FIRESAFE FT Acrylic



PRODUCT DESCRIPTION

FIRESAFE FT Acrylic is a heat-expanding, one-component acrylic-based joint sealant.

FIRESAFE FT Acrylic expandes two times volumetrically when the temperature reaches approx. 180ºC.

AREAS OF APPLICATION

Fireproof sealing of large joints and openings; penetration sealing of individual cables and cable bundles. Single penetrations and bundles of plastic electrical cable conduits ≤ Ø 16 – 32 mm of PE or PVC-U plastics. Uninsulated pipes in pipes of type PE-X water pipes of plastics ≤ Ø32 mm and single PVC plastic pipes ≤ Ø 50 mm. Penetration sealing of insulated aluminium Alu-PEX pipe, insulated copper or steel pipe and smaller non-insulated steel or copper pipe.

FIRESAFE FT Acrylic is generally used for single installation penetrations with maximum opening ≤ 15 mm between installation penetrations and construction.
For openings ≥ 15 mm between installation penetrations and construction, or with multiple installation penetrations, use FIRESAFE FT Acrylic in combination with FIRESAFE FT Board or FIRESAFE GPG MORTAR.
See the installation details on the following pages in this assembly manual or see also the assembly instructions for the FIRESAFE FT Board for details.

CERTIFICATION / FIRE RESISTANCE / ARTICLE -NR / EL- NO

- FIRESAFE FT Acrylic has been tested according to NS-EN 1366-3 (2009) and NS-EN 1366-4 (2009) and EN 13501-1 / 2.
- Certified according to ETA- 16/0094 - 16/0102.
- Fire resistance EI 30 to EI 240 with extensive applications for walls and floors.
- Fire-classified walls according to EN 1363-1: Plasterboard or masonry / cast construction (density 600 - 650 kg/m^3) ≥100mm.
- Fire classified floors according to EN 1363-1: Floors of masonry/ cast constuction (density 600 - 650 kg/m^3) ≥150mm.
- Approved as smoke sealant according to EN 1634-3.
- For more details, see DoP / Declaration of Performance at www.firesafe.no.
- Part no: 100 045
- El no: 12 178 07



APPLICATION

- Ensure that any openings to be sealed with FIRESAFE FT Acrylic are free from dust and grease.
- Treat absorbent materials with water or primer first.
- Fill the opening with backing material (mineral wool, ceramic fibre, PE board or no backing) where necessary.
- Apply the sealant into the opening and ensure good adhesion to all surfaces.
- Smooth the sealant over the opening; if neat edges are desired, use masking tape.
- FIRESAFE FT Acrylic sealant can normally be painted over after 24 hours, but always check adhesion.
- FIRESAFE FT Acrylic must not be applied at temperatures lower than +5 °C.
- Penetration sealing and sealing of joints is applied using a sealant gun and a standard sealant finishing tool.
- The tool should be cleaned with water.

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SEE FIRE RESISTANCE CLASS AND INSTALLATION DETAILS ON THE NEXT PAGES.

