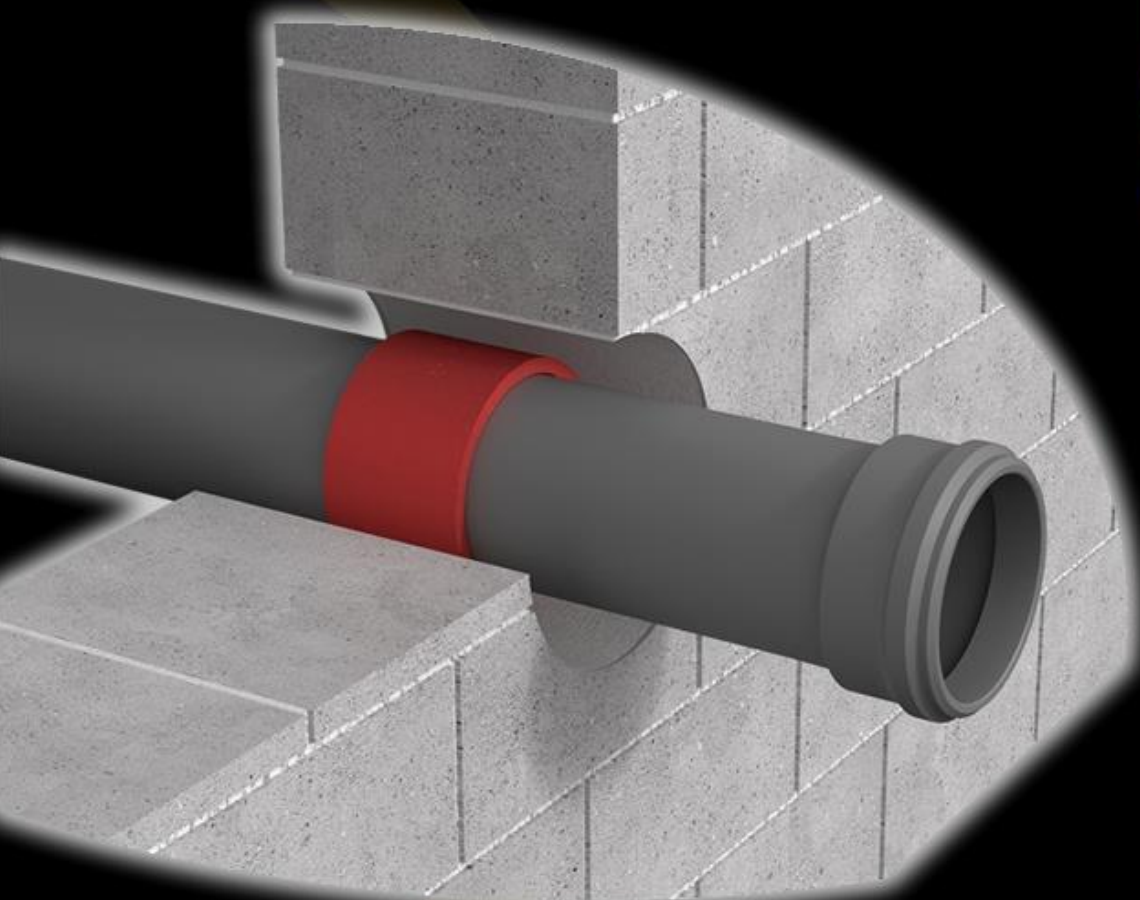


# INTU FR WRAP

*Intumescent pipe wrap*

TDS Technical Data Sheet



**•INTUSEAL®**  
*passive fire protection manufacturer*

CE



[www.intuseal.com](http://www.intuseal.com)

## ➔ 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.

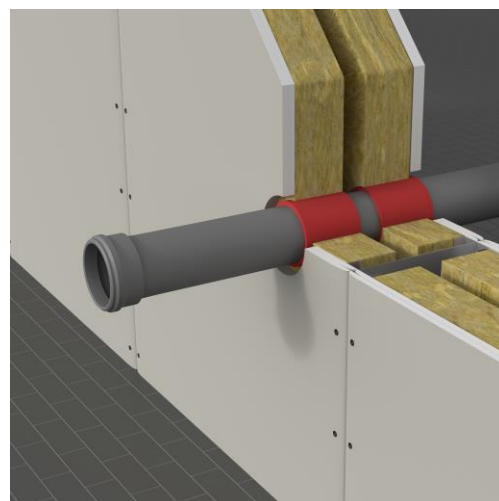
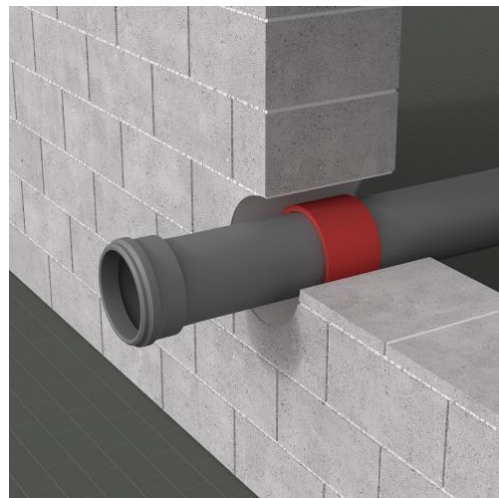
**Flexible walls:** The wall must be 125 mm minimum thickness. Must have steel profile structure covered on both sides with minimum 2 layers of boards with thickness 12.5mm.

