INTU FR MASTIC

Intumescent acrylic mastic

TDS Technical Data Sheet

.INTUSEAL®

passive fire protection manufacturer

CE

www.intuseal.com

INTU FR MASTIC

Intumescent acrylic mastic

TDS Technical Data Sheet

.INTUSEAL®
passive fire protection manufacturer

PRODUCT DESCRIPTION

The **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.

APPLICATION

The **INTU FR MASTIC** is designed for fire protection of penetrations with:

- non-flammable pipes in floors or walls
- 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**

Rigid walls: The wall must be 150 mm minimum thickness. Must have concrete, cellular concrete or masonry structure, with minimum density 600kg/m^3.

Rigid floors: The floor must be 150 mm minimum thickness. Must have concrete, cellular concrete or masonry structure, with minimum density 1700kg/m^3.

AVAILABILITY

Contents	Colour	Box	Pallet	Article number
310 ml	White	15	1260	INFRM310
310 ml	Grey	15	1260	INFRMG310
310 ml	Pure White	15	1260	INFRMPW310
600 ml	White	20	720	INFRM600
600 ml	Grey	20	720	INFRMG600
600 ml	Pure White	20	720	INFRMPW600
5 L	White	N/A	60	INFRMW5L
5 L	Grey	N/A	60	INFRMG5L

APPLICATION CONDITIONS

Mass **INTU FR MASTIC** after hardening, can be used in the temperature range -30˚C ÷ +80˚C.

TRANSPORT AND STORAGE

Store in dry and cool conditions at temperatures between + 5°C and + 25°C.

- Usefulness for 310 ml capacity: 12 months from the date of production placed on the package
- Usefulness for 600 ml and 5 l capacity: 18 months from the date of production placed on the package.

COMPLIANCE

- Reference standard: EN 1366-3 / ETAG 026-2 / EAD 350454-00-1104
- EN 1366-4 / EAD 350141-00-11046
- DoP 8/2019
- ETA 19/0038
- CoC 1488-CPR-0756/W
- LEED and BREEAM Certification
- TDS
- SDS

INTUSEAL Sp. z o.o.
Ul. Kineskopowa 1, 05-500 Piaseczno, Poland
E-mail: sales@intuseal.com

NIP PL5223031827

INSTALLATION METHOD

1. PREPARATION

Do not use **INTU FR MASTIC** if the ambient temperature is below 5°C.

Clean the surfaces 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.

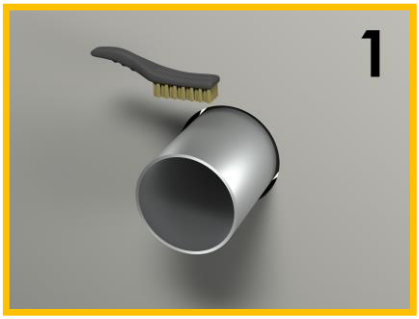
2. APPLICATION

a. fire protection of penetration pipes and cables

Insert a mineral wool primer into the hole with density ≥ 40 kg/m³ to a depth according table 1 for pipes according to the technical data below.
Fill the gap with **INTU FR MASTIC** to the required depth.
Insulate the pipe from the barrier with mineral wool with density ≥ 37 kg/m³ length and thickness indicated in table 1.

b. fire protection of gaps / expansion joints

Insert a mineral wool primer into the gaps / expansion joints with density of 40 kg/m³ to a depth according to the technical data below.
Fill the gap with **INTU FR MASTIC** to the required depth according table 2.



TECHNICAL DATA

Table. 1. DETAILS - NON FLAMMABLE PIPES

Diameter [mm]	Material	Filling	Insulation*1 Thickness/ Length [mm]	INTU FR MASTIC Width/ Depth [mm]	MASTIC consumption of a 310 ml tube
≤ 42,4	Steel / Cast Iron	Mineral wool; ρ ≥ 40 kg/m³ Depth: 15mm	30 /250	10 / 15	0,20
≤ 48,3			50 /250		0,20
≤ 60,3					0,25
≤ 76,1					0,30
≤ 88,9					0,35
≤ 108,0					0,40
< 159,0		Mineral wool; ρ ≥ 40 kg/m³ Depth: 20 mm	50 /650	25 / 20	1,90
≤ 219,1					2,50
≤ 6,0	Copper / Steel / Cast Iron		30 /500	25 / 20	0,35
≤ 54,0			30 /500		0,90
≤ 88,9			50 / 700		1,30

