INTU FR COAT I

Fire rated intumescent coat

TDS Technical Data Sheet

CE

.INTUSEAL®

passive fire protection manufacturer

EOTA
European Organisation for Technical Assessment

www.intuseal.com

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PRODUCT DESCRIPTION

INTU FR COAT I is a one-component intumescent paint designed for sealing fire protection penetrations with non-flammable pipes and electric cables. The coating made with this paint swells under the influence of temperature, creating a protective layer on the protected surface. The paint protects the system elements in penetrations up to fire resistance class of **EI 240**. (details according to reference documents)

APPLICATION

INTU FR COAT I is intended for the protection of non-flammable pipes in fire partition floors and walls and electric cables / cable trays in wall.

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

Rigid walls:
The wall must be at least 150mm thick and have concrete, cellular concrete structure or masonry structure, with a minimum density of 600kg/m^3

Rigid floors:
The floor must be at least 150mm thick and have concrete, cellular concrete structure or masonry structure, with a minimum density of 1700kg/m^3.

AVAILABILITY

TYPE	Art. No.
2,5 kg	INCI25KG
10 kg	INCI10KG

INSTALLATION METHOD

1. Prior to sealing, clean the surfaces of the hole and system components from grease and other contaminants thoroughly.
2. Mix the paint well before use. The paint does not require thinning but you can add a water.
3. The space around the pipe should be filled with cement mortar or mineral wool, the space around cable/cable trays should be filled mineral board **INTU FR BOARD A** (or mineral wool board density **INTU FR COAT A**) flush with the face of the partition.
4. Cover the pipe with **INTU FR COAT I** with a layer of appropriate thickness and length according to Table 1.
5. Cover the hole filling (mineral wool/cement mortar) with **INTU FR COAT A** ablative paint, overlapping the surface of the partition according to Table 1.

Approximate consumption of **INTU FR COAT I** – 1,5 kg/m^2 – for a dry film thickness of 1mm.

TRANSPORT AND STORAGE

Store in dry and cool conditions at temperatures between + 5°C and + 25°C. Shelf life 12 months from the production date shown on the packaging.

COMPLIANCE

- Reference standard: EN 1366-3 / ETAG 026-2 / EAD 350454-00-1104
- DoP 5/2019
- ETA 19/0038
- CoC 1488-CPR-0756/W
- TDS
- SDS

SOLUTION DETAILS

NON-FLAMMABLE PIPES

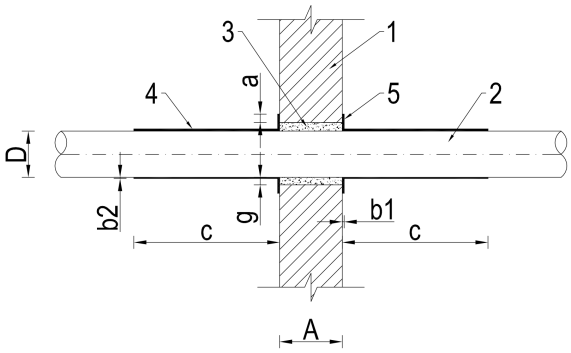
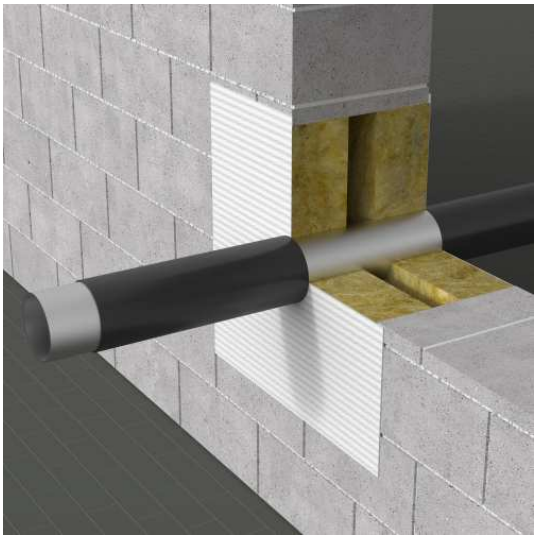


Fig. 1. Penetration with mortar filling

1 – a partition (wall or floor) with a thickness of A≥150mm
2 – non-flammable pipe
3 – concrete mortar filling g<20mm
4 – **INTU FR COAT I** intumescent paint b2≥1mm; c≥500mm;
5 – **INTU FR COAT I** intumescent paint, a≥10mm; b1≥1mm;



