

INTU FR MASTIC

Intumescent acrylic mastic

TDS Technical Data Sheet



•INTUSEAL®
passive fire protection manufacturer

CE



www.intuseal.com

→ PRODUCT DESCRIPTION

INTU FR MASTIC is an acrylic mastic designed to prevent spreading of fire, smoke and gases through openings in fire rated walls and floors. **INTU FR MASTIC** expands when it is subjected to fire and close openings around pipes, cables and gaps, expansion joints by creating tight barrier for fire, smoke and gas. Mass effective fills the gaps around the installation, ensuring the integrity and insulation of fire resistance class EI 120 and EI 240 (details according to compliance documents).

→ APPLICATION

INTU FR MASTIC is designed for:

- fire protection of penetrations with non-flammable pipes in floors or walls
- fire protection of single electric cables / bundle of cables in floors and walls
- fire protection of gaps / expansion joints
- installation / sealing of intumescent ventilation grilles **INTU FR GRILLE**

→ APPLICATION CONDITIONS

Mass **INTU FR MASTIC** after hardening, can be used in the temperature range $-30^{\circ}\text{C} \div +80^{\circ}\text{C}$.

→ INSTALLATION METHOD

1. PREPARATION

- Do not use **INTU FR MASTIC** if the ambient temperature is below 5°C .
- Clean the surfaces thoroughly from grease and other contaminants before applying the mastic. The **INTU FR MASTIC** should not be used on substrates that exude oils, softeners or solvents, greases and other contaminants

2. APPLICATION – fire protection of penetration pipes and cables

- Insert a mineral wool primer into the hole with density of 40 kg/m^3 to a depth according table 1 for pipes or according fig. 5 and 6 for cables.
- Fill the gap with **INTU FR MASTIC** to the required depth according table 1 for pipes or according fig. 5 and 6 for cables.
- Insulate the pipe from the barrier with mineral wool with a density of min 37 kg/m^3 length and thickness indicated in table 1.

3. APPLICATION – fire protection of gaps / expansion joints

- Insert a mineral wool primer into the gaps / expansion joints with density of 40 kg/m^3 to a depth according table 2.
- Fill the gap with **INTU FR MASTIC** to the required depth according table 2.

→ FIRE RESISTANCE CLASSIFICATION

STEEL PIPES - penetration seals in rigid wall					
Diameter [mm]	Pipe wall thickness [mm]	Fire resistance classification			
		C/C	C/U	U/C	U/U
$D \leq 42,4$	2,0 – 14,2	EI 240	EI 240	-	-
$42,4 < D \leq 48,3$	2,2 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
$48,3 < D \leq 60,3$	2,6 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
$60,3 < D \leq 76,1$	3,1 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
$76,1 < D \leq 88,9$	3,5 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
$88,9 < D \leq 108,0$	4,0 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
$108,0 < D \leq 139,7$	4,0 – 14,2	EI 120 (E 240*)	EI 120 (E 240*)	-	-
$139,7 < D \leq 159,0$	4,0 – 14,2	EI 120 (E 240*)	EI 120 (E 240*)	-	-
$159,0 < D \leq 219,1$	4,5 – 14,2	EI 90 (E 240*)	EI 90 (E 240*)	-	-



→ AVAILABILITY

TYPE	Art. No
310ml	INFRM310
600ml	INFRM600

→ TRANSPORT AND STORAGE

Store in dry and cool conditions at temperatures between $+5^{\circ}\text{C}$ and $+25^{\circ}\text{C}$. Shelf life 18 months.

→ COMPLIANCE:

- Reference standard: EN 1366-3 / ETAG 026-2 / EAD 350454-00-1104
- DoP 8/2019
- ETA 19/0038
- CoC 1488-CPR-0756/W
- TDS
- SDS

STEEL PIPES - penetration seals in rigid floor					
Diameter [mm]	Pipe wall thickness [mm]	Fire resistance classification			
		C/C	C/U	U/C	U/U
D ≤ 42,4	2,0 – 14,2	EI 240	EI 240	-	-
42,4 < D ≤ 48,3	2,2 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
48,3 < D ≤ 60,3	2,6 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
60,3 < D ≤ 76,1	3,1 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
76,1 < D ≤ 88,9	3,5 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
88,9 < D ≤ 108,0	4,0 – 14,2	EI 180 (E 240*)	EI 180 (E 240*)	-	-
108,0 < D ≤ 139,7	4,0 – 14,2	EI 120 (E 240*)	EI 120 (E 240*)	-	-
139,7 < D ≤ 159,0	4,0 – 14,2	EI 120 (E 240*)	EI 120 (E 240*)	-	-

