Firetect®

DECLARATION OF PERFORMANCE

(DoP)

No. CPR-14/0251-wrap

version 23/1

1.	Unique identification of product	**Firetect® Wrap + Wrap-'n-roll**
2.	Intended use	service closure for structural openings for pipe penetrations, to form a penetration seal in case of fire to reinstate the fire resistance of: - standard flexible walls ≥ 100mm - standard rigid walls ≥ 100mm - standard rigid floors ≥ 150mm
3.	Manufacturer	KLF Building Products BV Techniekweg 11, 4207 HC Gorinchem, The Netherlands
4.	Authorised representative	not applicable
5.	System of AVCP	System 1
6a.	Harmonised standard	not applicable
	Notified body	not applicable
6b.	European Assessment Document (EAD)	350454-00-1104
	European Technical Assessment (ETA)	ETA-14/0251
	Certificate of Constancy of Performance	0960-CPR-SKGIKOB.011130.01.NL
	Technical Assessment Body (TAB)	SKG-IKOB
	Identification notified body	No. 0960

7. Declared performances

basic requirements	characteristics	performances
BWR 1 Mechanical resistance + stability		not relevant
BWR 2 Safety in case of fire		
EN 13501-1	reaction to fire	Class F
EN 13501-2	resistance to fire	per tested assembly; EI 30 up to EI 240, see ANNEX BWR2 + ANNEX A
	field of application	
BWR 3 Hygiene, health + environment		IA1, S/W3
EAD 350454-00-1104, §2.2.3	air permeability	npd
EAD 350454-00-1104, §2.2.4	water permeability	npd
EAD 350454-00-1104, §2.2.5	content, emission and/or release of dangerous substances	acc. CLP classified as not dangerous acc. Regulation 1272/2008
BWR 4 Safety + accessibility in use		
EAD 350454-00-1104, §2.2.6	mechanical resistance + stability	npd
EAD 350454-00-1104, §2.2.7	resistance to impact / movement	npd
EAD 350454-00-1104, §2.2.8	adhesion	npd
EAD 350454-00-1104, §2.2.9	durability	Y_1 (internal use)
BWR 5 Protection against noise		
EAD 350454-00-1104, §2.2.10	airborne sound insulation	npd
BWR 6 Energy economy + heat retention		
EAD 350454-00-1104, §2.2.11	thermal properties	npd
EAD 350454-00-1104, §2.2.12	water vapour permeability	npd
General aspects relation to fitness for use		
EAD 350454-00-1104, §1.2.2	assumed working life for the intended use	10 years

8. Specific Technical Documentation: not applicable

npd= no performance determined

The performances of the products identified are in conformity with the declared performances. This declaration of performance is issued, in accordance with Regulation 305/2011, under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer in Gorinchem dated 12-05-2023 by C. Buikema

field of application
(FoA)

Firetect® Wrap + Wrap-'n-roll

tested and certified by ETA-14/0251;
fire resistance performances and assembly methods for uses in:

constructive element [1)]

fire rated walls acc. EN 1363-1	- flexible wall ≥100mm; metal or timber studs, plaster board type A + wall insulation - rigid wall ≥100mm: blockwork/concrete/masonry, density ≥ 600 kg/m^3 - rigid wall ≥150mm: blockwork/concrete/masonry, density ≥ 600 kg/m^3 - CLT wall ≥100mm: cross-laminated timber
fire rated floors acc. EN 1363-1	- rigid floor ≥150mm: (aerated) concrete, density ≥ 600 kg/m^3 - CLT floor ≥140mm: cross-laminated timber

[1)] the constructive element must be classified acc. EN 13501-2 for the required fire resistance period

fire resistance

field of application:
EI **30** t/m EI **240**: Wrap + Wrap-'n-roll

acc. EN 13501-2 / 1366-3
structural openings for pipe penetrations: [2)]

- PE/PP/PVC	≤ Ø160mm	also in PA board
- PP-R	≤ Ø125mm	
- PP-MD	≤ Ø160mm	also with pipe sockets
- PP-MX	≤ Ø160mm	also with pipe sockets
- aluPE-X	≤ Ø75mm	with pipe insulation + PA board
- PE-Xa	≤ Ø32 (54) mm	also with pipe insulation
- copper	≤ Ø76mm	with pipe insulation
- steel	≤ Ø219mm	with pipe insulation
- cast iron	≤ Ø110mm	

[2)] support services; support distance: see principle detail

environmental performances	BREEAM	LEED	VOC France	EN 717-1§	EMICODE	M1	Indoor Air
example protocols, click for full list	☑	☑	A+	E1		☑	Comfort GOLD

directions for use: application, fasteners, finish & maintenance: see TDS

product information

Product certification by DoP; more info on certification of CE building products through ETA at firetect.eu/certification
- full DoP version: declaration of performance + ANNEX BWR2 + ANNEX A; upon request
- web DoP version: declaration of performance + ANNEX BWR2; other info can be downloaded at firetect.eu/download
- FoA charts; suitable products per type of fireseal + EI performance + product / joint details
- TDS: general directions for use + product specs

Consult firetect.eu/download for updated versions; product development + fire tests are ongoing processes at KLF.
Contact KLF for other EI requirements and (non)standard or complex site requirements; mail info@klf.nl

How-to-read

charts Field of Application Firetect® fire rated building products

certification

Use FoA charts as *guideline* to quickly identify suitable Firetect products within classification.