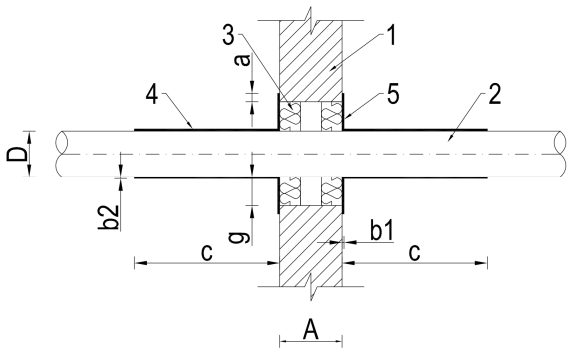
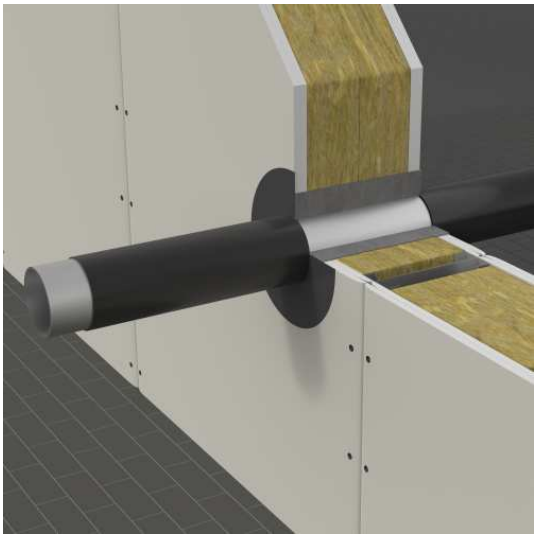


Fig. 2. Transition with mineral wool filling

1 – a partition (wall or floor) with a thickness of A≥150mm
2 – non-flammable pipe
3 – mineral wool filling with a density of min. 150 kg/m^3, thickness min. 60 mm, g≤50mm
4 – **INTU FR COAT I** intumescent paint b2≥1mm; c≥500mm;
5 – **INTU FR COAT A** ablative paint, a≥10mm; b1≥1mm;

NON-FLAMMABLE PIPES



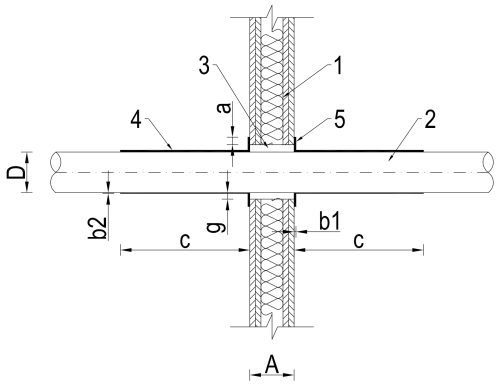
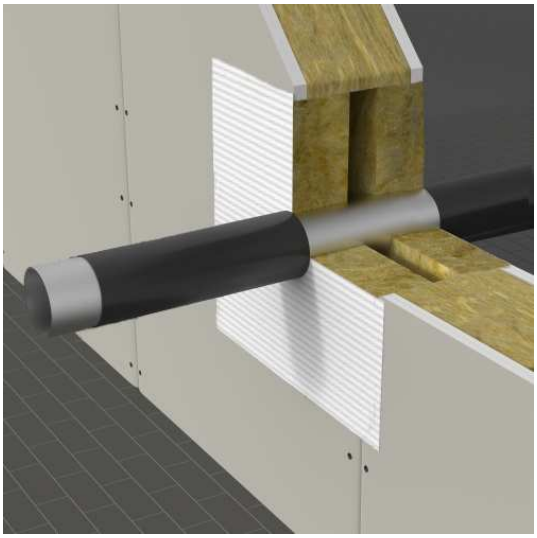


Fig. 3. Penetration with mortar filling

1 – flexible wall, thickness of A≥125mm
2 – non-flammable pipe
3 – concrete mortar filling g<20mm
4 – **INTU FR COAT I** intumescent paint b2≥1mm; c≥500mm;
5 – **INTU FR COAT I** intumescent paint, a≥10mm; b1≥1mm;



