INTU FR UNICOAT

Fire rated intumescent coat

TDS Technical Data Sheet

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.INTUSEAL®

passive fire protection manufacturer

www.intuseal.com

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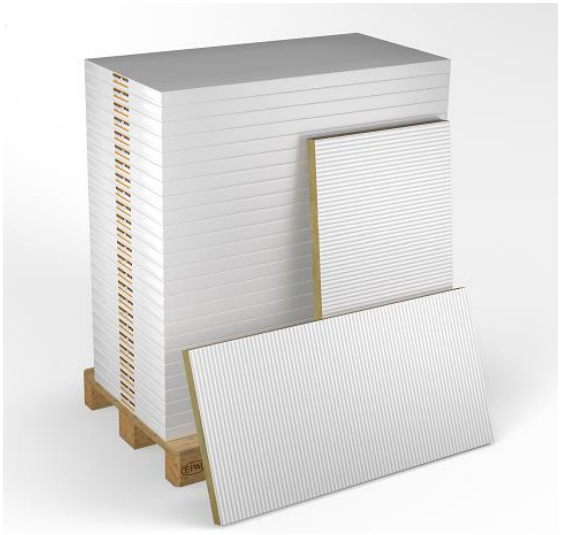
PRODUCT DESCRIPTION

The firestop system **INTU FR UNICOAT** is consisting of firestop paint (**INTU FR UNICOAT P**) with mineral wool. Is designed to protect penetrations of non-flammable pipes, cables, optical fibre. The cover layer that the paint creates, swells under the influence of temperature, forming a protective barrier on the surface of the mineral wool board that needs to be sealed. The coating protects service installations running through the partition up to fire resistance max. **EI 120** (details according to referential documents).

APPLICATION

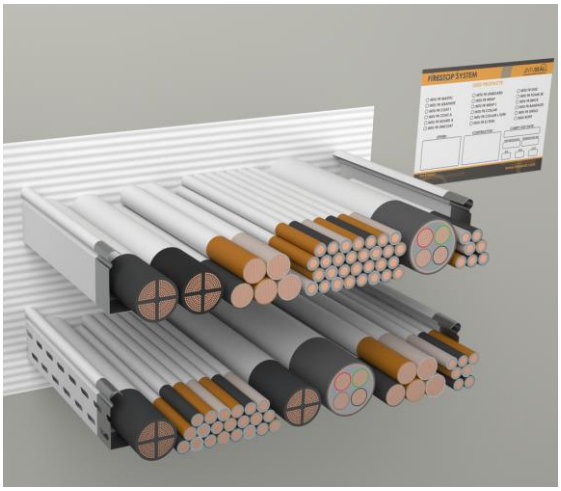


The **INTU FR UNICOAT P** paint is designed to protect non-flammable pipes in floors and compartment walls. It is suitable for electrical single or multiplied cables, fibre optics, in trays or cable ladder racks or without them walls. Maximum opening in wall: 600 x 600 mm, in floor: 1000 x 625 mm (W x H).

Flexible walls:
The wall must be minimum thickness: 100 mm with a frame structure of steel or wooden sections covered on both sides with minimum of 2 layers of panels with thickness min 12,5 mm.

Rigid walls:
The wall must be minimum thickness: 100 mm. Must be made of concrete, reinforced concrete, concrete blocks, cellular concrete, ceramic brick (solid, hollow or lattice) or silicate brick (solid or hollow) with minimum density 600 kg/m^3.

Rigid floors:
The floor must be minimum thickness: 150 mm. Must be made of concrete, reinforced concrete or cellular concrete with minimum density: 550 kg/m^3.



DRYING TIME

Paint condition	Dry to the touch	Complete dry/total hardened
Time	80 min	330 min

* Test was made for paint 1mm thickness. Environmental conditions (humidity and temperature) have impact on drying time.