Always apply acc. details as stated per principle detail; click EI performance in chart.

Product certification of CE marked building products is done by DoPs (Declaration of Performance), rather than test reports; more info at www.firetect.eu. Charts do not include all test data. Contact KLF for non-standard (EI) requirements: +31 345 63 97 97 or info@klf.nl.

supporting construction

product has been tested in + certified for constructive element, default type:

1	flexible wall ≥ 100 mm; metal or timber studs, plaster board type A + wall insulation
1-n(xxx)	flexible wall ≥ (xxx) mm; metal or timber studs, plaster board type F, **no** wall insulation
1-sh(xxx)	shaft wall ≥ (xxx) mm, **non**-insulated
	(xxx) = wall thickness in mm; see in charts with EI performance
1-sw	sandwich wall ≥ 100 mm
2	rigid wall ≥ 100 mm: blockwork/concrete/masonry, density ≥ 600 kg/m^3
3	rigid wall ≥ 150 mm: blockwork/concrete/masonry, density ≥ 600 kg/m^3
4	flexible ceiling ≥ 150 mm: metal studs, plaster board type F
5	rigid floor ≥ 150 mm: (aerated) concrete, density ≥ 600 kg/m^3
6	CLT wall ≥ 100 mm
7	CLT floor ≥ 140 mm

Note Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

tested in construction type **1**	also applicable in constructive element type **2+3** if wall thickness + m^3 weight are either equal or increased
tested in construction type **2**	also application in constructive element type **3** if wall thickness + m^3 weight are either equal or increased
tested in PA board	also applicable in FR Mortar fireseal; contact KLF for more info

"you may always upgrade, but never downsize"

pipe penetrations

type of plastic	all plastic pipe types acc. EN norms
type of metal	all copper or steel or pipes; also suitable for material with lower thermal conductivity + melting point at least equal to tested material
EI	fire resistance in minutes (integrity + insulation)
U/U + U/C + C/U + C/C	pipe end: U = uncapped and C = capped, at resp. exposed / unexposed side
1S + 2S	PA board coated on 1 side (1S) or 2 sides (2S)

pipe insulation

- all synthetic rubber min. 60 kg/m^3 eg Armaflex
- all glass wool or rock wool min. 75 kg/m^3 eg Climpipe or U Protect Pipe Section Alu2
- all polyolefin foam min. 28 kg/m^3 eg Uponor
- all PIR min. 33 kg/m^3

LS	local sustained = partly insulated pipe; total insulation length in mm through constructive element (symmetrically)
LI	local interrupted = partly insulated pipe; insulation length in mm on either side of constructive element
CS	continued sustained = fully insulated pipe
CI	continued interrupted = fully insulated pipe, yet interrupted in constructive element

max. opening

see principle detail, plus:
- allowed oversize opening ≤ 15mm with collar + wrap; if larger, use PA board:
  walls: max. 600 x 1200 mm + 25%, floors: max. 1000 x 1200 mm up to 600 x 5000 mm
- allowed 'oversized' collar ≤ 15mm, eg use Ø90 collar for Ø80 pipe

Note Support pipes; support distance: see principle detail.
Fasten glass wool or rock wool individually (not wrapped!) with steel wire; see principle detail.

How-to-read

charts Field of Application Firetect® fire rated building products

certification

Use FoA charts as *guideline* to quickly identify suitable Firetect products within classification.

Always apply acc. details as stated per principle detail; click EI performance in chart.

Product certification of CE marked building products is done by DoPs (Declaration of Performance), rather than test reports; more info at www.firetect.eu. Charts do not include all test data. Contact KLF for non-standard (EI) requirements: +31 345 63 97 97 or info@klf.nl.

cable penetrations

type of service: all steel (galvanised) cable trays + ladders, non-perforated + perforated
all steel (galvanised) mesh wire cable trays

EI: fire resistance in minutes (integrity + insulation)

minimum working spaces

	configuration	horizontal	vertical
Min. distances from opening edges	LARGE	35mm	30 mm
	MIXED	30 mm	0 mm
Min. distances between services	LARGE	5mm	100 mm
	MIXED	20 mm	20 mm

cable groups

group 1 - small sheathed	max. Ø 21mm
group 2 - medium sheathed	max. Ø 50mm
group 3 - large sheathed	max. Ø 80mm
group 4 - data + fibre optic	max. Ø 100mm bundle
group 5 - non-sheathed	max. Ø 23mm
conduit, steel or plastic	max. Ø 16mm

max. opening: see principle detail

Note: Support cable services; support distance: see principle detail.

blank seals

gaps + openings without any service penetrations

EI: fire resistance in minutes (integrity + insulation)

up to EI 120 for application in walls + floors

disclaimer

Consult www.firetect.eu/download for updates; product development + fire tests are ongoing processes at KLF.
Mentioned brand names are for illustrative purpose only, to indicate type of material tested.