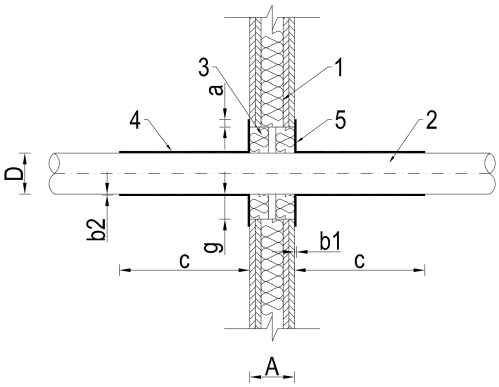
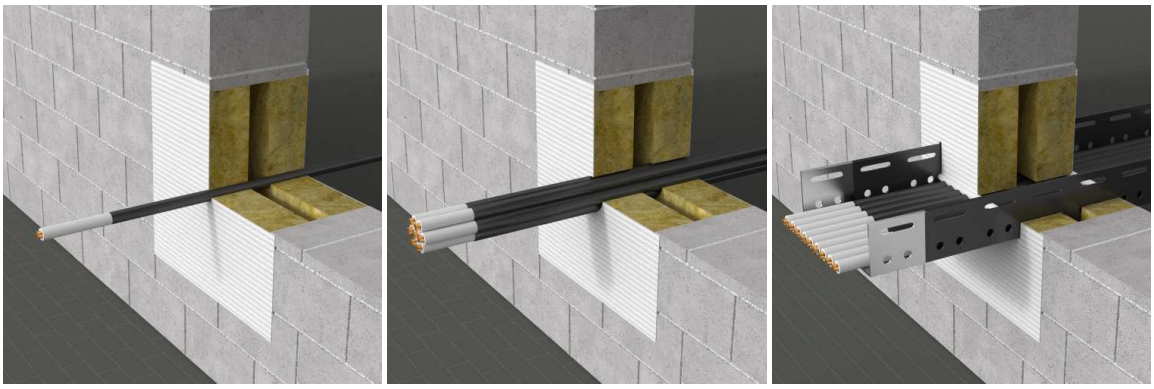
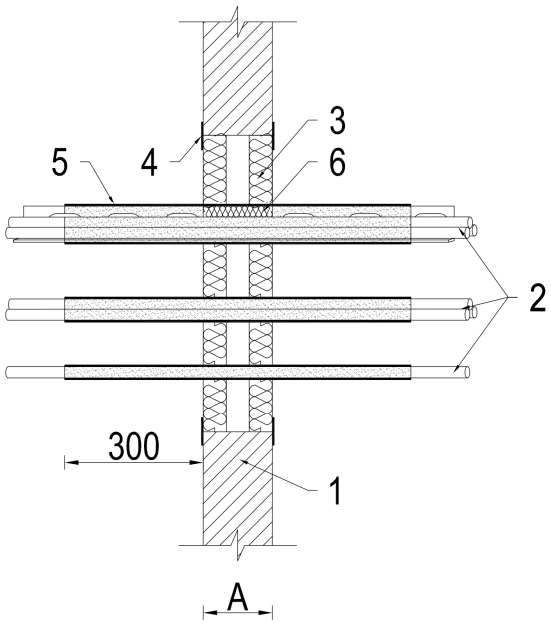


Fig. 4. Transition with mineral wool filling

1 – flexible wall. thickness A≥125mm
2 – non-flammable pipe
3 – mineral wool filling with a density of min. 150 kg/m^3, thickness min. 60 mm, g≤50mm
4 – **INTU FR COAT I** intumescent paint b2≥1mm; c≥500mm;
5 – **INTU FR COAT A** ablative paint, a≥10mm; b1≥1mm;

ELECTRIC CABLES





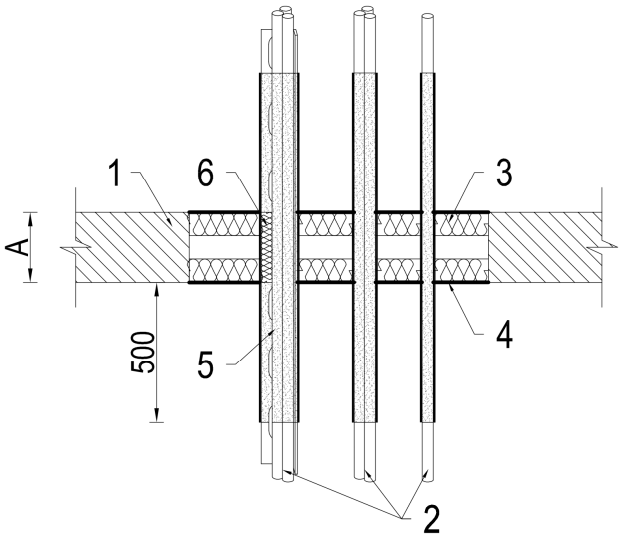


Fig. 5. Penetration seal of electric cables in wall

1 – a partition (wall) with a thickness of A≥150mm
2 – single cable / bundle of cables / cable trays
3 – mineral wool filling with a density of min. 150 kg/m^3, thickness min. 60 mm, g≤50mm painted ablative paint **INTU FR COAT A** (or **INTU FR BOARD A**)
4 – **INTU FR COAT A** ablative paint on combining wool with a barrier, dry layer thickness min 1mm, overlapping the 10mm partition
5 – **INTU FR COAT I** intumescent paint on the length of min 300mm from the partition, thickness of 1mm.
6 – gaps filled with loose mineral wool and intumescent acrylic mastic **INTU FR MASTIC**

