

INTU FR COAT A

Fire rated ablative coat

TDS Technical Data Sheet



INTUSEAL®
passive fire protection manufacturer



CE

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→ PRODUCT DESCRIPTION

The firestop ablative paint **INTU FR COAT A** is a one-component product designed for sealing fire protection penetrations and expansion joints with fire resistance class up to **EI 240**. Under fire conditions and the influence of high temperature, endothermic reactions take place in the product. The paint absorbs heat to a large extent, delaying the impact of fire on structural elements. The product is used in combination with mineral wool board with min. density 150 kg/m³ and minimum thickness 60 mm for penetration seals and with min. density 50 kg/m³ for linear joint. The ready-made/painted firestop boards **INTU FR BOARD A** are also available for sale.

→ APPLICATION

INTU FR COAT A is designed for fire protection of:

- penetration seals with single or group of non-flammable pipes in floors or walls
- expansion joints in floors or walls
- electric cables in walls (combined with paint **INTU FR COAT I**)

Rigid walls: The wall must be minimum thickness 150 mm. Must have concrete, cellular concrete or masonry structure, with minimum density 600 kg/m³.

Rigid floors: The floor must be minimum thickness 150 mm. Must have concrete, cellular concrete or masonry structure, with minimum density 1700 kg/m³.

Approximate consumption of **INTU FR COAT A** for mineral wool boards painting: 1,7 kg/m² – for a dry film thickness of 1mm.

INTU FR COAT A DRYING TIME

Paint condition	Dry to the touch	Complete dry/total hardened
Time	60 min	360 min

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

→ AVAILABILITY

Contents	Colour	Packaging	Pallet	Article number
3 kg	White	Pail	147	INCA3KG
12,5 kg		Pail	48	INCA125KG
260 kg		Barrel	2	INCA260KG

→ INSTALLATION METHOD

- 1) Clean the surface of the hole and system components from grease and other contaminants thoroughly
- 2) Cut the mineral wool board (density: $\rho \geq 150$ kg/m³) to the correct size and place the wool board in the hole/gap

Application cases	
non-flammable pipes	expansion joints
3) Apply on pipe mineral wool insulation (density: $\rho \geq 37$ kg/m ³).	3) Put loose mineral wool ($\rho \geq 50$ kg/m ³) or mineral wool board in gap of 100 mm depth.
4) Paint mineral wool board and a part of the insulation by INTU FR COAT A according to solution details below.	4) Paint mineral wool with INTU FR COAT A on one side of the partition. Prepare a partition overlap min 5mm (solution details below).



→ 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:
 - penetration seals: EN 1366-3 / ETAG 026-2 / EAD 350454-00-1104
 - linear joint seals: EN 1366-4 / ETAG 026-3 / EAD 350141-00-1106
- DoP 5/2019
- DoP 12/2019
- Penetration seals: ETA 19/0038
- Linear joint seals: ETA 19/0037
- Penetration seals: CoC 1488-CPR-0756/W
- Linear joint seals: CoC 1488-CPR-0763/W
- BREEAM certification
- TDS
- SDS