FoA plastic pipes

Firetect® fire rated building products are applicable for:

PE
polyethylene

aluPE-X
heating + water supply
aka PEX-AL-PEX,
Al-Composite or Multilayer

PE-Xa
high pressure + temperature
cross-linked PE

PE-LD + PE-HD	aluPE-X	PE-Xa
dØ up to 250 mm	dØ up to 75 mm	dØ up to 32 (54) mm
s1 3,2 up to 22,7 mm	s1 2,0 up to 7,5 mm	s1 2,2 up to 4,4 mm
pipes within range (dØ+s1) acc.	pipes within range (dØ+s1) acc.	pipes within range (dØ+s1) acc.
EN 1519-1	EN 1519-1	EN 1519-1
EN 12666-1	EN 12201-2	EN 12201-2
EN 12201-2	EN 12666-1	EN 12666-1
EN ISO 15494	EN ISO 15494	EN 15875
DIN 8074	DIN 8074	EN ISO 15494
DIN 8075	DIN 8075	ISO 21003
DIN 19535-10	DIN 19535-10	DIN 8074
		DIN 8075
		DIN 19535-10
eg Wavin TS	eg Uponor MLC	eg Uponor Aqua
Agru PE 100	TECEflex	Geberit Mepla
Agru PE 100-RC	Geberit Mepla	Kekelit Kelox KM 110
	Kekelit Kelox KM 110	Rehau Rautitan flex
	Rehau Rautitan stabil	Rehau Rautitan stabil
	Henco Alupex	
	Begetube Alpex	

PP
polypropylene

PP-R
high pressure + temperature

PP-MD
low noise

PP	PP-R	PP-MD	PP-MX
dØ up to 250 mm	dØ up to 110 mm	dØ up to 160 mm	dØ up to 160 mm
s1 2,7 up to 22,7 mm	s1 3,7 up to 15,1 mm	s1 1,8 up to 5,4 mm	s1 2,7 up to 5,7 mm
pipes within range (dØ+s1) acc.	pipes within range (dØ+s1) acc.	pipes within range (dØ+s1) acc.	pipes within range (dØ+s1) acc.
EN 1451-1	EN 1451-1	EN 1451-1	EN 1451-1
EN ISO 15494	EN ISO 15494	EN ISO 15494	EN ISO 15494
EN ISO 15874	EN ISO 15874	EN ISO 15874	EN ISO 15874
DIN 8077	ISO 21003	DIN 8077	DIN 8077
DIN 8078	DIN 8077	DIN 8078	DIN 8078
	DIN 8078		
eg Dyka PP	eg Aquatherm Blue	eg Uponor Decibel	eg Geberit Silent-Pro
Agru PP-H	Aquatherm Green	Geberit Silent-PP	
	Aquatechnik PP-R	Pipelife Master 3	
	Akatherm PP-R	Rehau Raupiano Plus	
	Wavin Pilsa	Poloplast Polo-Kal NG / 3S	
		Wavin SiTech / AS	
		Valsir Silere / Triplus	

PVC
polyvinyl chloride

PVC + PVC-C + PVC-U
dØ up to 400 mm
s1 2,7 up to 22,7 mm
pipes within range (dØ+s1) acc.
EN 1329-1
EN 1453-1
EN 1452
EN 1566-1
EN ISO 15493
ISO 15877
DIN 8061
DIN 8062
DIN 19531-10

Scope of pipes tested with Firetect products

*Fire performances are valid for range of pipe diameter **dØ** + pipe wall thickness **s1** within the same pipe material.*

*Per Foa chart (pipe **material**) is stated what Firetect product to use within range (dØ+s1).*

Always install services acc. manufacturer's instructions; support distance ≤ 500mm (walls) and ≤ 400mm (floors).