COPPER PIPES - penetration seals in rigid wall					
Diameter [mm]	Pipe wall thickness [mm]	Fire resistance classification			
		C/C	C/U	U/C	U/U
D ≤ 6,0	≥ 0,8	EI 240	EI 240	-	-
6,0 < D ≤ 15,0	≥ 1,0	EI 180	EI 180	-	-
15,0 < D ≤ 18,0	≥ 1,1	EI 180	EI 180	-	-
18,0 < D ≤ 22,0	≥ 1,1	EI 180	EI 180	-	-
22,0 < D ≤ 35,0	1,4 – 14,2	EI 180	EI 180	-	-
35,0 < D ≤ 42,0	1,5 – 14,2	EI 180	EI 180	-	-
42,0 < D ≤ 54,0	1,7 – 14,2	EI 180	EI 180	-	-
54,0 < D ≤ 88,9	2,2 – 14,2	EI 120 (E 180*)	EI 120 (E 180*)	-	-

COPPER PIPES - penetration seals in rigid floor					
Diameter [mm]	Pipe wall thickness [mm]	Fire resistance classification			
		C/C	C/U	U/C	U/U
D ≤ 6,0	≥ 0,8	EI 180 (E 240*)	EI 180 (E 240*)	-	-
6,0 < D ≤ 15,0	≥ 1,0	EI 90 (E 240*)	EI 90 (E 240*)	-	-
15,0 < D ≤ 18,0	≥ 1,1	EI 90 (E 240*)	EI 90 (E 240*)	-	-
18,0 < D ≤ 22,0	≥ 1,1	EI 90 (E 240*)	EI 90 (E 240*)	-	-
22,0 < D ≤ 35,0	1,4 – 14,2	EI 90 (E 240*)	EI 90 (E 240*)	-	-
35,0 < D ≤ 42,0	1,5 – 14,2	EI 90 (E 240*)	EI 90 (E 240*)	-	-
42,0 < D ≤ 54,0	1,7 – 14,2	EI 90 (E 240*)	EI 90 (E 240*)	-	-

ELECTRICAL CABLES			
Installation type	Diameter [mm]	Fire resistance classification	
		WALL	FLOOR
Single cable	Ø ≤ 21,0mm	EI 240	EI 120
Cables in bundle (made of cables Ø ≤ 21,0mm)	Ø ≤ 100mm	EI 90, EI 120*	EI 120

GAPS / EXPANSION JOINTS			
Joint width	Fire resistance classification		
	WALL (horizontal)	WALL (vertical)	FLOOR
10 mm	EI 120*	EI 120*	EI 120*
from 11 to 50 mm	EI 120*	EI 120*	EI 120*

* outside ETA, the results acc. to fire test report

➔ SOLUTION DETAILS - NON FLAMMABLE PIPES

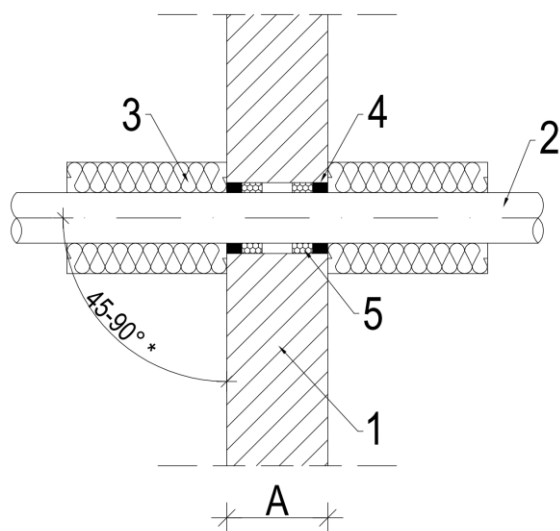
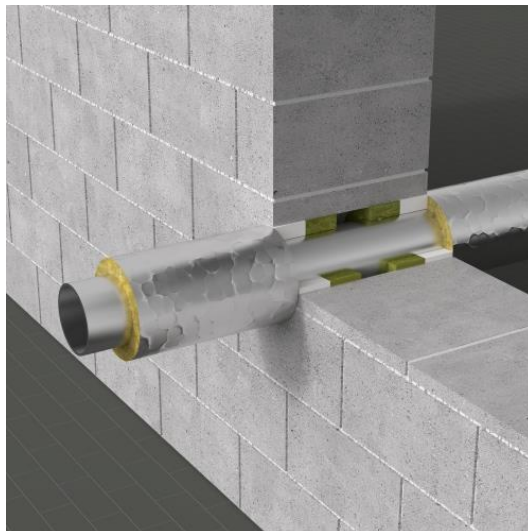