TYPE OF PENETRATION:	FIRE RESISTANCE CLASS:	DETAILS:	PAGE:
Plastic, type PE, electrical cable conduits, (d) ≤ Ø16 mm in flexible and rigid wall.	**EI 120**	Figure 1	**3**
Plastic, type PE, electrical cable conduits, (d) ≤ Ø16 mm in rigid wall and rigid floor.	**EI 120**	Figure 2	**3**
2x PE plastic, type PE, electrical cable conduits, (d) ≤ Ø16 mm in GPG MORTAR in rigid wall.	**EI 120**	Figure 3	**4**
2x PE plastic, type PE, electrical cable conduits, (d) ≤ Ø16 mm in FT Board in rigid wall.	**EI 120**	Figure 4	**4**
Corrugated PVC-U plastic electrical cable conduits, (d) ≤ Ø32 mm in flexible and rigid wall, and rigid floor.	**EI 90**	Figure 5	**5**
Smooth PVC-U plastic electrical cable conduits, (d) ≤ Ø32 mm in flexible and rigid wall, and rigid floor.	**EI 90**	Figure 6	**5**
PVC-U plastic electrical cable conduits in bundle, (d) ≤ Ø50 mm in rigid floor.	**EI 180**	Figure 7	**6**
Cable conduits in bundle ≤ Ø90 mm in flexible and rigid wall, and rigid floor.	**EI 120**	Figure 8	**6**
Single cable ≤ Ø25 mm in rigid wall and rigid floor.	**EI 240**	Figure 9	**7**
Non-insulated steel or copper pipe, (d): ≤ 28mm in rigid wall and rigid floor.	**≤ EI 120**	Figure 10	**7**
Insulated steel or copper pipe, (d): 12 mm ≤ Ø ≤ 28 mm in rigid wall and rigid floor.	**EI 120**	Figure 11	**8**
Non-insulated steel pipe, (d): Ø ≤ 60.3 mm in rigid wall and rigid floor.	**EI 120**	Figure 12	**8**
Insulated steel pipe, (d): Ø ≤ 42.2 mm in rigid wall and rigid floor.	**EI 120**	Figure 13	**9**
Non-insulated aluminum pipe, type Alu-PEX ≤ Ø25 mm in flexible and rigid wall.	**EI 120**	Figure 14	**9**
Insulated aluminum pipe, type Alu-PEX, (d): 25 mm ≤ Ø ≤ 75 mm in rigid wall and rigid floor.	**EI 120**	Figure 15	**10**
Insulated aluminum pipe, type Alu-PEX, (d): 25 mm ≤ Ø ≤ 75 mm in GPG MORTAR in rigid wall.	**EI 60**	Figure 16	**10**
Non-insulated plastic pipe, type PE-X, (d): ≤ 54 mm in rigid floor.	**≤ EI 240**	Figure 17	**11**
Non-insulated plastic pipe, type PE-X, (d): ≤ 54 mm in flexible and rigid wall.	**≤ EI 120**	Figure 18	**11**
Non-insulated plastic pipe, type PVC, (d) ≤ 50 mm in flexible and rigid wall.	**EI 120**	Figure 19	**12**
One-sided vertical joint in rigid wall.	**EI 60**	Figure 20	**12**
Two-sided vertical joint in flexible and rigid wall.	**EI 90**	Figure 21	**13**
Two-sided horisontal joint in rigid floor.	**EI 120**	Figure 22	**13**

DEFINITIONS:

Explanations of abbreviations for pipe end configuration and pipe insulation (ref. NS-EN 1366-3: 2009, Table 2):
C/U: Capped/Uncapped. Closed/open, supported by a fire-rated load-bearing system, non-ventilated pipe systems, e.g. cold and hot water pipes. **C/C**: Capped/Capped. Closed/Closed. Capped pipe systems **U/C:** Unventilated pipe systems, e.g. cold or hot water pipes. All pipes can be in any angles between 90 ° and 45 ° relative to the wall.
Explanations of abbreviations for pipe insulation (ref. NS-EN 1366-3: 2009, Table 1):
LS: Specified insulation locally with specified length out from the wall/floor on both sides and through the penetration. **LS**: Thickness and density of the pipe insulation in the tables can be increased but not reduced. **LS**: Pipe insulation lengths can be increased but not reduced. Pipes insulated with cellular rubber: the thickness of pipe insulation must not be changed. Cellular-rubber insulation must have a fire rating of Euroclass B/B_L-s3, d0.

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Table 1:	Flexible and rigid wall ≥ 100 mm			
Electrical cable conduit diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
PE plastic cable conduits,(d): ≤ Ø16 mm. With cable ≤ Ø13 mm. Pipe wall thickness (t): ≥ 1.0 mm. C/U. Max. opening in wall d: Ø76 mm.	5 x 10 mm	With or without backing	**EI 120**	**Figure 1**

Installation	**Details, figure 1**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic on both sides of the wall around the conduit. Apply FIRESAFE FT Acrylic outside the construction as shown in figure 1. Apply FIRESAFE FT Acrylic around the conduit with joint width 5 mm and 10 mm joint depth.

Table 2:	Rigid wall and rigid floor ≥ 150 mm			
Electrical cable conduit diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
PE plastic cable conduits, (d): ≤ Ø 16 mm. With cable (d): ≤ Ø13 mm. Pipe wall thickness (t): ≥ 1.0 mm. C/U. Max. opening in wall or floor d: Ø76 mm.	30 x 25 mm	With or without backing	**EI 120**	**Figure 2**

Installation	**Details, figure 2**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the conduit with joint width 30 mm and 25 mm joint depth.