PE + PP + PVC classification ≤ Ø250 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

PE + PP + PVC acc. EN norms
dØ up to 250 mm
s1 up to 22,7 mm
pipe brands eg Pipelife, Agru, Dyka, Wavin

suitable Firetect products within classification: *

dØ	s1	pipe insulation	Graphite sealant (DoP CPR-14/0273) walls	Graphite sealant floors	FMU collar (DoP CPR-14/0251) walls	FMU collar floors	Wrap (DoP CPR-14/0251) walls	Wrap floors
up to Ø110	2,7 up to 10,0 PE 3,4 up to 10,0 PP 2,7 up to 6,3 PVC 2,7 up to 10,0	non-insulated	EI 90 in wall 1+2+3 EI 90 in wall 1-n100 EI 30 in wall 1-n75 EI 90 in wall 6	EI 90 in floor 5 EI 90 in floor 7	EI 60 in wall 1+2+3 EI 60 in wall 1-n100 EI 30 in wall 1-n75 also on **PA board**: screwed on or cast-in	EI120 in ceiling 4 EI 120 in floor 5 EI 90 in floor 7 also on **PA board**: screwed on or cast-in	EI 120 in wall 1+2+3 2 layer	EI 180 in floor 5 2 layer EI 90 in floor 7 2 layer
Ø125	3,1 up to 11,7 PE 3,9 up to 11,7 PP 3,1 up to 7,1 PVC 3,1 up to 11,7	non-insulated			EI 60 in wall 1+2+3 EI 60 in wall 1-n100 collar Ø125		EI 60 in wall 1+2+3 2 layer	EI 180 in floor 5 3 layer
Ø140 - Ø160	4,0 up to 14,6 PE 4,9 up to 14,6 PP 4,0 up to 14,6 PVC 4,0 up to 14,6	non-insulated			EI 60 in wall 1+2+3 EI 60 in wall 1-n100 collar Ø140 or Ø160	EI 90 in floor 5 collar Ø140 or Ø160		EI 180 in floor 5 3 layer
Ø200	4,9 up to 18,2 PE 6,2 up to 18,2 PP 4,9 up to 18,2 PVC 4,9 up to 18,2	non-insulated			EI 60 in wall 1+2+3 EI 60 in wall 1-n100 collar Ø200			
Ø250	6,2 up to 22,7 PE 9,6 up to 22,7 PP 6,2 up to 22,7 PVC 6,2 up to 22,7	non-insulated			EI 60 in wall 1+2+3 also in **PA board** collar Ø250			

* Alternatively, use Acrylic sealant or PA sealer for pipes ≤ Ø50mm; see individual results.

non-standard configurations eg angled, bundled or XL:
up to Ø400mm with FMU collar

joint details: min. W x D, default:
walls: 10 x 25 mm, apply on 2 sides
floors: 15 x 25 mm, apply on 2 sides

default:
walls: apply on 2 sides
floors: apply on 1 side
always apply smokeseal Acrylic sealant on 2 sides

default:
walls: apply on 2 sides
floors: apply on 1 side
always apply smokeseal Acrylic sealant on 2 sides

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

NOTE:
CONDUITS: see
PLASTIC CABLE CONDUITS

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
how-to-read
acoustical
environmental

PP-R classification ≤ Ø125 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

PP-R acc. EN norms
dØ 40 up to 125 mm
s1 3,7 up to 17,1 mm
pipe brands eg Aquatherm, Aquatechnik, Wavin Pilsa

suitable Firetect products within classification:

dØ	s1	pipe insulation	Graphite sealant (DoP CPR-14/0273) walls	Graphite sealant (DoP CPR-14/0273) floors	FMU collar (DoP CPR-14/0251) walls	FMU collar (DoP CPR-14/0251) floors	Wrap (DoP CPR-14/0251) floors
Ø40	3,7 up to 5,5	non-insulated	EI 120 in wall 1+2 EI 240 in wall 3	results max. EI 240 in floor 5	results max. EI 120 in wall 1+2 EI 240 in wall 3 collar Ø40	results max. EI 240 in floor 5 collar Ø40	
		+ pipe insulation + **polythylene rubber**, min. 25 kg/m³ 25 mm	individual result: EI 60 in wall 1-n100 in **PA board**				
Ø50	4,6	non-insulated	individual result: EI 60 in wall 1-n75				
Ø63	5,8 up to 8,6	non-insulated	results max. EI 120 in wall 1+2 EI 240 in wall 3	results max. EI 240 in floor 5	EI 90 in wall 1+2 EI 120 in wall 3 collar Ø63	results max. EI 120 in floor 5 collar Ø63	
Ø75	6,8 up to 10,3 s1 up to 10,3	non-insulated	results max. EI 120 in wall 1+2 EI 240 in wall 3 individual result: EI 60 in wall 1-n75	results max. EI 240 in floor 5	EI 90 in wall 1+2 EI 120 in wall 3 collar Ø75	EI 120 in floor 5 collar Ø75	
Ø90	8,2	+ pipe insulation + **polythylene rubber**, min. 25 kg/m³ 25 mm	individual result: EI 60 in wall 1-n100				
Ø110	10,0 up to 15,1	non-insulated	results max. EI 120 in wall 1+2+3	results max. EI 180 in floor 5	EI 60 in wall 1+2+3 collar Ø110	results max. EI 120 in floor 5 collar Ø110	
Ø125	11,4 up to 17,1	non-insulated				results max. EI 180 in floor 5 collar Ø125	EI 240 in floor 5 3 layer
			joint details: min. W x D, default: walls: 10 x 40 mm, apply on 2 sides floors: 15 x 40mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides		default: floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental

