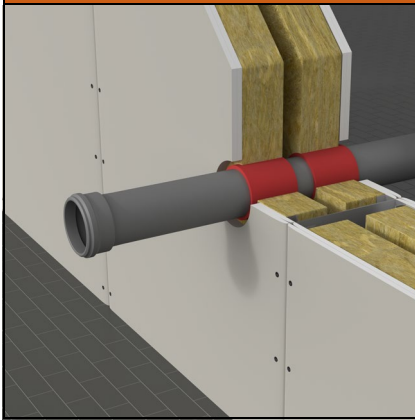
- 1 – flammable pipe
- 2 – cement mortar
- 3 – rigid wall
- 4 – INTU FR WRAP installed in wall axis

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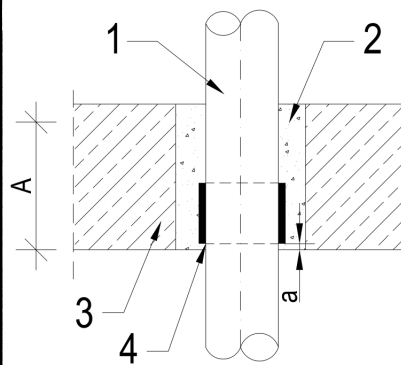
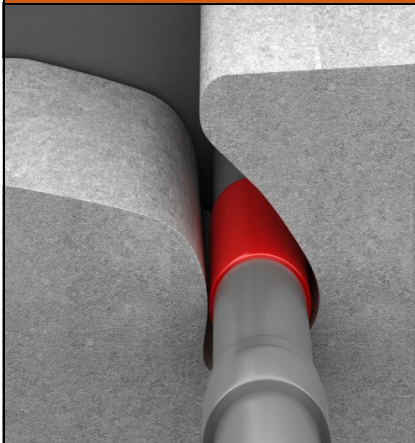
#### COMBUSTIBLE PIPE penetration seal in FLEXIBLE WALL



**Fig. 2. Pipe in flexible wall  $A \geq 125$  mm**

- 1 – flammable pipe
- 2 – INTU FR MASTIC sealant: width  $0 \leq a \leq 20$  mm; depth  $b \geq 25$  mm
- 3 – flexible wall
- 4 – 2 x INTU FR WRAP, two-side flush with face of the partition

#### COMBUSTIBLE PIPE penetration seal in RIGID FLOOR



**Fig. 3. Pipe in floor  $A \geq 150$  mm**

- 1 – flammable pipe
- 2 – cement mortar
- 3 – floor
- 4 – INTU FR WRAP, installed  $a \leq 10$  mm from the floor bottom