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

Table 2. DETAILS - GAPS / LINEAR JOINTS

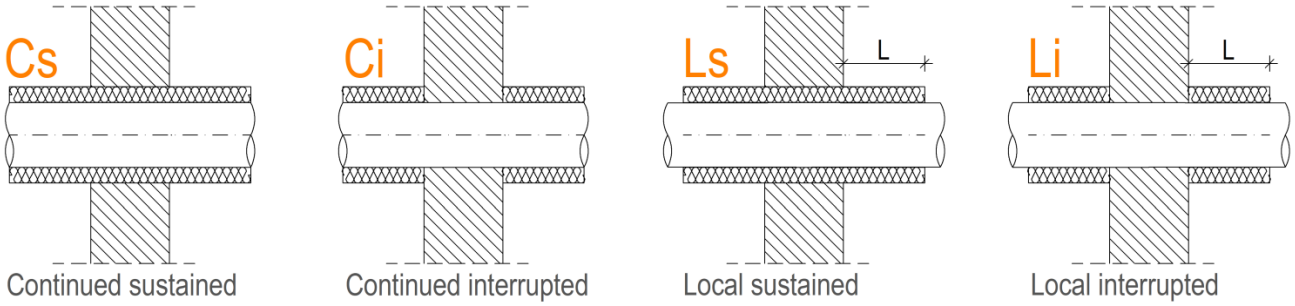
Mass consumption for 1,0 linear meter joint*2					
Joint width [mm]	10	20	30	40	50
For joint depth = 15 mm	0,50	1,00	1,50	2,00	2,50

*2Consumption of one 310 ml package of INTU FR MASTIC for make 1,0 linear meter of joint with dimensions: 15 mm x joint width.

FIRE RESISTANCE CLASSIFICATION

Pipe insulation configuration

Continuous		Local	
Cs	Ci	Ls	Li



STEEL / CAST IRON PIPES - penetration seals					
Diameter [mm]	Pipe wall thickness [mm]	Fire resistance classification in rigid WALL		Fire resistance classification in rigid FLOOR	
		C/C and C/U	Insulation configuration	C/C and C/U	Insulation configuration
D ≤ 42,4	2,0 – 14,2	EI 240	Ci or Li	EI 240	Ci or Li
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 (E240*)		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*)	
159,0 < D ≤ 219,1	4,5 – 14,2	EI 90 (E 240*)		-	-

STEEL/ CAST IRON PIPES/ COPPER - penetration seals					
Diameter [mm]	Pipe wall thickness [mm]	Fire resistance classification in rigid WALL		Fire resistance classification in rigid FLOOR	
		C/C and C/U	Insulation configuration	C/C and C/U	Insulation configuration
D ≤ 6,0	≥ 0,8	EI 240	Ci or Li	EI 180 (E 240*)	Ci or Li
6,0 < D ≤ 15,0	≥ 1,0	EI 180		EI 90 (E 240*)	
15,0 < D ≤ 18,0	≥ 1,1	EI 180		EI 90 (E 240*)	
18,0 < D ≤ 22,0	≥ 1,1	EI 180		EI 90 (E 240*)	
22,0 < D ≤ 35,0	1,4 – 14,2	EI 180		EI 90 (E 240*)	
35,0 < D ≤ 42,0	1,5 – 14,2	EI 180		EI 90 (E 240*)	
42,0 < D ≤ 54,0	1,7 – 14,2	EI 180		EI 90 (E 240*)	
54,0 < D ≤ 88,9	2,2 – 14,2	EI 120 (E 180*)		-	-

