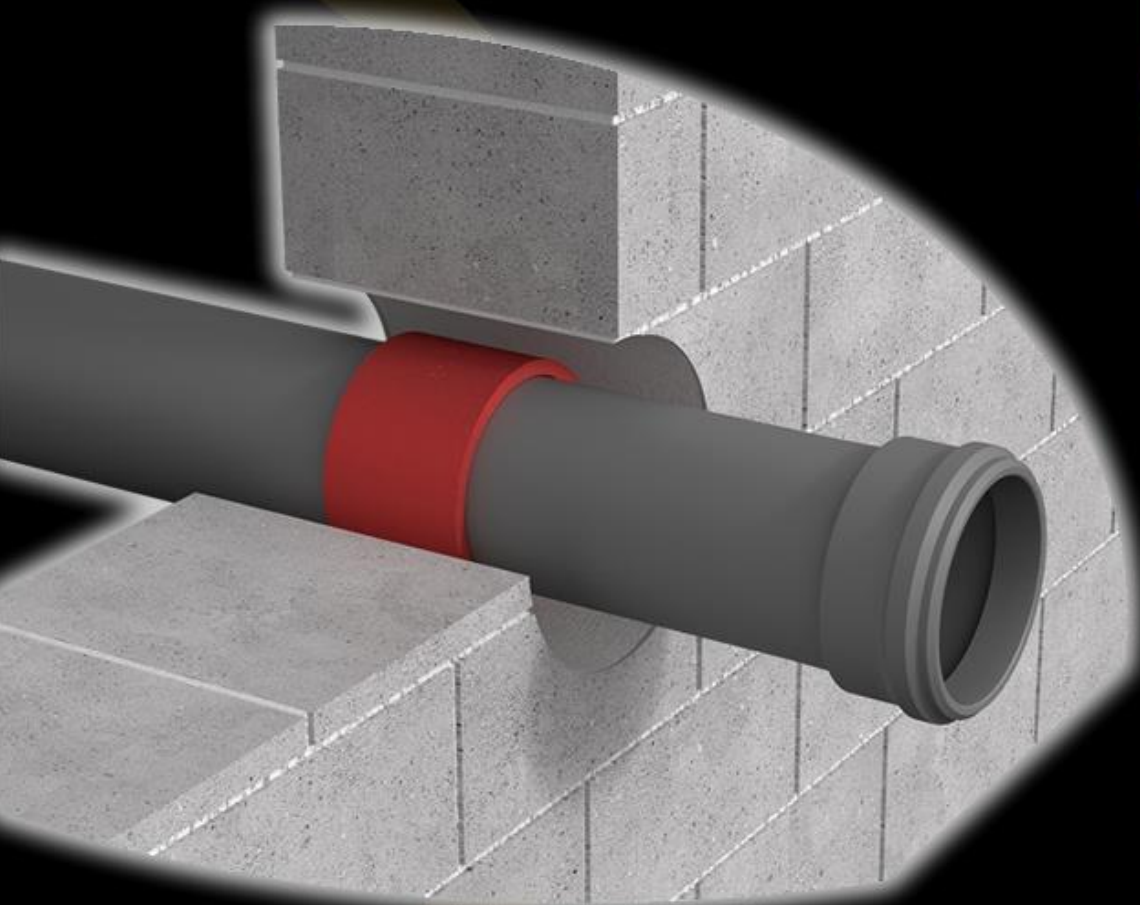


INTU FR WRAP

Intumescent pipe wrap

TDS Technical Data Sheet



•INTUSEAL®
passive fire protection manufacturer

CE



www.intuseal.com

INTU FR WRAP

Intumescent pipe wrap

TDS Technical Data Sheet

INTUSEAL[®]
passive fire protection manufacturer

→ PRODUCT DESCRIPTION

The firestop wrap **INTU FR WRAP** is made of graphite-based material. The material swells under the influence of high temperature (about 140°C), and fills the entire space created after burned flammable installations.

→ APPLICATION

The **INTU FR WRAPS** are used to penetrations seals with plastic pipes (PVC, PP, PE, HDPE, PEX/Al/PEX, PE-RT/Al/PE-RT, PP-R/Al/PP-R, PP-R GLASS) running through fire partitions.

- protection of flammable pipes
- fire resistance up to 240 minutes
- availability: from 32 mm to 200 mm
- high swelling ratio
- ideal for installation in very tight spaces

Rigid walls: The wall must be 150 mm minimum thickness. Must have concrete, cellular concrete or masonry structure, with minimum density 600kg/m³.

Rigid floors: The floor must be 150 mm minimum thickness. Must have concrete, cellular concrete or masonry structure, with minimum density 1700kg/m³.