PP-MD classification ≤ Ø160 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

PP-MD acc. EN norms
dØ 32 up to 160 mm
s1 1,8 up to 5,4 mm
pipe brands eg Uponor, Poloplast, Rehau, Geberit, Pipelife
acoustical damper brands eg Uponor Bottom Bend

suitable Firetect products within classification:

dØ	s1	configuration	Graphite sealant (DoP CPR-14/0273) walls	Graphite sealant floors	FMU collar (DoP CPR-14/0251) walls	FMU collar floors	Wrap (DoP CPR-14/0251) walls	Wrap floors
Ø32	1,8	non-insulated	EI 120 in wall 1+2 Ei 240 in wall 3	EI 240 in floor 5	EI 120 in wall 1+2 EI 240 in wall 3 collar Ø40	EI 240 in floor 5 collar Ø40	EI 120 in wall 1+2 EI 180 in wall 3 1 layer	EI 180 in floor 5 2 layer
Ø50	2,0	non-insulated	EI 90 in wall 1+2 EI 180 in wall 3	EI 180 in floor 5	EI 120 in wall 1+2 EI 180 in wall 3 collar Ø50	EI 240 in floor 5 collar Ø50	EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 1 layer
Ø75	2,6	non-insulated	EI 60 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5	EI 120 in wall 1+2 EI 240 in wall 3 collar Ø75	EI 240 in floor 5 collar Ø75	EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 1 layer
Ø110	3,8	non-insulated	EI 60 in wall 1+2+3	EI 60 in floor 5	EI 120 in wall 1+2+3 collar Ø110	EI 180 in floor 5 collar Ø110	EI 120 in wall 1+2+3 2 layer	EI 240 in floor 5 2 layer
						EI 90 in floor 7 collar Ø160 in FR Mortar or PA board		EI 90 in floor 7 2 layer
		+ pipe socket			EI 60 in wall 1+2+3 collar Ø140	EI 240 in floor 5 collar Ø140	EI 90 in wall 1+2+3 3 layer	
						EI 90 in floor 7 collar Ø160 in FR Mortar or PA board		
		+ acoustical damper				EI 180 in floor 5 collar Ø110 in FR Mortar or PA board		
Ø160	5,4	non-insulated			EI 60 in wall 1+2+3 collar Ø160	EI 180 in floor 5 collar Ø160		EI 240 in floor 5 3 layer
		+ pipe socket			EI 60 in wall 1+2+3 collar Ø200			
			joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental

PP-MX classification ≤ Ø160 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

PP-MX acc. EN norms
dØ 50 up to 160 mm
s1 2,7 up to 5,7 mm
pipe brands eg Geberit

suitable Firetect products within classification:

dØ	s1	configuration	Graphite sealant DoP CPR-14/0273 walls	Graphite sealant DoP CPR-14/0273 floors	FMU collar DoP CPR-14/0251 walls	FMU collar DoP CPR-14/0251 floors	Wrap DoP CPR-14/0251 walls	Wrap DoP CPR-14/0251 floors
Ø50	2,7	non-insulated	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5	EI 90 in wall 1+2 EI 240 in wall 3 collar Ø50	EI 240 in floor 5 collar Ø50	EI 120 in wall 1+2 EI 240 in wall 3 2 layer	EI 240 in floor 5 2 layer
		+ pipe socket	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5	EI 120 in wall 1+2 EI 240 in wall 3 collar Ø63	EI 240 in floor 5 collar Ø63	EI 120 in wall 1+2 EI 240 in wall 3 2 layer	EI 240 in floor 5 2 layer
Ø110	4,2	non-insulated	EI 90 in wall 1+2+3	EI 60 in floor 5	EI 90 in wall 1+2+3 collar Ø110	EI 240 in floor 5 collar Ø110	EI 120 in wall 1+2+3 2 layer	EI 180 in floor 5 2 layer
		+ pipe socket		EI 240 in floor 5	EI 90 in wall 1+2+3 collar Ø125	EI 240 in floor 5 collar Ø125	EI 60 in wall 1+2+3 3 layer	EI 60 in floor 5 3 layer
Ø125	4,7	non-insulated			EI 120 in wall 1+2+3 collar Ø125	EI 180 in floor 5 collar Ø125	EI 120 in wall 1+2+3 3 layer	EI 120 in floor 5 3 layer
		+ pipe socket				EI 180 in floor 5 collar Ø140		EI 240 in floor 5 3 layer
Ø160	5,7	non-insulated				EI 120 in floor 5 collar Ø160	EI 90 in wall 1+2+3 3 layer	EI 240 in floor 5 3 layer
		+ pipe socket			EI 120 in wall 1+2+3 collar Ø200	EI 180 in floor 5 collar Ø200	EI 120 in wall 1+2+3 3 layer	EI 240 in floor 5 3 layer
			joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 10 x 25 mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental