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Table 3:	Rigid wall ≥ 100 mm			
Electrical cable conduit diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Thickness of FIRESAFE GPG MORTAR (mm)**	**Fire resistance class**	**See detail, figure**
2x PE plastic cable conduits, (d): ≤ Ø16 mm in GPG MORTAR. With cable (d): ≤ Ø 13 mm. Pipe wall thickness (t): ≥ 1.0 mm. C/C. Max. opening in wall 450x200 mm.	10 x 25 mm	50 mm	**EI 120**	**Figure 3**

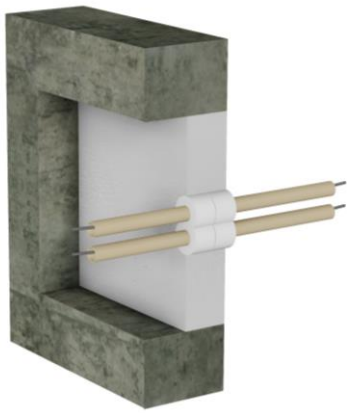
Installation	**Details, figure 3**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. **Installation of FIRESAFE GPG MORTAR** FIRESAFE GPG MORTAR is mixed to a firm consistency with 4 parts GPG powder and 1 part water. Apply FIRESAFE GPG MORTAR in ≥ 50 mm thickness. Apply FIRESAFE FT Acrylic on both sides in the GPG sealant. Apply FIRESAFE FT Acrylic around the conduit with joint width 10 mm and 25 mm joint depth.

Table 4:	Flexible and rigid wall ≥ 100 mm			
Electrical cable conduit diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Thickness of FIRESAFE FT Board 2 S (mm)**	**Fire resistance class**	**See detail, figure**
2x PE plastic cable conduits, (d): ≤ Ø16 mm in FT Board. With cable (d): ≤ Ø 13 mm. Pipe wall thickness (t): ≥ 1.0 mm. C/C. Max. opening in wall 450x200 mm.	10 x 25 mm	50 mm	**EI 120**	**Figure 4**

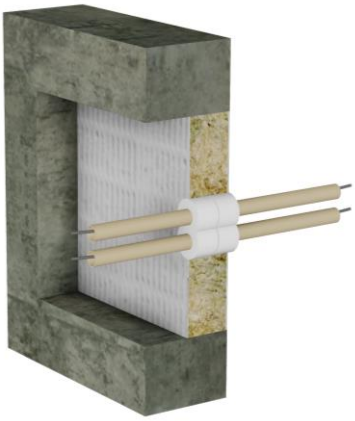
Installation	**Details, figure 4**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. **Installation of FIRESAFE FT Board 2S** Fit FIRESAFE FT Board exactly to the opening with a knife or a saw. Apply FIRESAFE FT Acrylic on all end sides of the FT board with steel trowel or similar before pressing the FT board into the opening. FIRESAFE FT board can be installed flush with the wall on one side or can be centered in the wall. When FIRESAFE FT Board is installed in the opening, gaps between Board and the construction is sealed with FIRESAFE FT Acrylic on both sides of the FT board. Apply FIRESAFE FT Acrylic on both sides in the FIRESAFE FT Board. Apply FIRESAFE FT Acrylic around the conduit with joint width 10 mm and 25 mm joint depth.

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Table 5:	Flexible and rigid wall ≥ 100 mm. Rigid floor ≥ 150 mm			
Electrical cable conduit diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Corrugated PVC-U plastic cable conduits, (d): ≤ Ø 32 mm. With cable (d): ≤ Ø21 mm. Max. opening in wall or floor d: ≤ Ø52 mm.	10 x 25mm	With or without backing	**EI 90**	**Figure 5**

Installation	**Details, figure 5**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the conduit with joint width 10 mm and 25 mm joint depth.