➔ TECHNICAL DATA for metal pipes penetration seals

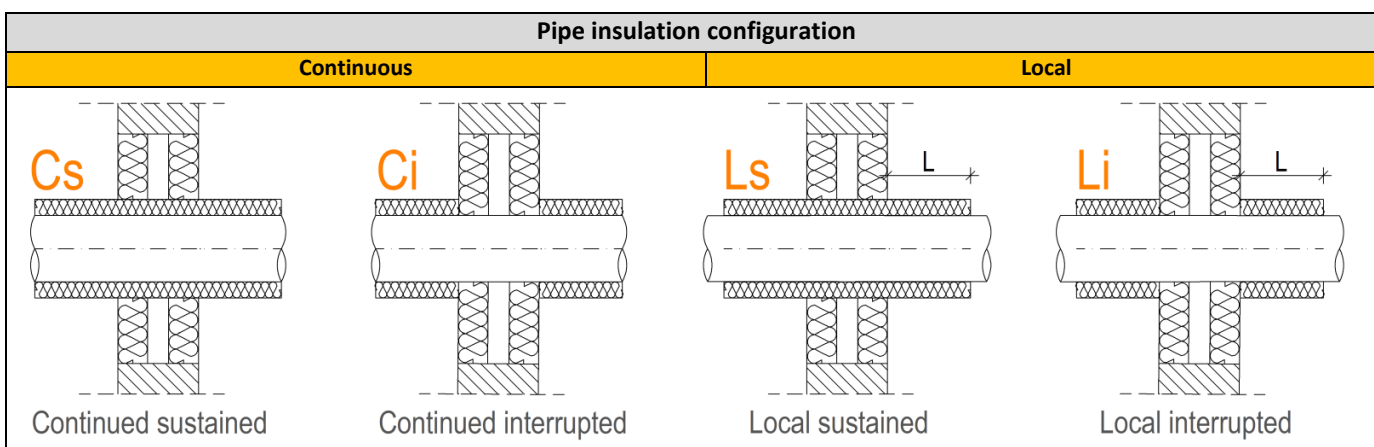


Table 1. Parameters for penetration seal of non-flammable pipes in RIGID WALL (partition filling: 2 x mineral wool board)

Type of penetrating element						Partition: RIGID WALL with thickness A ≥ 150 mm				
Pipe		Pipe insulation				Min. insulation painting with INTU FR COAT A length x thickness	Partition filling	Fire resistance classification C/U and C/C		
Pipe material	Pipe diameter (mm)	Pipe wall thickness (mm)	Insulation length - L (mm)	Insulation thickness - G (mm)	Insulation config					
MINERAL WOOL INSULATED METAL PIPES Density of mineral wool on pipes $\rho \geq 37 \text{ kg/m}^3$		STEEL	$\varnothing \leq 42,4$	2,0 – 14,2	$L \geq 250$	≥ 30	Cs, Ci, Ls, Li	50 x 0,6	2 x mineral wool board ($\rho \geq 150 \text{ kg/m}^3$) thickness ≥ 60 mm coated on one side with 1 mm of INTU FR COAT A or INTU FR BOARD A	EI 120
	$42,4 < \varnothing \leq 48,3$		2,2 – 14,2	$L \geq 250$	≥ 30					
	$48,3 < \varnothing \leq 60,3$		2,6 – 14,2	$L \geq 250$	≥ 50					
	$60,3 < \varnothing \leq 76,1$		3,1 – 14,2	$L \geq 250$	≥ 50					
	$76,1 < \varnothing \leq 88,9$		3,5 – 14,2	$L \geq 250$	≥ 50					
	$88,9 < \varnothing \leq 108,0$		4,0 – 14,2	$L \geq 250$	≥ 50					
	$108,0 < \varnothing \leq 159,0$		4,0 – 14,2	$L \geq 650$	≥ 50					
	$159,0 < \varnothing \leq 219,0$		4,5 – 14,2	$L \geq 650$	≥ 50					
COPPER	$\varnothing \leq 6,0$	$\geq 0,8$	$L \geq 500$	≥ 30	Cs, Ci, Ls, Li	50 x 0,6	2 x mineral wool board ($\rho \geq 150 \text{ kg/m}^3$) thickness ≥ 60 mm coated on one side with 1 mm of INTU FR COAT A or INTU FR BOARD A	EI 120		
	$6,0 < \varnothing \leq 22,0$	$\geq 1,0$	$L \geq 700$	≥ 50	Cs, Ls			EI 60		
	$22,0 < \varnothing \leq 35,0$	1,3 – 14,2	$L \geq 700$	≥ 50						
	$35,0 < \varnothing \leq 42,0$	1,5 – 14,2	$L \geq 700$	≥ 50						
	$42,0 < \varnothing \leq 54,0$	1,7 – 14,2	$L \geq 700$	≥ 50						
	$54,0 < \varnothing \leq 88,9$	2,2 – 14,2	$L \geq 700$	≥ 50						

Table 2. Parameters for penetration seal of non-flammable pipes in RIGID FLOOR (partition filing: 2 x mineral wool board)