Fig. 1

- 1 – wall (A – thickness of min 150mm)
- 2 – non-flammable pipe;
- 3 – mineral wool insulation with a density of min 37 kg/m³, length and thickness according table 1
- 4 – **INTU FR MASTIC** (details according table 1)
- 5 – mineral wool density of min. 40 kg/m³, dimension in according table 1

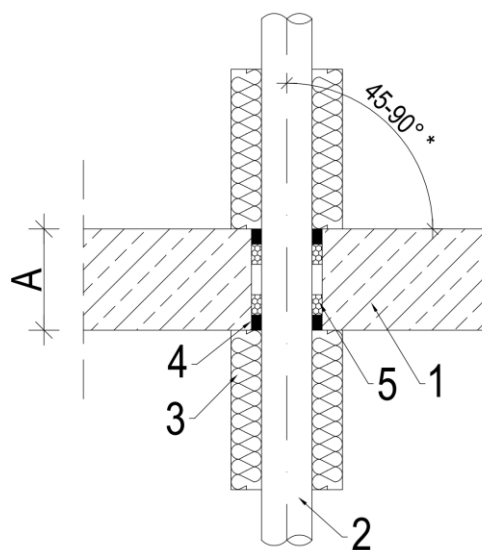


Fig. 2

- 1 – floor (A – thickness min 150mm)
- 2 – non-flammable pipe;
- 3 – mineral wool insulation with a density of min 37 kg/m³, length and thickness according table 1
- 4 – **INTU FR MASTIC** (details according table 1)
- 5 – mineral wool density of min. 40 kg/m³, dimension in according table 1

* – Installations placed at an angle of 45 ÷ 90° to the partition, based on PN-EN 1366-3 standard

Table. 1.

Diameter	Material	Filling	Insulation*	INTU FR MASTIC
≤ 42,4 mm	steel	Mineral wool Density of min. 40kg/m ³ Depth: 15mm	Thickness: 30mm Length: 250mm	Width: 10mm Depth: 15mm
≤ 108,0 mm	steel		Thickness: 50mm Length: 250mm	
< 159,0 mm	steel	Mineral wool Density of min. 40kg/m ³ Depth: in all partition	Thickness 50mm Length: 650mm	Width: 25mm Depth:: 20mm
≤ 219,1 mm	steel			
≤ 6,0 mm	copper		Thickness 30mm Length: 500mm	Width: 25mm Depth: 20mm
≤ 54,0 mm	copper		Thickness 30mm Length: 500mm	
≤ 88,9 mm	copper		Thickness 60mm Length: 700mm	

* Mineral wool **insulation** with aluminium wrapper, density 37 kg/m³, length L from the partition

➔ SOLUTION DETAILS - GAPS / LINEAR JOINTS

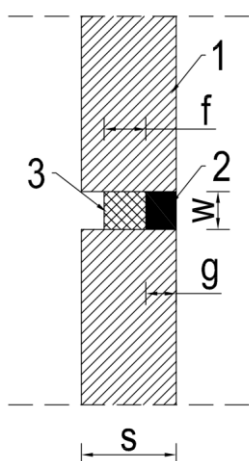


Fig. 3. Gap in a wall

- 1 – wall (s – thickness min 100mm)
2 – **INTU FR MASTIC**, on any side (details according table 2)
3 – mineral wool with a density of min. 50kg/m³ (details according table 2)
 w – joint width