AVAILABILITY

Product	Contents	Color	Packaging	Pallet	Article no.
INTU FR UNICOAT P	3 kg	white	pail	147	INUP3KG
	12 kg		pail	48	INUP12KG

Product	Thickness	Dimensio	Pallet	Article no.
INTU FR UNIBOARD 1S	50 mm	1200x600	38/76	INUB501SI
INTU FR UNIBOARD 2S	50 mm	1200x600	38/76	INUB502SI

* 1S – board factory painted on one side, one dry film thickness: 0,5mm
2S – board factory painted on two sides, one dry film thickness: 0,5mm

COMPLIANCE

- Reference standard: EN 1366-3 / EAD 350454-00-1104
- TDS

TRANSPORT AND STORAGE

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

INSTALLATION METHOD

1. PREPARATION
Clean the surfaces of the opening and the installations of grease and other contaminants before the protection is performed. Fill the space in penetration with mineral wool painted with **INTU FR UNICOAT P** or painted ready to use board **INTU FR UNIBOARD**

2. APPLICATION
Mix the paint well before use to a homogeneous consistency. The paint does not require dilution. Cover the pipe and cables with **INTU FR UNICOAT P** with the appropriate thickness to obtain demanded dry film thickness and length, according to the table of parameters for the protection of non-flammable pipes or cables.

3. FINISH
Penetration seal is ready. Complete declaration and paste it next to the penetration.

FIRE RESISTANCE CLASSIFICATION

NON-COMBUSTIBLE pipes in rigid walls min 100mm thick with INTU FR UNICOAT P coating					
Type of pipe	**Diameter (mm)**	**Pipe wall thickness (mm)**	**Coating thickness x length (mm)**	**Filling of the opening**	**EI class**
Steel	≤ Ø66,7	1,5 ÷ 14,2	1 x 500	Mineral wool + INTU FR MASTIC	EI 60, E 120
Steel	≤ Ø114,3	3,6 ÷ 14,2	1 x 500	Mineral wool + INTU FR MASTIC	EI 60, E 120
Steel	≤ Ø168,3	4 ÷ 14,2	1 x 500	Mineral wool + INTU FR MASTIC	EI 60, E 120
Copper	≤ Ø54	2	1 x 500	Mineral wool + INTU FR MASTIC	EI 120

CABLES AND CABLE TRAYS with 50mm thick mineral wool filling, painted on both sides 'with INTU FR UNICOAT P paint - any location in a partition			
Type of instalation	**Max. gap dimension (mm)**	**EI class - flexible / rigid**	**EI class - floor**
Single cables Ø ≤ 21 mm or bundles Ø ≤100 mm	Wall: 600 x 600 Floor: 1000 x 625	EI 60	EI 60, E 90
Single cables with diameter Ø ≤ 80		EI 60	EI 60, E 90
Steel cable trays (perforated and solid) and cable ladders racks		EI 60	EI 60, E 90
Uncoated cables with diameter Ø ≤ 24 mm		EI 60	EI 60, E 90
Fiber optics		EI 60	EI 60, E 90
Plastic installation tubes Ø ≤ 16 mm		EI 60	
CABLES AND CABLE TRAYS with 100mm thick mineral wool filling (2 x 50mm), wool painted on one side with INTU FR UNICOAT P – flush with the partition surface			
Type of instalation	**Max. gap dimension (mm)**	**EI class - flexible / rigid wall**	**EI class - floor**
Single cables Ø ≤ 21 mm or bundles Ø ≤100 mm	Wall: 600 x 600 Floor: 1000 x 625	EI 120	EI 120
Single cables with diameter Ø ≤ 80		EI 90, E120	EI 120
Steel cable trays (perforated and solid) and cable ladder racks		EI 120	EI 120
Uncoated cables with diameter Ø ≤ 24 mm		EI 120	EI 120
Fiber optics		EI 120	EI 120
Plastic installation tubes Ø ≤ 16 mm		EI 120	-

➔ SOLUTION DETAILS

PROTECTION OF CABLES AND CABLE TRAYS

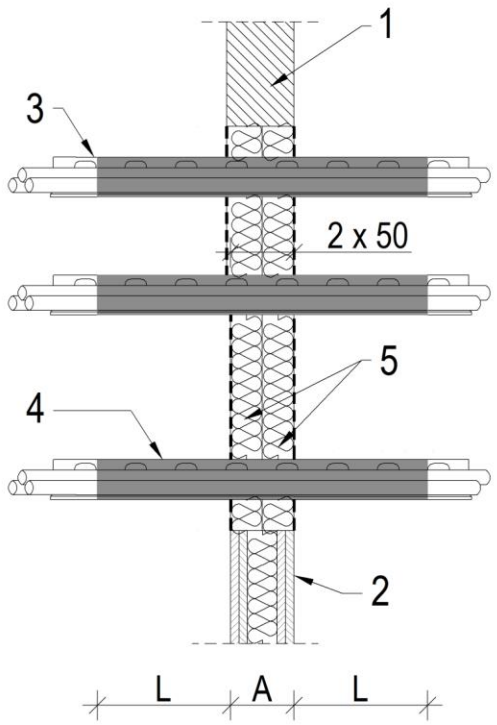


Fig. 1. Penetration through the wall of cables and cable trays with mineral wool min. density 150 kg/m³ with a thickness of 100mm