Type of penetrating element						Partition: RIGID FLOOR with thickness A ≥ 150 mm		
Pipe		Pipe insulation				Partition filling	Fire resistance classification C/U and C/C	
MINERAL WOOL INSULATED METAL PIPES Density of mineral wool on pipes ρ ≥ 37 kg / m ³		Pipe wall thickness (mm)	Insulation length - L (mm)	Insulation thickness - G (mm)	Min. insulation painting with INTU FR COAT A length x thickness (mm)		Pipe insulation configuration	
Pipe material	Pipe diameter (mm)						Cs, Ls	Ci, Li
STEEL	∅ ≤ 42,4	2,0 – 14,2	L ≥ 250	≥ 30	50 x 0,6	2 x mineral wool board (ρ ≥ 150kg/m ³) thickness ≥ 60 mm coated on one side with 1 mm of INTU FR COAT A or INTU FR BOARD A	EI 180	EI 240
	42,4 < ∅ ≤ 48,3	2,2 – 14,2	L ≥ 250	≥ 50			EI 120	EI 120
	48,3 < ∅ ≤ 60,3	2,6 – 14,2	L ≥ 250	≥ 50				
	60,3 < ∅ ≤ 76,1	3,1 – 14,2	L ≥ 250	≥ 50				
	76,1 < ∅ ≤ 88,9	3,5 – 14,2	L ≥ 250	≥ 50				
	88,9 < ∅ ≤ 108,0	4,0 – 14,2	L ≥ 250	≥ 50				
	108,0 < ∅ ≤ 159,0	4,0 – 14,2	L ≥ 650	≥ 50				
159,0 < ∅ ≤ 219,0	4,5 – 14,2	L ≥ 650	≥ 50	-	-			
COPPER	∅ ≤ 6,0	≥ 0,8	L ≥ 500	≥ 30	50 x 0,6	2 x mineral wool board (ρ ≥ 150kg/m ³) thickness ≥ 60 mm coated on one side with 1 mm of INTU FR COAT A or INTU FR BOARD A	EI 240	EI 240
	6,0 < ∅ ≤ 22,0	≥ 1,0	L ≥ 500	≥ 30			EI 180	EI 60
	22,0 < ∅ ≤ 35,0	1,3 – 14,2	L ≥ 500	≥ 30				
	35,0 < ∅ ≤ 42,0	1,5 – 14,2	L ≥ 500	≥ 30				
	42,0 < ∅ ≤ 54,0	1,7 – 14,2	L ≥ 500	≥ 30				
	54,0 < ∅ ≤ 88,9	2,2 – 14,2	L ≥ 700	≥ 50				

Table 3. Parameters for penetration seal of non-flammable pipes in RIGID FLOOR (partition filing: 1 x mineral wool board)

Type of penetrating element						Partition: RIGID WALL with thickness A ≥ 150 mm		
Pipe		Pipe insulation				Partition filling installed on the floor bottom	Fire resistance classification C/U and C/C	
MINERAL WOOL INSULATED METAL PIPES Density of mineral wool on pipes ρ ≥ 37 kg / m ³		Pipe wall thickness (mm)	Insulation length - L (mm)	Insulation thickness - G (mm)	Insulation config			Min. insulation painting with INTU FR COAT A length x thickness (mm)
Pipe material	Pipe diameter (mm)							
STEEL	∅ ≤ 42,4	2,0 – 14,2	L ≥ 250	≥ 30	Cs, Ls	50 x 0,6	1 x mineral wool board (ρ ≥ 150kg/m ³) thickness ≥ 60 mm coated on one side with 1 mm of INTU FR COAT A or INTU FR BOARD A	EI 90
	42,4 < ∅ ≤ 48,3	2,2 – 14,2	L ≥ 250	≥ 50				EI 60
	48,3 < ∅ ≤ 60,3	2,6 – 14,2	L ≥ 250	≥ 50				
	60,3 < ∅ ≤ 76,1	3,1 – 14,2	L ≥ 250	≥ 50				
	76,1 < ∅ ≤ 88,9	3,5 – 14,2	L ≥ 250	≥ 50				
	88,9 < ∅ ≤ 108,0	4,0 – 14,2	L ≥ 250	≥ 50				

➔ **SOLUTION DETAILS** for metal pipes penetration seals

NON-FLAMMABLE PIPES (continuous insulation)