aluPE-X (composite) classification ≤ Ø75 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

aluPE-X (composite) acc. EN norms
dØ 16 up to 75 mm
s1 2,0 up to 7,5 mm

pipe brands eg Uponor, Rehau, Geberit, Henco
pipe insulation brands eg Climpipe, Rockwool, Armaflex, U Protect Pipe Section Alu2

suitable Firetect products within classification:

dØ	s1	pipe insulation	Graphite sealant (DoP CPR-14/0273) walls	Graphite sealant (DoP CPR-14/0273) floors	Acrylic sealant or PA sealer (DoP CPR-14/0273) walls	Acrylic sealant or PA sealer (DoP CPR-14/0273) floors	FMU collar (DoP CPR-14/0251) floors	Wrap (DoP CPR-14/0251) walls	Wrap (DoP CPR-14/0251) floors
up to Ø25	2,0 up to 2,5	non-insulated	EI 120 in wall 1+2+3		EI 120 in wall 1+2+3				
Ø16 up to Ø75 + synth. rubber insulation	2,0 up to 7,5	+ pipe insulation + **synth. rubber**, min. 60 kg/m³ up to 13mm	EI 60 in wall 1+2+3 EI 90 in wall 1-n100 EI 60 in wall 1-n75 also in **PA board**	individual results max. EI 90 in floor 5 EI 90 in floor 7	EI 120 in wall 3 EI 90 in wall 6	EI 120 in floor 5 EI 90 in floor 7 10 x 25 mm	EI 90 in floor 7 collar Ø50 - Ø90	EI 60 in wall 1+2+3 2 layer also in **PA board**	EI 90 in floor 7 2 layer
			EI 120 in wall 2+3 in FR Mortar		EI 60 in wall 2+3 in FR Mortar			EI 90 in wall 2+3 1 layer in FR Mortar	
Ø16 up to Ø75 + glass or rock wool (alu) insulation	2,0 up to 7,5	+ pipe insulation + **glass or rock wool** (alu), min. 75 kg/m³ 20 + 30mm	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5				EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 2 layer
		40mm	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5				EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 2 layer
		50mm	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5				EI 120 in wall 1+2 EI 240 in wall 3 2 layer	EI 240 in floor 5 2 layer
		60mm	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5				EI 120 in wall 1+2+3 3 layer	EI 120 in floor 5 3 layer
		80mm	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5				EI 120 in wall 1+2+3 3 layer	EI 120 in floor 5 3 layer
			joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental

PE-Xa classification ≤ Ø54 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

PE-Xa acc. EN norms
dØ 15(28) up to 32(54) mm
s1 2,2 up to 4,4 mm

pipe brands eg Uponor, Rehau, Geberit
pipe insulation brands eg Uponor, Armaflex

suitable Firetect products within classification:

dØ	s1	pipe insulation	Graphite sealant DoP CPR-14/0273 walls	Graphite sealant DoP CPR-14/0273 floors	Acrylic sealant or PA sealer DoP CPR-14/0273 walls	Acrylic sealant or PA sealer DoP CPR-14/0273 floors	FMU collar DoP CPR-14/0251 walls	FMU collar DoP CPR-14/0251 floors	Wrap DoP CPR-14/0251 walls	Wrap DoP CPR-14/0251 floors
Ø15 (28)	2,5	non-insulated	EI 90 in wall 1+2 EI 240 in wall 3 EI 60 in wall 1-sh75 on PA board	EI 240 in floor 5	EI 90 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5	EI 60 in wall 1+2 EI 240 in wall 3 collar Ø40	EI 240 in floor 5 collar Ø40	EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 1 layer
		+ pipe insulation + **polyolefin rubber**, min. 28 kg/m³ 10mm	EI 120 in wall 1+2 EI 240 in wall 3 EI60 in wall 1-sh75 on PA board	EI 240 in floor 5			EI 120 in wall 1+2 EI 120 in wall 3 collar Ø50	EI 120 in floor 5 collar Ø50	EI 120 in wall 1+2 EI 240 in wall 3 2 layer	EI 240 in floor 5 2 layer
Ø16 (25)	2,2	non-insulated	EI 120 in wall 1+2 EI 240 in wall 3 EI 60 in wall 1-sh75 on PA board	EI 240 in floor 5	EI 120 in wall 1+2 EI 240 in wall 3 EI 90 in wall 6	EI 240 in floor 5 EI 90 in floor 7	EI 120 in wall 1+2 EI 240 in wall 3 collar Ø40	EI 240 in floor 5 collar Ø40	EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 1 layer
		+ pipe insulation + **polyolefin rubber**, min. 28 kg/m³ 10mm	EI 120 in wall 1+2 EI 240 in wall 3	EI 240 in floor 5			EI 120 in wall 1+2 EI 120 in wall 3 collar Ø50	EI 120 in floor 5 collar Ø50	EI 120 in wall 1+2 EI 240 in wall 3 1 or 2 layer	EI 240 in floor 5 2 layer
Ø32 (54)	4,4	non-insulated	EI 120 in wall 1+2 EI 240 in wall 3 EI 60 in wall 1-sh75 on PA board	EI 240 in floor 5	EI 60 in wall 1+2 EI 180 in wall 3	EI 180 in floor 5	EI 120 in wall 1+2 EI 240 in wall 3 collar Ø63	EI 240 in floor 5 collar Ø63	EI 120 in wall 1+2 EI 240 in wall 3 1 layer	EI 240 in floor 5 1 layer
		+ pipe insulation + **polyolefin rubber**, min. 28 kg/m³ 20mm	EI 90 in wall 1+2 EI 120 in wall 3	EI 90 in floor 5			EI 60 in wall 1+2 EI 240 in wall 3 collar Ø110	EI 240 in floor 5 collar Ø110	EI 90 in wall 1+2 EI 240 in wall 3 2 layer	EI 240 in floor 5 2 layer
			joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	