Table 6:	Flexible and rigid wall ≥ 100 mm. Rigid floor ≥ 150 mm			
Electrical cable conduit diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Smooth PVC-U plastic cable conduits, (d): ≤ Ø 32 mm. With cable (d): ≤ Ø21 mm. Max. opening in wall or floor d: ≤ Ø52 mm.	10 x 25mm	With or without backing	**EI 90**	**Figure 6**

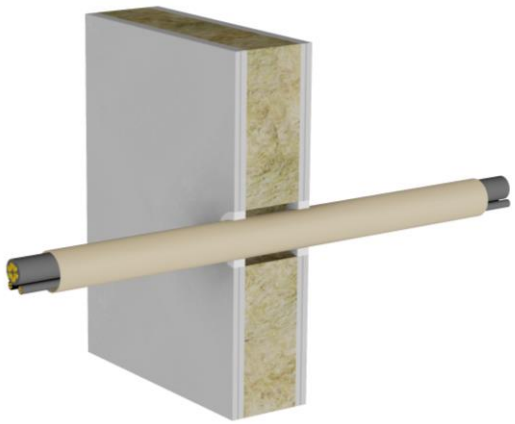
Installation	**Details, figure 6**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the conduit with joint width 10 mm and 25 mm joint depth.

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Table 7:	Rigid floor ≥ 150 mm			
Electrical cable conduits in bundle diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Corrugated or smooth PVC-U plastic cable conduits (d): 16 mm ≤ Ø ≤ 32 mm in bundle (d): ≤ Ø 50 mm. With cable (d): ≤ Ø21 mm. Max. opening in floor d: ≤ Ø82 mm.	15 x 25mm	With or without backing	**EI 180**	**Figure 7**

Installation	**Details, figure 7**
	Electric conduit must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the floor on both sides. Apply FIRESAFE FT Acrylic around the conduit with joint width 15 mm and 25 mm joint depth. Apply FIRESAFE FT Acrylic between electric cable conduits for smoke seal.

Table 8:	Flexible and rigid wall ≥ 100 mm. Rigid floor ≥ 150 mm			
Electrical cables in bundle diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Cable (d): ≤ Ø 13 mm or cable bundle (d): ≤ Ø 90 mm. With 32 x cables (d): ≤ Ø13 mm. Max. opening in wall or floor d: ≤ Ø110 mm.	10 x 25mm	With or without backing	**EI 120**	**Figure 8**

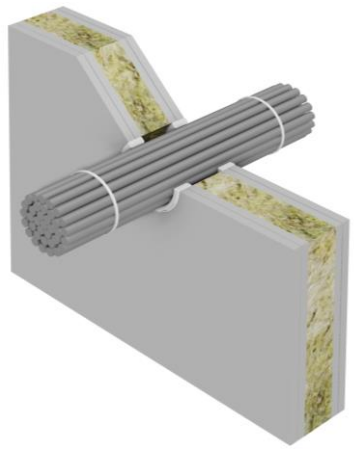
Installation	**Details, figure 8**
	Electric cable bundle must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the cable bundle with joint width 10 mm and 25 mm joint depth. Apply also FIRESAFE FT Acrylic between electrical cables for smoke seal.

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Table 9:	Rigid wall and rigid floor ≥ 150 mm			
Cable diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness (mm)**	**Fire resistance**	**See detail, figure**
Cable ≤ Ø25 mm. Max. opening in wall/floor d: ≤ Ø85 mm.	30 x 15mm	Backing of stone wool, density 60kg/m^3, 120 mm	**EI 240**	**Figure 9**

Installation	**Details, figure 9**
	Cable must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Install stone wool backing in the opening. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the cable with joint width 30mm and 15 mm joint depth.

Table 10:	Rigid wall and rigid floor ≥ 150 mm			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Non-insulated steel or copper pipe (d): ≤ Ø12 mm. Pipe wall thickness (t): ≥ 1.0 mm. C/U	10 x 25 mm	With or without backing	**EI 120**	**Figure 10**
Non-insulated steel or copper pipe (d): ≤ Ø15 mm. Pipe wall thickness (t): ≥ 1.1 mm. C/U	15 x 25 mm	With or without backing	**EI 120**	
Non-insulated steel or copper pipe (d): ≤ Ø22 mm. Pipe wall thickness (t): ≥ 1.1 mm. C/U	10 x 25 mm	With or without backing	**EI 60**	
Non-insulated steel or copper pipe (d): ≤ Ø28 mm. Pipe wall thickness (t): ≥ 1.2 mm. C/U	11 x 25 mm	With or without backing	**EI 60**	

Installation	**Details, figure 10**
	Pipe must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the pipe with joint width from 10 mm to 15 mm and 25 mm joint depth.