Fig. 1. Wall penetration $A \geq 150\text{mm}$

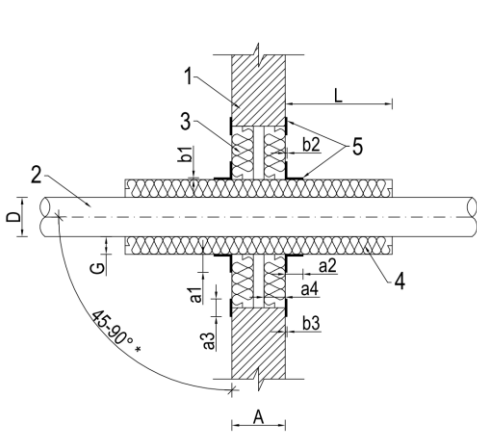
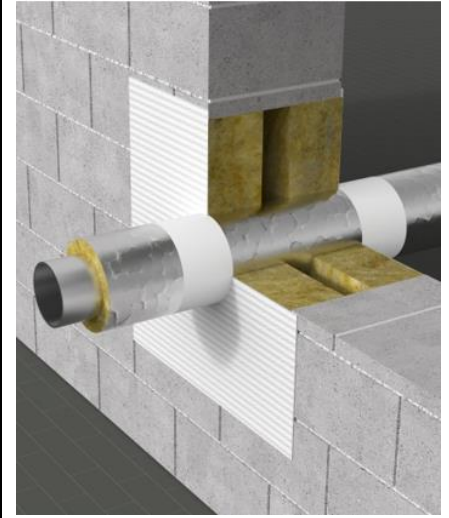
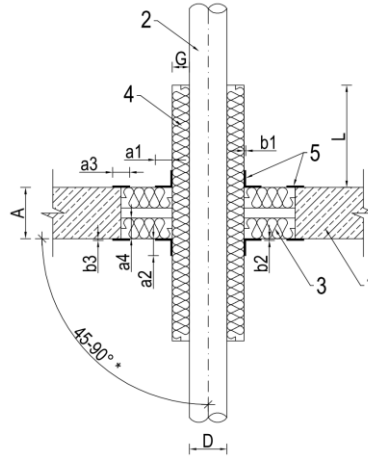


Fig. 2. Floor penetration $A \geq 150\text{mm}$



- 1 – floor/wall, thickness $A \geq 150\text{mm}$ and density $\rho \geq 1700 \text{ kg/m}^3$
- 2 – non-flammable pipe
- 3 – mineral wool board with a density $\rho \geq 150 \text{ kg/m}^3$, coated with ablative paint with 1mm dry layer thickness
- 4 – mineral wool insulation, density $\rho \geq 37 \text{ kg/m}^3$, length L and thickness G according to Technical Data
- 5 – INTU FR COAT A ablative paint, $a1 \geq 50 \text{ mm}$; $a2 \geq 50 \text{ mm}$; $a3 \geq 20 \text{ mm}$; $a4 \geq 60 \text{ mm}$; $b1 \geq 0,6 \text{ mm}$; $b2 \geq 0,6 \text{ mm}$; $b3 \geq 0,6 \text{ mm}$

* - Installations angled $45 \div 90^\circ$ to the partition, based on PN-EN 1366-3 standard

NON-FLAMMABLE PIPES (non-continuous insulation)