Fig. 6. Penetration seal of electric cables in floor

1 – a partition (floor) with a thickness of A≥150mm
2 – single cable / bundle of cables / cable trays
3 – mineral wool filling with a density of min. 150 kg/m^3, thickness min. 60 mm, g≤50mm painted ablative paint **INTU FR COAT A** (or **INTU FR BOARD A**)
4 – **INTU FR COAT A** ablative paint on combining wool with a barrier, dry layer thickness min 1mm, overlapping the 10mm partition
5 – **INTU FR COAT I** intumescent paint on the length of min 500mm from the partition, thickness of 2mm.
6 – gaps filled with loose mineral wool and intumescent acrylic mastic **INTU FR MASTIC**

Table 1. Parameters for protection of non-flammable pipes

	Hole	Diameter	Material	Filling	Coating thickness x length [b2 x c]
STEEL PIPES	Larger than the diameter of the pipe by 2x50mm	≤ 42,4 mm	steel	Mineral wool with a density of min. 150 kg/m³	1mm x 500mm
		≤ 108,0 mm*	steel		1mm x 500mm
		≤ 159,0 mm*	steel		2mm x 500mm
		≤ 219,0 mm*	steel		2mm x 500mm
	Larger than the diameter of the pipe by 2x20mm	≤ 42,4 mm	steel	Concrete mortar	1mm x 500mm
		≤ 108,0 mm	steel		1mm x 500mm
		≤ 159,0 mm	steel		2mm x 500mm
		≤ 219,0 mm	steel		2mm x 500mm

*pipe is also painted inside the partition

	Hole	Diameter	Material	Filling	Coating thickness x length [b2 x c]
COPPER PIPES	Larger than the diameter of the pipe by 2x50mm	≤ 6,0 mm	copper	Mineral wool with a density of min. 150 kg/m³	1mm x 500mm
		≤ 54,0 mm	copper		1mm x 500mm
		≤ 88,9 mm	copper		1mm x 500mm
	Larger than the diameter of the pipe by 2x20mm	≤ 6,0 mm	copper	Concrete mortar	1mm x 500mm
		≤ 54,0 mm	copper		1mm x 500mm
		≤ 88,9 mm	copper		1mm x 500mm

	Filling	Intumescent paint
ELECTRIC CABLES (SINGLE / IN BUNDLE / IN CABLE TRAYS)	Mineral wool with a density of min. 150kg / m³, 60mm thickness, painted with **INTU FR COAT A** ablative paint (or **INTU FR BOARD A**) on both sides of the wall	Thickness min 1mm Length 300 mm from the partition

➔ FIRE RESISTANCE CLASSIFICATION

	Filling	DN	EI Flexible wall	EI Wall	EI Floor
STEEL PIPES	Mineral wool with a density of min. 150 kg/m³	≤ 42,4 mm	EI 120	EI 180	EI 240
		≤ 108,0 mm	EI 120	EI 120	EI 120
		≤ 159,0 mm	-	EI 60	EI 180
		≤ 219,0 mm	-	-	EI 90
	Concrete mortar	≤ 42,4 mm	EI 90	EI 240	EI 240
		≤ 108,0 mm	EI 60	EI 240	EI 180
		≤ 159,0 mm	-	EI 60	EI 120
		≤ 219,0 mm	-	EI 60	EI 90
COOPER PIPES	Mineral wool with a density of min. 150 kg/m³	≤ 6,0 mm	-	EI 120	EI 240
		≤ 54,0 mm	-	EI 90	EI 240
		≤ 88,9 mm	-	-	EI 180
	Concrete mortar	≤ 6,0 mm	-	EI 120	EI 240
		≤ 54,0 mm	-	EI 120	EI 180
		≤ 88,9 mm	-	-	EI 120

	Type of installation	Diameter	EI Wall	EI Floor
ELECTRIC CABLES (also IN TRAYS)	Single cable	Ø ≤ 21mm	EI 120	EI 120*
	Single cable	Ø ≤ 80mm	EI 120	-
	Bundle of cables (made of single cable Ø ≤ 21mm)	Ø ≤ 100mm	EI 120	EI 120*

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