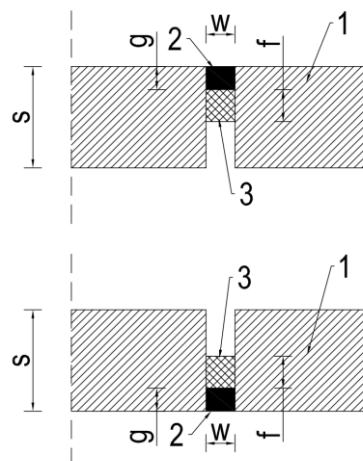


Fig. 4. Gap in a floor

- 1 – floor (s – thickness min 150mm)
2 – **INTU FR MASTIC** applied from the bottom or top of the floor (details according table 2)
3 – mineral wool with a density of min. 50kg/m³ (details according table 2)
 w – joint width

Table 2.

Partition	Joint width (w)	INTU FR MASTIC (pos. 2)	Mineral wool (pos. 3)
Wall	10 mm	Min. depth (g): 15 mm	Min. depth (f): 50 mm
	od 11 do 50 mm	Min. depth (g): 15 mm	Min. depth (f): 85 mm
Floor	10 mm	Min. depth (g): 10 mm	Min. depth (f): 50 mm
	od 11 do 50 mm	Min. depth (g): 15 mm	Min. depth (f): 100 mm

➔ SOLUTION DETAILS - ELECTRIC CABLES

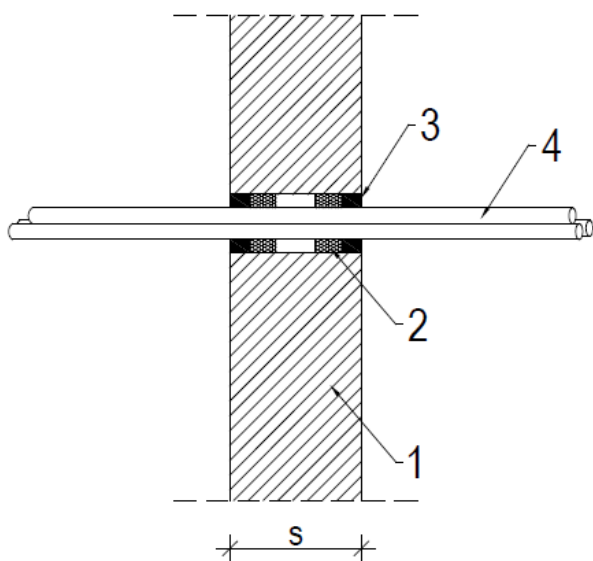


Fig. 5

- 1 – wall (S – thickness of min 150mm)
- 2 – mineral wool density of min. 40 kg/m³, depth 15mm
- 3 – **INTU FR MASTIC** depth min 20mm
- 4 – single electric cable ≤ Ø 21mm or cables in bundle ≤ Ø 100mm

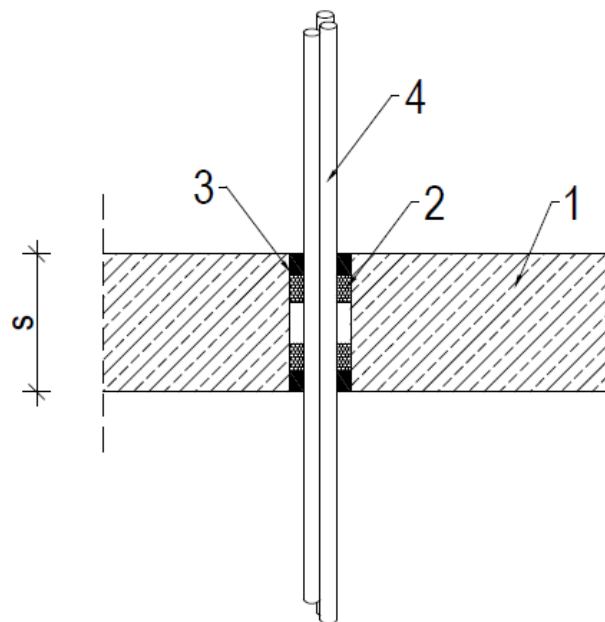


Fig. 6

- 1 – floor (S – thickness of min 150mm)
- 2 – mineral wool density of min. 40 kg/m³, depth 15mm
- 3 – **INTU FR MASTIC** depth min 20mm
- 4 – single electric cable ≤ Ø 21mm or cables in bundle ≤ Ø 100mm