1 – rigid wall, thickness A ≥ 100 mm
2 – flexible wall, thickness A ≥ 100 mm
3 – single cables Ø ≤ 80 mm
bundle of cables Ø ≤ 100 mm (made of single cables Ø ≤ 21 mm, self-supporting cables, cables in trays, cables in a cable ladder rack)
4 – fire protection coating made of **INTU FR UNICOAT P** paint with a dry film thickness of min. 1mm, over a length of 150mm
5 – **2 x INTU FR UNIBOARD 1S** (mineral wool density: 150 kg/m³ with thickness: 50mm coated one-side with **INTU FR UNICOAT P** paint with dry film thickness of min. 0,5mm)

Installations coated with **INTU FR UNICOAT P** over the thickness of mineral wool.

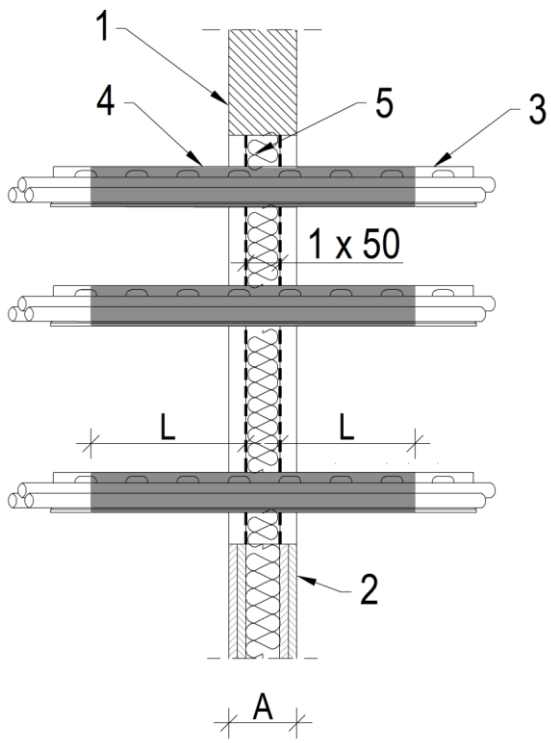


Fig. 2. Penetration through the wall of cables and cable trays with mineral wool min. density 150 kg/m³ with a thickness of 50mm

1 – rigid wall, thickness A ≥ 100 mm
2 – flexible wall, thickness A ≥ 100 mm
3 – single cables Ø ≤ 80 mm
bundle of cables Ø ≤ 100 mm (made of single cables Ø ≤ 21 mm, self-supporting cables, cables in trays, cables in a cable ladder rack)
4 – fire protection coating made of **INTU FR UNICOAT P** paint with minimum 1 mm dry film thickness over a length of 200 mm
5 – **1 x INTU FR UNIBOARD 2S** (mineral wool density: 150 kg/m³ with thickness: 50 mm, coated two-side with **INTU FR UNICOAT P** with one dry film thickness of min. 0,5 mm)

Mineral wool (pos. 5) located anywhere in the thickness of the partition.

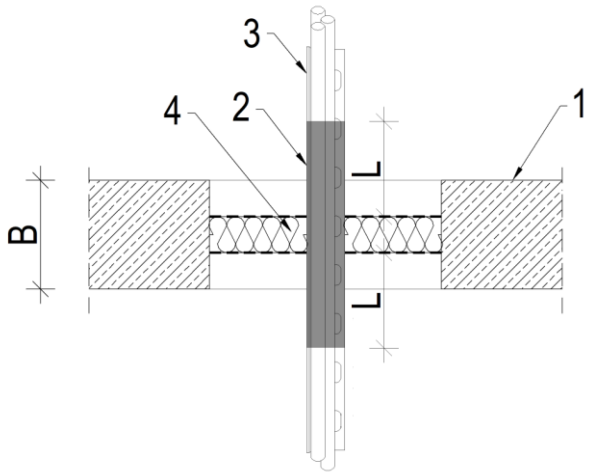


Fig. 3. Penetration through the floor of cables and cable trays with mineral wool min. density 150 kg/m³ with a thickness of 50mm