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Table 11:	Rigid wall and rigid floor ≥ 150 mm				
Pipe diameter (Ø)	**Pipe insulation: type, density**	**Pipe insulation: Thickness (mm), length (mm), distribution**	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Fire resistance class**	**See detail, figure**
Steel or copper pipe, (d): 12 mm ≤ Ø ≤ 28 mm Pipe wall thickness (t): ≥ 1.0 mm. C/U	Cellular rubber (Armaflex AF or equivalent)	13 mm, 700 mm, LS	10 x 25 mm	**EI 120**	**Figure 11**

Installation	**Details, figure 11**
	Pipe must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the pipe insulation with joint width 10 mm and 25 mm joint depth. **LS**: The pipe must have continuous insulation 13 mm thick, length 700 mm on each side of the wall or the floor.

Table 12:	Rigid wall and rigid floor ≥ 150 mm			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Non-insulated steel pipe, (d): ≤ Ø60.3 mm. Pipe wall thickness (t): ≥ 3.0 mm. C/U	10 x 25mm	With or without backing	**EI 120**	**Figure 12**

Installation	**Details, figure 12**
	Pipe must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the pipe with joint width 10 mm and 25 mm joint depth.

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Table 13:	Rigid wall and rigid floor ≥ 150 mm				
Pipe diameter (Ø)	**Pipe insulation: type, density**	**Pipe insulation: Thickness (mm), length (mm), distribution**	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Fire resistance class**	**See detail, figure**
Steel pipe, (d): ≤ Ø42.2 mm. Pipe wall thickness (t): ≥ 3.25 mm. C/U	Stone wool 75 kg/m^3	25 mm, 1000 mm, LS	9 x 25 mm	**EI 120**	**Figure 13**

Installation	**Details, figure 13**
	Pipe must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the pipe insulation with joint width 9 mm and 25 mm joint depth. **LS**: The pipe must have continuous insulation 25 mm thick, length 1000 mm on each side of the wall or the floor.

Table 14:	Flexible and rigid wall ≥ 100 mm			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Non-insulated aluminum pipe, type Alu-PEX, (d): ≤ Ø25 mm. Pipe wall thickness (t): 2.0 mm ≤ t ≤ 2.5 mm.C/U Max. opening in wall d: Ø45 mm.	10 x 25mm	With or without backing	**EI 120**	**Figure 14**

Installation	**Details, figure 14**
	Pipe must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall on both sides. Apply FIRESAFE FT Acrylic around the pipe with joint width 10 mm and 25 mm joint depth.

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Table 15:	Rigid wall and rigid floor ≥ 150 mm				
Pipe diameter (Ø)	**Pipe insulation: type, density**	**Pipe insulation: Thickness (mm), length (mm), distribution**	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Fire resistance class**	**See detail, figure**
Aluminum pipe, type Alu-PEX, (d): 25 mm ≤ Ø ≤ 75 mm. Pipe wall thickness (t): ≥ 2.5 mm. C/U	Cellular rubber (Armaflex AF or equivalent)	13 mm, 700 mm, LS	10 x 25 mm	**EI 120**	**Figure 15**

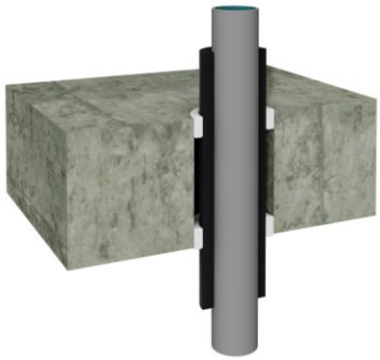
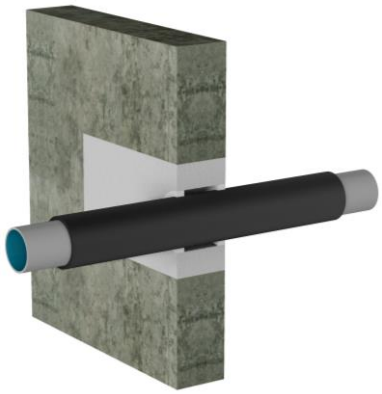
Installation	**Details, figure 15**
	Pipe must be cleaned for dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall or the floor on both sides. Apply FIRESAFE FT Acrylic around the pipe insulation with joint width 10 mm and 25 mm joint depth. **LS**: The pipe must have continuous insulation 13 mm thick, length 700 mm on each side of the wall or the floor.