'eccentric to zero' position in opening is allowed

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental

COPPER classification ≤ Ø76 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

copper
dØ max. 76 mm
s1 max. 14,0 mm
pipe insulation brands eg Climpipe, Rockwool, Armaflex, U Protect Pipe Section Alu2

suitable Firetect products within classification:

dØ	s1	pipe insulation	Graphite sealant DoP CPR-14/0273 walls	Graphite sealant DoP CPR-14/0273 floors	Acrylic sealant or PA sealer DoP CPR-14/0273 walls	Acrylic sealant or PA sealer DoP CPR-14/0273 floors	Wrap DoP CPR-14/0251 walls	Wrap DoP CPR-14/0251 floors
up to Ø28	1,0 up to 1,2	non-insulated	individual results max. EI 180 in wall	individual results max. EI 180 in floor 5	individual results max. EI 120 in wall	individual results max. EI 120 in floor 5		
up to Ø42 + synth. rubber or rock wool (alu) insulation	1,0 up to 14,0	+ pipe insulation						
		+ synth. rubber, min. 60 kg/m³						
		13mm	EI 90 in wall 1+2+3 individual results max. EI 60 in wall 1-n75	individual results max. EI 90 in floor 7	individual results max. EI 120 in wall 3	individual results max. EI 120 in floor 5		individual results max. EI 90 in floor 7
		25mm	EI 90 in wall 1+2+3 individual result: EI 90 in wall 1-n100 individual results max. EI 60 in wall 1-n75					
		+ rock wool (alu), min. 90 kg/m³						
		25mm	EI 60 in wall 1+2+3		individual results max. EI 90 in wall 1-n100 EI 60 in wall 1-n75 EI 120 in wall 3	individual results max. EI 120 in floor 5		
		50mm	EI 90 in wall 1+2+3					
up to Ø76 + glass or rock wool (alu) insulation	1,0 up to 2,1	+ pipe insulation						
		+ glass or rock wool (alu), min. 75 kg/m³ 20 up to 30mm	EI 90 in wall 1+2+3	EI 90 in floor 5			EI 90 in wall 1+2 EI 120 in wall 3 2 layer	EI 120 in floor 5 2 layer
		40mm	EI 90 in wall 1+2+3	EI 90 in floor 5			EI 90 in wall 1+2 EI 120 in wall 3 1 layer	EI 120 in floor 5 2 layer
		50mm	EI 90 in wall 1+2+3	EI 90 in floor 5			EI 90 in wall 1+2 EI 120 in wall 3 2 layer	EI 120 in floor 5 2 layer
		60mm	EI 90 in wall 3	EI 90 in floor 5			EI 60 in wall 1+2 EI 120 in wall 3 3 layer	EI 120 in floor 5 3 layer
		80mm	EI 240 in wall 3	EI 240 in floor 5			EI 60 in wall 1+2 EI 120 in wall 3 3 layer	EI 120 in floor 5 3 layer
			joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental