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

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

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

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

➔ SOLUTION DETAILS

NON FLAMMABLE PIPES - penetration seals

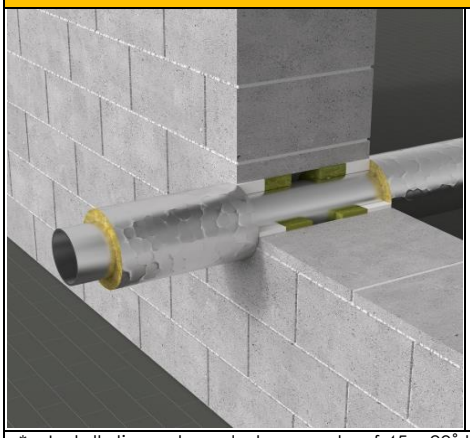


Fig. 1 Penetration seal in wall A ≥ 150 mm

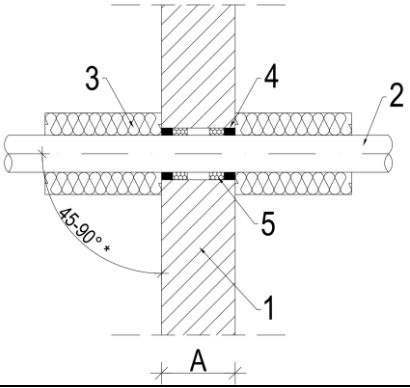
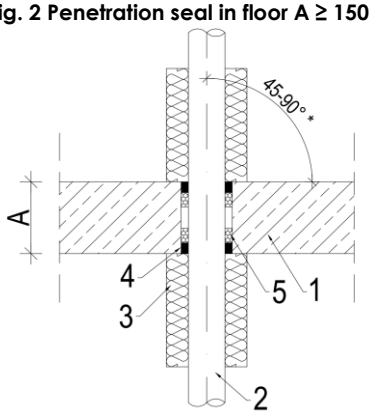


Fig. 2 Penetration seal in floor A ≥ 150 mm



* – Installations placed at an angle of 45 ÷ 90° to the partition, based on PN-EN 1366-3 standard
1 – wall/floor (A – thickness)
2 – non-flammable pipe
3 – mineral wool insulation with a density (ρ) of min 37 kg/m³, length and thickness according table 1
4 – **INTU FR MASTIC** (details according table 1)
5 – mineral wool density ρ ≥ 40 kg/m³ (dimension in table 1)

ELECTRIC CABLES - penetration seals

Fig. 3 Penetration seal in wall s ≥ 150 mm

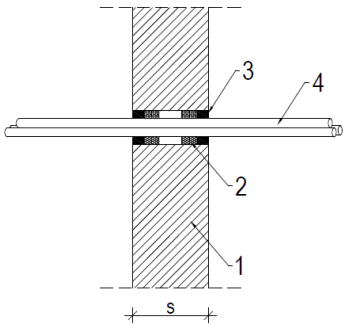
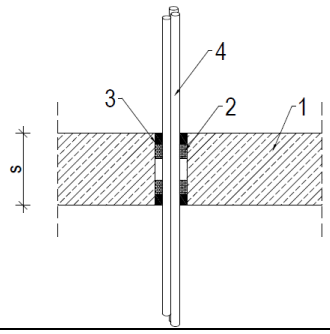


Fig. 4 Penetration seal in floor s≥150mm



1 – wall / floor (s – thickness);
2 – mineral wool ρ ≥ 40 kg/m³ depth 15mm;
3 – **INTU FR MASTIC** depth min 20mm;
4 – single electric cable ≤ Ø 21mm or cables in bundle ≤ Ø 100 mm

GAP / LINEAR JOINTS - penetration seals

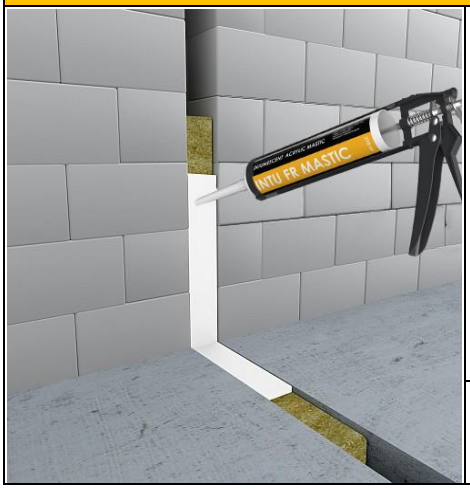


Fig.5 Gap in wall s ≥ 100 mm

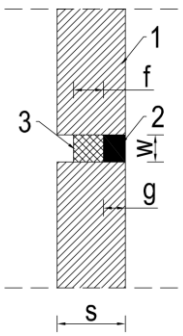
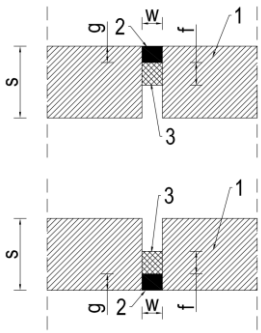


Fig. 6 Gap in floor s ≥ 150 mm



1 – wall / floor (s – thickness)
2 – **INTU FR MASTIC** applied from the bottom or top of the floor (details according table 2); **w** – joint width
3 – mineral wool, ρ ≥ 50kg/m³ (details in tab. 2)