Table16:	Rigid wall ≥ 100 mm			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Thickness FIRESAFE GPG MORTAR (mm)**	**Fire resistance class**	**See detail, figure**
Aluminum pipe, type Alu-PEX, (d): 25 mm ≤ Ø ≤ 75 mm. Pipe wall thickness (t): 2.0 ≤t ≤ 7.5 mm. C/U Max. opening in wall ≤ 200 x 1000 mm.	10 x 25 mm	100 mm	**EI 60**	**Figure 16**

Applicable to aluminum pipes Alu- PEX with pipe wall thickness (t): 2.0 ≤t ≤ 7.5 mm. (13 mm thickness pipe insulation type Armaflex).
LS: The pipe must have a continuous pipe insulation type Armaflex 700 mm long on each side of the wall.
Other similar cellular rubber materials may be used in fire class Euroclass B / BL, s3-d0.
Explanation of abbreviations for pipe insulation (ref. 1366-3: 2009, Table 1):
LS: Length from wall on both sides and through the penetration.
LS: Length of pipe insulation can be increased, but not reduced.

Installation	**Details, figure 16**
	**Installation of FIRESAFE GPG MORTAR** Pipe must be cleaned for dust. Debris and dust in the opening must be removed. FIRESAFE GPG MORTAR is mixed to a firm consistency with 4 parts GPG powder and 1 part water. Apply FIRESAFE GPG MORTAR in ≥ 100 mm thickness. Apply FIRESAFE FT Acrylic flush with the GPG sealant on both sides of the wall. Apply FIRESAFE FT Acrylic around insulated pipe in the GPG sealant after GPG MORTAR is cured. Apply FIRESAFE FT Acrylic around the pipe insulation with joint width 10 mm and 25 mm joint depth.

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FIRESAFE FT Acrylic

Table 17:	Rigid floor ≥ 150 mm			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Plastic pipe in pipe PE-X (d) Inner diameter pipes ≤ Ø15 mm - outer diameter pipes ≤ Ø28 mm. PipeLife Upnor. Pipe wall thickness (t): ≤ 2.5 mm. C/U	15 x 25mm	With or without backing	**EI 240**	**Figur 17**
Plastic pipe in pipe PE-X (d) Inner diameter pipes ≤ Ø16 mm - outer diameter pipes ≤ Ø25 mm. PipeLife Upnor. Pipe wall thickness (t): ≤ 2.2 mm. C/U	15 x 25mm	With or without backing	**EI 240**	
Plastic pipe in pipe PE-X (d) Inner diameter pipes ≤ Ø32 mm - outer diameter pipes ≤ Ø54 mm. PipeLife Upnor. Pipe wall thickness (t): ≤ 4.4 mm. C/U	15 x 25mm	With or without backing	**EI 180**	

Installation	**Details, figure 17**
	Pipe must be cleaned for grease and dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the floor on both sides. Apply FIRESAFE FT Acrylic around the pipe with joint width 15 mm and 25 mm joint depth.

Table 18:	Flexible and rigid wall ≥ 100 mm			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Plastic pipe in pipe PE-X (d) Inner diameter pipes ≤ Ø15 mm - outer diameter pipes ≤ Ø28 mm. PipeLife Upnor. Pipe wall thickness (t): ≤ 2.5 mm. C/U	10 x 25mm	With or without backing	**EI 90**	**Figure 18**
Plastic pipe in pipe PE-X (d) Inner diameter pipes ≤ Ø16 mm - outer diameter pipes ≤ Ø25 mm. PipeLife Upnor. Pipe wall thickness (t): ≤ 2.2 mm. C/U	10 x 25mm	With or without backing	**EI 120**	
Plastic pipe in pipe PE-X (d) Inner diameter pipes ≤ Ø32 mm - outer diameter pipes ≤ Ø54 mm. PipeLife Upnor. Pipe wall thickness (t): ≤ 4.4 mm. C/U	10 x 25mm	With or without backing	**EI 60**	

Installation	**Details, figure 18**
	Pipe must be cleaned for grease and dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall on both sides. Apply FIRESAFE FT Acrylic around the pipe with joint width 10 mm and 25 mm joint depth.