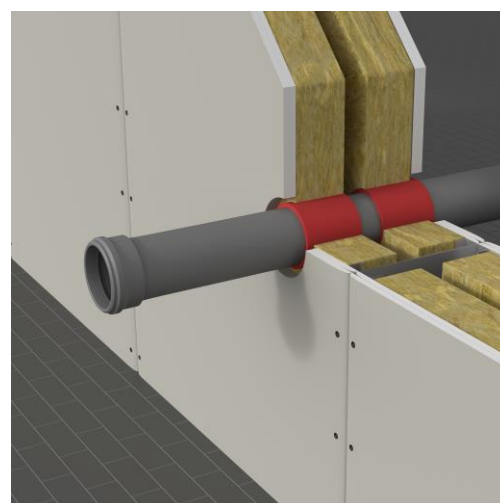
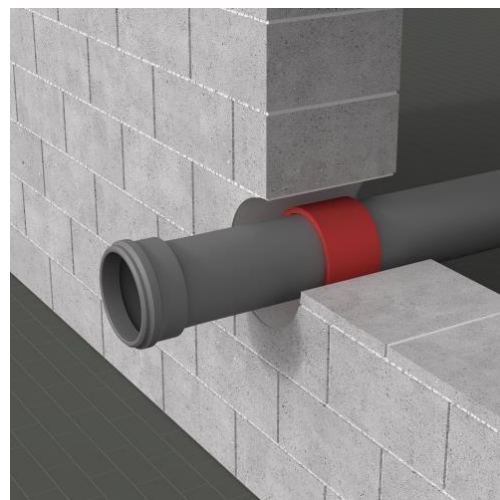
Flexible walls: The wall must be 125 mm minimum thickness. Must have steel profile structure covered on both sides with minimum 2 layers of boards with thickness 12.5mm.

→ AVAILABILITY, DIMENSIONS AND QUANTITY OF INSERTS

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	

→ INSTALLATION METHOD

1. Wrap the pipe.
2. Slide it inside the partition.
3. Fill the gap with mortar.



→ TRANSPORT AND STORAGE

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

→ COMPLIANCE:

- Reference standard:
EN 1366-3 / ETAG 026-2 / EAD
350454-00-1104
- ETA-18/0593
- DoP 1/2019
- CoC 1488-CPR-0722/W
- TDS
- SDS

➔ 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 $\varnothing \leq 200$

Pipe material: PP					
INTU FR WRAP type	Diameter \varnothing [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE *1 / RIGID WALL
			EI classification		
			U/C or C/C configuration		
32 mm	$\varnothing \leq 32$	1,8	240	240	120
		1,9 - 12,5	180	-	-
		12,6 - 18,4	-	-	-
40 mm	$32 < \varnothing \leq 40$	1,8	240	240	120
		1,9 - 12,5	180	-	-
		12,6 - 18,4	-	-	-
50 mm	$40 < \varnothing \leq 50$	1,8	240	240	120
		1,9 - 12,5	180	-	-
		12,6 - 18,4	-	-	-
55 mm	$50 < \varnothing \leq 55$	1,9 - 12,5	180	240	120
		12,6 - 18,4	-	-	-
		-	-	-	-
63 mm	$55 < \varnothing \leq 63$	1,9 - 12,5	180	240	120
		12,6 - 18,4	-	-	-
		-	-	-	-
75 mm	$63 < \varnothing \leq 75$	1,9 - 12,5	180	240	120
		12,6 - 18,4	-	-	-
		-	-	-	-
82 mm	$75 < \varnothing \leq 82$	2,3 - 8,3	180	240	120
		8,4 - 18,4	-	-	90/120*2
		-	-	-	-
110 mm	$82 < \varnothing \leq 110$	2,7	180	240	120
		2,8 - 18,4	-	-	90/120*2
		-	-	-	-
125 mm	$110 < \varnothing \leq 125$	3,6 - 3,7	-	45	-
		3,8 - 14,8	60	90	-
		14,9 - 16,7	-	45	-
		-	-	-	-
160 mm	$125 < \varnothing \leq 160$	5,5 - 6,1	60	90	-
		6,2	-	-	-
200 mm	$160 < \varnothing \leq 200$	7,7	60	45	-