1 – rigid floor, thickness B ≥ 150 mm
2 – fire protection coating made of **INTU FR UNICOAT P** with minimum 1 mm dry film thickness over a length of 200 mm
3 – single cables with diameter Ø ≤ 80 mm, bundle of cables with diameter Ø ≤ 100 mm made of single cables with diameter Ø ≤ 21 mm, self-supporting cables, cables in trays, cables in a ladder
4 – mineral wool (minimum density 150 kg/m³ with min. thickness 50 mm, coated with **INTU FR UNICOAT P** paint with min. dry film thickness: 0,5mm
or **1 x INTU FR UNIBOARD 2S**
Mineral wool (pos. 4) located anywhere in the thickness of the partition.

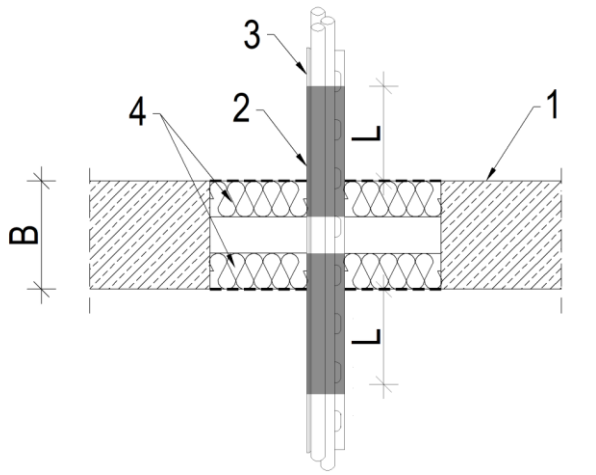


Fig. 4. Penetration through the floor of cables and cable trays with mineral wool min. density 150 kg/m³ with a thickness of 100mm

1 - rigid floor, thickness B ≥ 150 mm
2 - fire protection coating made of **INTU FR UNICOAT P** with 1 mm minimum dry film thickness, over a length of 150 mm
3 - single cables with diameter Ø ≤ 80 mm, bundle of cables with diameter Ø ≤ 100 mm made of single cables with diameter Ø ≤ 21 mm, self-supporting cables, cables in trays, cables in a ladder
4 - mineral wool (min. density 150 kg/m³ with min. thickness 2x 50mm coated with **INTU FR UNICOAT P** paint with 0,5 mm minimum dry film thickness)
or **2 x INTU FR UNIBOARD 1S**

Installations covered with **INTU FR UNICOAT P** paint on the thickness of mineral wool.

PROTECTION OF PIPES

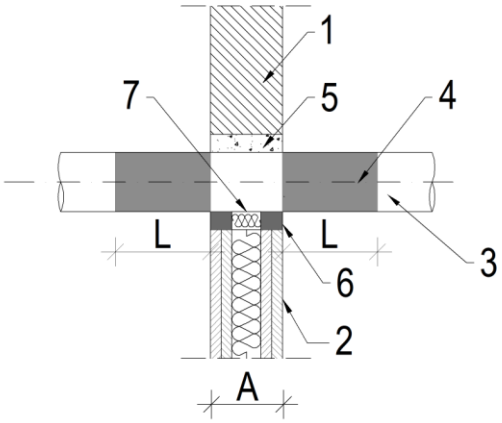


Fig. 5. Penetration through the wall of a non-combustible pipe with mineral wool filling and INTU FR MASTIC or cement mortar

1 – rigid wall, thickness A ≥ 100 mm
2 – flexible wall, thickness A ≥ 100 mm
3 – steel or cast iron pipe
4 – fire protection coating **INTU FR UNICOAT P** of min. thickness 1mm over a length of L = 500mm
5 – filling with cement mortar
6 – fire resistant sealant **INTU FR MASTIC**, min. depth 10mm
7 – mineral wool, min. density 35 kg/m³