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FIRESAFE FT Acrylic

Table 19:	Flexible and rigid wall ≥ 100 mm.			
Pipe diameter (Ø)	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness**	**Fire resistance class**	**See detail, figure**
Plastic pipe type PVC (d): ≤ Ø50 mm Pipe wall thickness (t): 3.4 mm. C/U Max. Opening in wall d: ≤ Ø70 mm.	10 x 25mm	With or without backing	**EI 120**	**Figure 19**

Installation	**Details, figure 19**
	Pipe must be cleaned for grease and dust. Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Apply FIRESAFE FT Acrylic flush with the wall on both sides. Apply FIRESAFE FT Acrylic around the pipe with joint width 10 mm and 25 mm joint depth.

Table 20:	Rigid wall ≥ 100 mm			
One-sided vertical joint. Joint width (mm):	**Width × depth FIRESAFE FT Acrylic from one side (mm)**	**Backing, type, density, thickness (mm)**	**Fire resistance class**	**See detail, figure**
≤ 50 mm	10 mm	50 mm stone wool from one side, density 50 kg/m^3	**EI 60**	**Figure 20**

Installation	**Details, figure 20**
	Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Make sure there is sufficient adhesion on all surrounding surfaces. Install stone wool backing in the sealant opening. Apply FIRESAFE FT Acrylic flush with the wall on one side. Apply FIRESAFE FT Acrylic with 10 mm joint depth from one side of the wall. Smooth the FIRESAFE FT Acrylic in the opning. If needed use masking tape to get straight edges.

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FIRESAFE FT Acrylic

Table 21:	Flexible and rigid wall ≥ 100 mm			
Two-sided vertical joint. Joint width (mm):	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness (mm)**	**Fire resistance class**	**See detail, figure**
≤ 50 mm	10 mm	50 mm stone wool from one side, density 50 kg/m^3	**EI 90**	**Figure 21**

Installation	**Details, figure 21**
	Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Make sure there is sufficient adhesion on all surrounding surfaces. Install stone wool backing in the sealant opening. Apply FIRESAFE FT Acrylic flush with the wall on both sides. Apply FIRESAFE FT Acrylic with 10 mm joint depth from both sides of the wall. Smooth the FIRESAFE FT Acrylic in the opning. If needed use masking tape to get straight edges.

Table 22:	Rigid floor ≥ 150 mm			
Two-sided horizontal joint. Joint width (mm):	**Width × depth FIRESAFE FT Acrylic from two sides (mm)**	**Backing, type, density, thickness (mm)**	**Fire resistance class**	**See detail, figure**
≤ 50 mm	10 mm	50 mm stone wool from one side, density 50 kg/m^3	**EI 120**	**Figure 22**

Installation	**Detalj, figur 22**
	Debris and dust in the opening must be removed. Absorbent materials must be pre-wetted with water or primer. Make sure there is sufficient adhesion on all surrounding surfaces. Install stone wool backing in the sealant opening. Apply FIRESAFE FT Acrylic flush with the floor on both sides. Apply FIRESAFE FT Acrylic with 10 mm joint depth from both sides of the floor. Smooth the FIRESAFE FT Acrylic in the opning. If needed use masking tape to get straight edges.

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FIRESAFE FT Acrylic

DOCUMENTATION INFORMATION
Overview of applications as well as fire resistance classes are shown in this assembly view. Other documentation such as product datasheets, safety data sheets (SDS) and declaration of performance (DoP) can be downloaded from www.firesafe.no. Product Certification with Declaration of performance (DoP); For more information see certification of CE-labeled construction products through ETA at www.eota.eu/. Always consult www.firesafe.no for the latest version of assembly instructions, product data sheet and declaration of performance (DoP), as product development and testing are ongoing processes in FIRESAFE AS. Contact FIRESAFE AS, Technical Department for other EI requirements, non-standardized solutions or complex project-specific requirements; e-mail: firmapost@firesafe.no.

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