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

Diameter \varnothing [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR
		EI classification	
		U/C or C/C configuration	
Pipe material: PE-RT			
$\varnothing \leq 20$	2,0	240	-
Pipe material: PE-RT/AI/PE-RT			
$\varnothing \leq 20$	2,0	240	240
	2,1-7,5		180/240*2
$20 < \varnothing \leq 75$	7,5	-	-
Pipe material: PE-X			
$\varnothing \leq 20$	2,0	240	-
Pipe material: PE-X/AI/PE-X			
$\varnothing \leq 75$	2,0 - 7,4	-	240
	7,5	120	
$20 < \varnothing \leq 75$	7,5	-	-
Pipe material: PP-R			
$\varnothing \leq 20$	3,4	240	-
Pipe material: PP-R/AI/PP-R			
$\varnothing \leq 20$	3,4 - 12,4	-	240
	12,6 - 18,4		-
$20 < \varnothing \leq 75$	12,5	-	240
	12,6 - 18,4		-
$20 < \varnothing \leq 110$	18,3	240	-
	18,4	-	240
PP-R/PP-R-GF/PP-R			
$\varnothing \leq 20$	2,8 - 12,5	-	240
$20 < \varnothing \leq 75$	12,5		-
$\varnothing \leq 110$	12,5	-	-
	12,6 - 18,2		-
	18,3		180
	18,4		-

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

*2 „E” fire-resistant class

Table 4 Fire resistance classification penetration seal for PE-HD, PE, ABS or SAN+PVC pipes $\varnothing \leq 200$

Pipe material: PE-HD, PE, ABS or SAN+PVC					
INTU FR WRAP type	Diameter \varnothing [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE* ¹ / RIGID WALL
			EI classification		
			U/C or C/C configuration		
32 mm	$\varnothing \leq 32$	2,0 – 3,0	240	240	120
		3,1 – 6,8			-
		6,9 – 10,0	120	-	-
40 mm	$32 < \varnothing \leq 40$	2,2	-	-	120
		2,3 – 3,0	120	240	90/120* ²
		3,1 – 6,7			
		6,8	240	-	-
50 mm	$40 < \varnothing \leq 50$	6,9 – 10,0	120	-	-
		2,5	-	-	120
		2,6 – 3,0	120	240	90/120* ²
		3,1 – 6,7			
55 mm	$50 < \varnothing \leq 55$	6,8	240	-	-
		6,9 – 10,0	120	-	-
		2,6	-	-	120
		2,7 – 3,0	120	240	90/120* ²
63 mm	$55 < \varnothing \leq 63$	3,1 – 6,7	120	240	120
		2,8	-	-	90/120* ²
		2,9 – 3,0			
		6,8	240	-	-
75 mm	$63 < \varnothing \leq 75$	6,9 – 10,0	120	-	-
		3,0	-	-	120
		3,1 – 3,2	-	240	90/120* ²
		3,3 – 6,7	120	-	-
82 mm	$75 < \varnothing \leq 82$	6,8	240	-	-
		3,6	-	240	120
		3,7 – 5,7	120	-	-
110 mm	$82 < \varnothing \leq 110$	5,8 – 10,0	120	-	-
		4,2 – 5,6			120
		5,7	120	240	120
125 mm	$110 < \varnothing \leq 125$	5,8 – 10,0	120	240	120
		4,8 – 5,8			
		5,9 – 6,2	120	-	-
		6,3 – 9,4			
160 mm	$125 < \varnothing \leq 160$	9,5	-	-	-
		6,2 – 9,4	120	240	-
		9,5	180	-	-
200 mm	$160 < \varnothing \leq 200$	6,6 – 7,7	90	90	-
		7,8 – 11,9	60	-	-

Table 5 Fire resistance classification penetration seal for PVC-U or PVC-C pipes $\varnothing \leq 200$

Pipe material: PVC-U or PVC-C					
INTU FR WRAP type	Diameter \varnothing [mm]	Pipe wall thickness [mm]	RIGID WALL	RIGID FLOOR	FLEXIBLE* ¹ / RIGID WALL
			EI classification		
			U/C or C/C configuration		
32 mm	$\varnothing \leq 32$	1,8 – 3,6	240	240	120
		3,7 – 4,2	180	-	-
40 mm	$32 < \varnothing \leq 40$	1,8 – 3,6	240	240	120
		3,7 – 4,2	180	-	-
50 mm	$40 < \varnothing \leq 50$	1,8 – 3,6	240	240	120
		3,7 – 4,2	180	-	-
55 mm	$50 < \varnothing \leq 55$	1,9 – 3,5	180	240	120
		3,6	240	-	-
63 mm	$55 < \varnothing \leq 63$	3,7 – 4,2	180	240	120
		1,9 – 3,5	180	-	-
75 mm	$63 < \varnothing \leq 75$	3,6	240	240	120
		3,7 – 4,2	180	-	-
82 mm	$75 < \varnothing \leq 82$	2,1 – 3,4	120	240	120
		3,5	240	180	-
		3,6 – 4,1	180	-	-
110 mm	$82 < \varnothing \leq 110$	4,2	180	240	120
		2,2	120	180	-
		2,3 – 3,5	240	240	120
		3,6 – 4,1	180	-	-
125 mm	$110 < \varnothing \leq 125$	4,2	180	240	120
		2,5 – 3,3	-	120	-
		3,4 – 3,9	120	240	-
		4,0 – 5,3	120	-	-
160 mm	$125 < \varnothing \leq 160$	5,4 – 6,1	-	-	-
		6,2	120	240	120
		3,2 – 6,1	-	120	-
		6,2	240	180	240
200 mm	$160 < \varnothing \leq 200$	6,3 – 7,6	180	240	-
		7,7	180	-	-
		7,8 – 9,5	-	120	-
		4,4 – 5,8	-	120	-
200 mm	$160 < \varnothing \leq 200$	5,9	180	240	-
		6,0 – 7,7	120	240	-