## ➔ 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 insert in 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 classification penetration seal for PVC-U or PVC-C pipes Ø ≤ 200

| Pipe material: <b>PVC-U or PVC-C</b> |                          |                          |             |                        |
|--------------------------------------|--------------------------|--------------------------|-------------|------------------------|
| Diameter Ø [mm]                      | Pipe wall thickness [mm] | RIGID WALL               | RIGID FLOOR | FLEXIBLE */ RIGID WALL |
|                                      |                          | EI classification        |             |                        |
|                                      |                          | U/C or C/C configuration |             |                        |
| 32                                   | 1,8 - 3,6                | 240                      | 240         | 120                    |
| 40                                   | 1,8 - 3,6                | 240                      | 240         | 120                    |
| 50                                   | 1,8 - 3,6                | 240                      | 240         | 120                    |
| 55                                   | 1,9 - 3,5                | 180                      | 240         | 120                    |
|                                      | 3,6                      | 240                      | 240         | 120                    |
| 63                                   | 1,9 - 3,5                | 180                      | 240         | 120                    |
|                                      | 3,6                      | 240                      | 240         | 120                    |
| 75                                   | 1,9 - 3,5                | 180                      | 240         | 120                    |
|                                      | 3,6                      | 240                      | 240         | 120                    |
| 82                                   | 2,1 - 3,4                | 120                      | 240         | 120                    |
|                                      | 3,5                      | 120                      | 180         | 120                    |
|                                      | 3,6                      | 240                      | 180         | 120                    |
|                                      | 3,6 - 4,1                | 180                      | 180         | 120                    |
| 110                                  | 4,2                      | 180                      | 180         | 120                    |
|                                      | 2,2                      | 120                      | 240         | 120                    |
|                                      | 2,3 - 3,5                | 120                      | 180         | 120                    |
|                                      | 3,6                      | 240                      | 180         | 120                    |
| 125                                  | 3,6 - 4,1                | 180                      | 180         | 120                    |
|                                      | 4,2                      | 180                      | 180         | 120                    |
|                                      | 2,5 - 3,3                | -                        | 120         |                        |
|                                      | 3,4 - 3,9                | 120                      | 120         |                        |
| 160                                  | 4,0 - 5,3                | 120                      | 240         |                        |
|                                      | 5,4 - 6,1                | 120                      | 240         |                        |
|                                      | 6,2                      | 120                      | 240         |                        |
|                                      | 3,2 - 6,1                | -                        | 120         |                        |
| 200                                  | 6,2                      | 240                      | 120         |                        |
|                                      | 6,3 - 7,6                | 180                      | 120         |                        |
|                                      | 7,7                      | 180                      | 240         |                        |
|                                      | 7,8 - 9,5                | 180                      | -           |                        |

Table 3 Fire resistance class. penetration seal for PP pipes Ø ≤ 200

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

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

Table 3 Fire resistance classification penetration seal for PE-HD, PE, ABS or SAN+PVC pipes Ø ≤ 200

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

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

| Pipe material: <b>PE-RT/Al/PE-RT</b> |                          |                          |             |
|--------------------------------------|--------------------------|--------------------------|-------------|
| Diameter Ø [mm]                      | Pipe wall thickness [mm] | RIGID WALL               | RIGID FLOOR |
|                                      |                          | EI classification        |             |
|                                      |                          | U/C or C/C configuration |             |
| 32<br>40<br>50<br>63<br>75           | 2,0                      | 240                      | 240         |
|                                      | 2,1 – 7,5                | 240                      | 180/240*2   |
|                                      | 7,5                      | 240                      | 180/240*2   |
| Pipe material: <b>PE-X/Al/PE-X</b>   |                          |                          |             |
| 32<br>40<br>50<br>63<br>75           | 2,0 – 7,4                | -                        | 240         |
|                                      | 7,5                      | 120                      | 240         |
|                                      |                          |                          |             |
| Pipe material: <b>PP-R/Al/PP-R</b>   |                          |                          |             |
| 32<br>40<br>50<br>63<br>75           | 12,5                     | -                        | 240         |
|                                      | 18,3                     | 240                      | -           |
|                                      |                          |                          |             |
| 82<br>110                            | 18,3                     | 240                      | 240         |
|                                      | 18,4                     | -                        | 240         |
| PP-R/PP-R-GF/PP-R                    |                          |                          |             |
| 32<br>40<br>50<br>63<br>75           | 12,5                     | -                        | 240         |
|                                      | 12,6 – 18,2              | -                        | 240         |
|                                      | 18,3                     | 180                      | 240         |
|                                      | 18,4                     | -                        | 240         |
| 82<br>110                            | 18,3                     | 180                      | -           |
|                                      | 18,4                     | -                        | 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