Fig. 3. Wall penetration $A \geq 150\text{mm}$

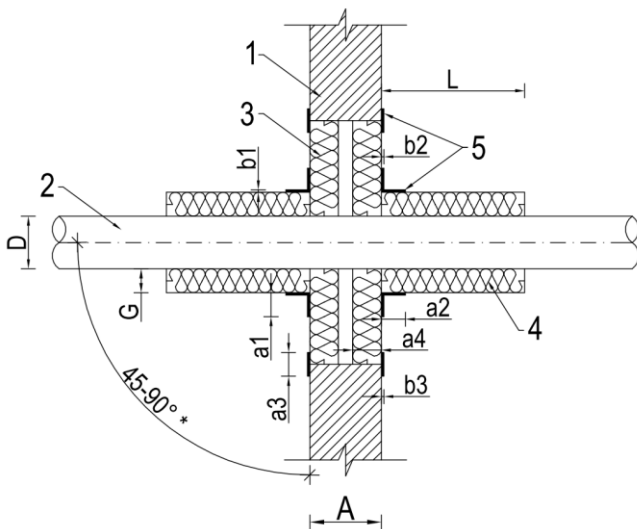
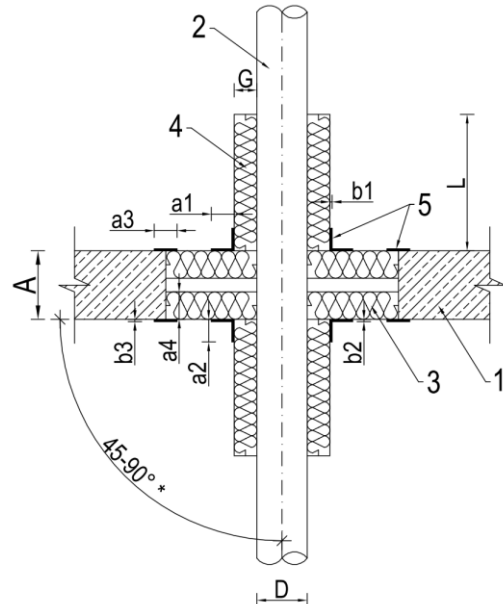
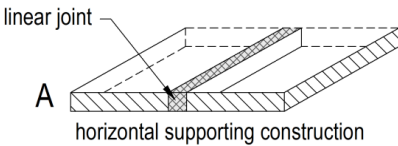
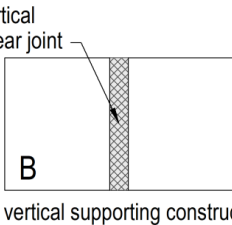
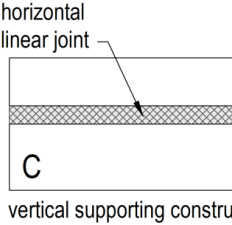
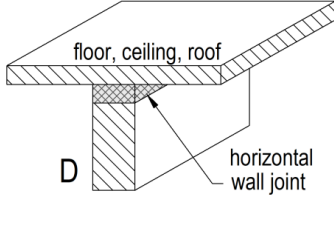



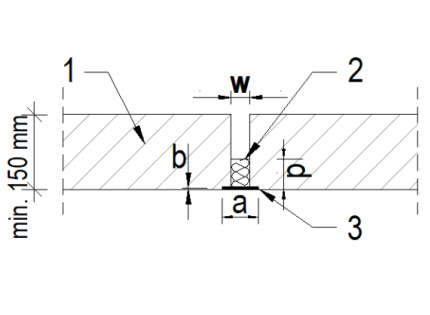
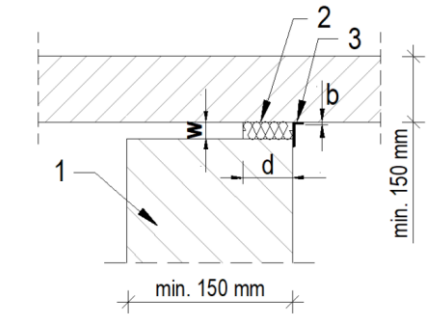
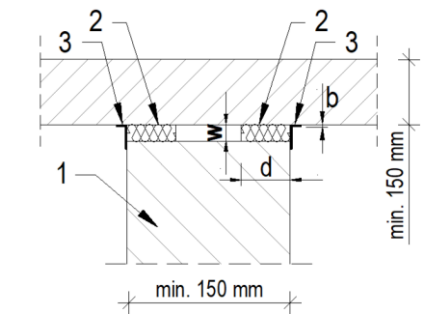
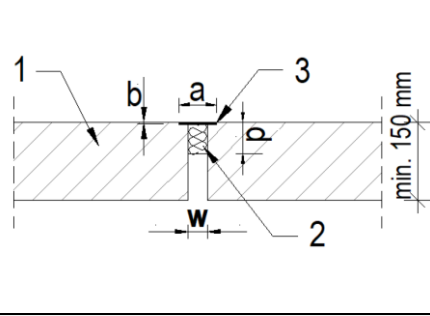
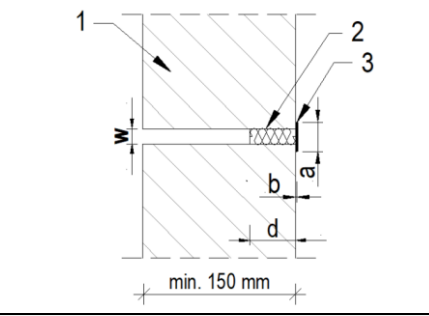
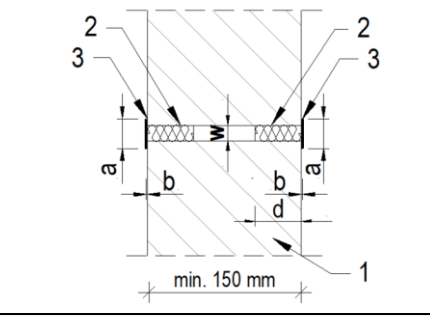