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

*² „E” fire-resistant class

➔ SOLUTION DETAILS

COMBUSTIBLE PIPE penetration seal in RIGID WALLS

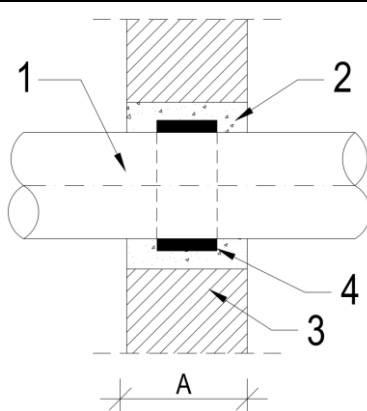
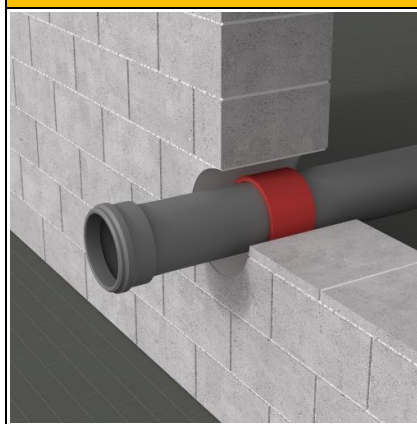


Fig. 1. Pipe in rigid wall $A \geq 150$ mm

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

COMBUSTIBLE PIPE penetration seal in FLEXIBLE WALL

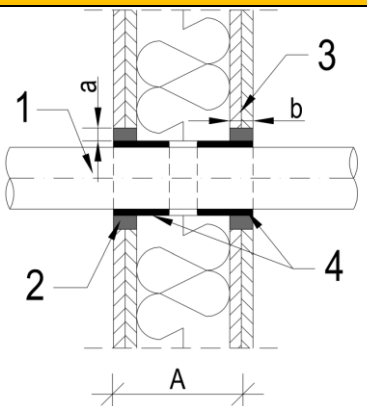
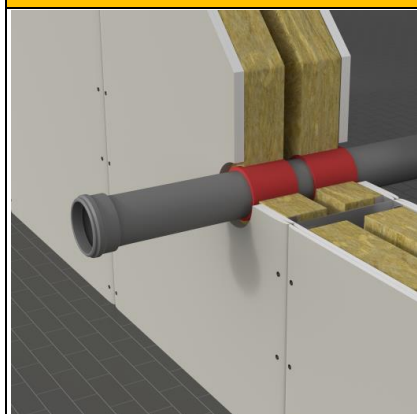


Fig. 2. Pipe in flexible wall $A \geq 125$ mm

- 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

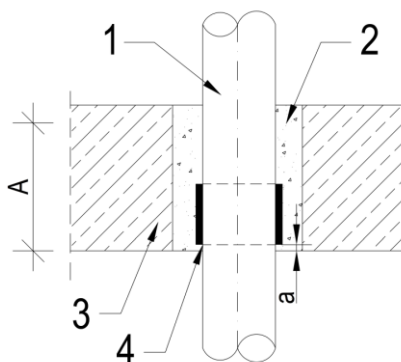
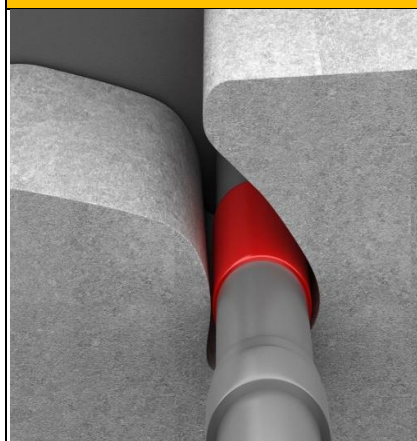


Fig. 3. Pipe in floor $A \geq 150$ mm

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