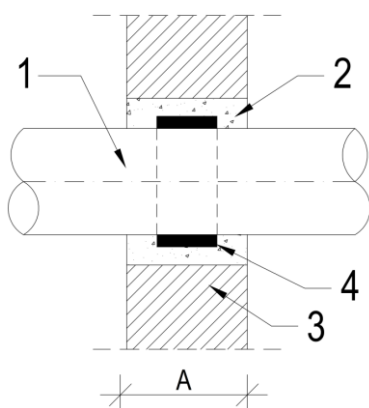
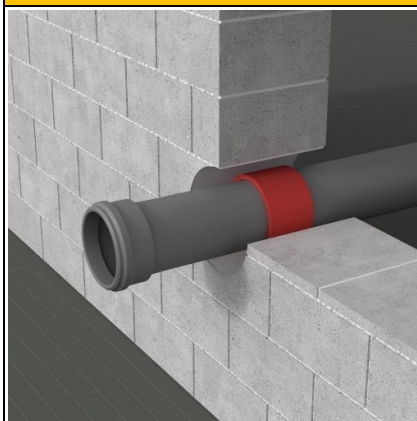


Fig. 1. Pipe in rigid wall  $A \geq 150$  mm

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

### COMBUSTIBLE PIPE penetration seal in FLEXIBLE WALL

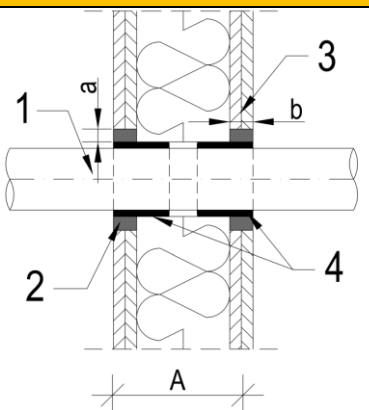
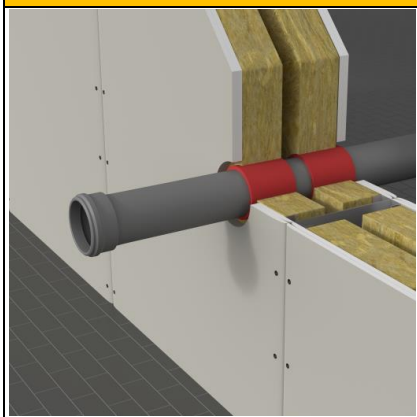


Fig. 2. Pipe in flexible wall  $A \geq 125$  mm

- 1 – flammable pipe
- 2 – ALFA 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

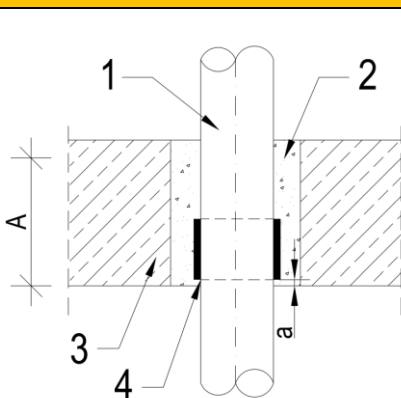
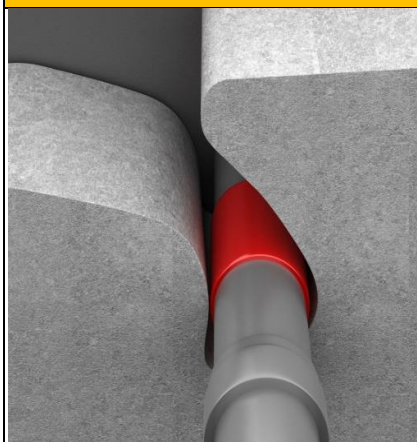


Fig. 3. Pipe in floor  $A \geq 150$  mm

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