Fig. 4. Floor penetration $A \geq 150\text{mm}$



- 1 – floor/wall, thickness $A \geq 150\text{mm}$ and density $\rho \geq 1700 \text{ kg/m}^3$
- 2 – non-flammable pipe
- 3 – mineral wool board with density $\rho \geq 150 \text{ kg/m}^3$, coated with ablative paint with 1mm dry layer thickness
- 4 – mineral wool insulation with density $\rho \geq 37 \text{ kg/m}^3$, length L and thickness G according to Technical Data
- 5 – INTU FR COAT A ablative paint: $a1 \geq 50\text{mm}$; $a2 \geq 50 \text{ mm}$; $a3 \geq 20 \text{ mm}$; $a4 \geq 60 \text{ mm}$; $b1 \geq 0,6\text{mm}$; $b2 \geq 0,6\text{mm}$; $b3 \geq 0,6\text{mm}$

➔ **TECHNICAL DATA** for linear joints

Possible orientation of linear joints seals		
 <p>linear joint A horizontal supporting construction</p>	 <p>vertical linear joint B vertical supporting construction</p>	 <p>horizontal linear joint C vertical supporting construction</p>
 <p>floor, ceiling, roof D horizontal wall joint</p>		
Fire resistance for linear joints in RIGID FLOOR gap with total width $w \leq 100$ mm		
 <p>Orientation: A $d \geq 100$ mm (depth of wool)</p>	 <p>Orientation: D $d \geq 100$ mm (depth of wool)</p>	 <p>Orientation: D $d \geq 50$ mm (depth of wool)</p>
 <p>min. 150 mm 1 2 3 w b a p</p>	 <p>2 3 1 w d b min. 150 mm</p>	 <p>3 2 1 w d b min. 150 mm</p>
<p>EI120 Wool from any side of the partition</p>	<p>EI120 - EI240 Wool from any side of the partition</p>	<p>EI120 $d \geq 50$ mm (depth of wool)</p>
Fire resistance for linear joints in RIGID WALL gap with total width $w \leq 100$ mm		
<p>Orientation: B $d \geq 100$ mm (depth of wool)</p>	<p>Orientation: C $d \geq 100$ mm (depth of wool)</p>	<p>Orientation: B or C</p>
 <p>1 3 2 b a p w min. 150 mm</p>	 <p>1 2 3 w d b a min. 150 mm</p>	 <p>2 3 1 a b w d b a min. 150 mm</p>
<p>Vertical: EI 120 - EI240 Wool from any side of the partition</p>	<p>Horizontal: EI120 - EI180 Wool from any side of the partition</p>	<p>EI 120</p>
<p>1 – wall / floor with thickness ≥ 150 mm; gap with total width $w \leq 100$ mm; 2 – INTU FR BOARD A and/or mineral wool with density $\rho \geq 150$ kg/m³, min. depth 100 mm (coated on one side with INTU FR COAT A, with 1 mm dry film thickness); 3 – coating of INTU FR COAT A on the mineral wool and wall (on one side of the wall): - length $a \geq w + 2 \times 5$ mm (the wall is covered on the width of at least 5 mm from the both edges of linear joint) - thickness $b \geq 1,0$ mm (on the mineral wool) or $b \geq 0,6$ mm on the wall</p>		