STEEL classification ≤ Ø219 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

steel
dØ max. 219,1 mm
s1 max. 14,2 mm

pipe insulation brands eg Climpipe, Rockwool, Armaflex, U Protect Pipe Section Alu2

suitable Firetect products within classification:

dØ	s1	pipe insulation	Graphite sealant DoP CPR-14/0273 walls	Graphite sealant DoP CPR-14/0273 floors	Acrylic sealant or PA sealer DoP CPR-14/0273 walls	Acrylic sealant or PA sealer DoP CPR-14/0273 floors	Wrap DoP CPR-14/0251 walls	Wrap DoP CPR-14/0251 floors
steel Ø12 up to Ø219	1,0 up to 4,5 mm Ø12 up to Ø219 mm	non-insulated	individual results max. EI 120 in wall	individual results max. EI 120 in floor 5	individual results max. EI 180 in wall	individual results max. EI 180 in floor 5		
	1,0 up to 14,2 mm Ø15 up to Ø219 mm	+ pipe insulation + synth. rubber, min. 60 kg/m³						
		10mm	EI 90 in wall 1+2+3	EI 90 in floor 5				
		13mm	EI 120 in wall 1+2+3 individual results max. EI 90 in wall 1-n100 EI 60 in wall 1-n75	EI 60 in floor 5 EI 90 in floor 7	individual results max. EI 120 in wall 3	individual results max. EI 120 in floor 5		EI 90 in floor 7 2 layer
		25mm	EI 60 in wall 1+2+3 EI 60 in wall 1-n100 individual results max. EI 60 in wall 1-n75	EI 60 in floor 5				
	1,0 up to 14,2 mm Ø15 up to Ø219 mm	+ pipe insulation + glass or rock wool (alu), min. 75 kg/m³						
		20 up to 30mm	EI 60 in wall 1+2+3	EI 90 in floor 5			EI 60 in wall 1+2+3 1 layer	EI 90 in floor 5 2 layer
		40mm	EI 60 in wall 1+2+3	EI 90 in floor 5			EI 90 in wall 1+2+3 1 layer	EI 90 in floor 5 2 layer
		50mm	EI 90 in wall 1+2+3	EI 90 in floor 5			EI 120 in wall 1+2+3 2 layer	EI 120 in floor 5 2 layer
		60mm	EI 90 in wall 1+2+3	EI 90 in floor 5			EI 60 in wall 1+2+3 3 layer	EI 120 in floor 5 3 layer
		80mm	EI 90 in wall 1+2+3	EI 180 in floor 5			EI 60 in wall 1+2+3 3 layer	EI 120 in floor 5 3 layer
	1,0 up to 14,2 mm Ø15 up to Ø219 mm	+ pipe insulation + rock wool (alu), min. 90 kg/m³						
		25mm	EI 60 in wall 1+2+3		EI 120 in wall 3 EI 60 in wall 1-n100 individual results max. EI 30 in wall 1-n75	EI 120 in floor 5 also on PA board		
		50mm	EI 90 in wall 1+2+3		individual results max. EI 90 in wall 1-n100			
	3,25 up to 14,2 mm Ø42 up to Ø219 mm	+ pipe insulation + PIR, min. 33 kg/m³						
		25mm	EI 60 in wall 1+2+3	EI 180 in floor 5				
		50mm	EI 60 in wall 1+2+3	EI 90 in floor 5				
			joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		joint details: min. W x D, default: walls: 10 x 25 mm, apply on 2 sides floors: 15 x 25 mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 1 side always apply smokeseal Acrylic sealant on 2 sides	

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

NOTE:
CONDUITS: see
STEEL CONDUITS
SPIRAL pipes: see
AIR CONTROL

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical

CAST IRON ≤ Ø110 mm

Fire performances are valid for **range** of dØ pipe diameter + s1 pipe thickness within the same pipe material:

cast iron
dØ max. 110 mm
s1 max. 3,5 mm
pipe insulation brands eg Rockwool, Armaflex

suitable Firetect products within classification:

dØ	s1	pipe insulation	Acrylic sealant or PA sealer (DoP CPR-14/0273) walls	Acrylic sealant or PA sealer (DoP CPR-14/0273) floors	Wrap (DoP CPR-14/0251) walls	Wrap (DoP CPR-14/0251) floors
steel Ø12 up to Ø219	3,5 mm Ø58 up to Ø110 mm	non-insulated				
	3,5 mm Ø58 up to Ø110 mm	+ pipe insulation + **synth. rubber**, min. 60 kg/m³ 13mm			max. EI 90 in wall 6 2 layer	max. EI 90 in floor 7 2 layer
	3,5 mm Ø58 up to Ø110 mm	+ **rock wool** (alu), min. 85 kg/m³ 20 mm	EI 90 in wall 6	EI 90 in floor 7		
		30mm	EI 90 in wall 6	EI 90 in floor 7		
			joint details: min. W x D, default: walls: 5 x 25 mm, apply on 2 sides floors: 5 x 25 mm, apply on 2 sides		default: walls: apply on 2 sides floors: apply on 2 sides always apply smokeseal Acrylic sealant on 2 sides	

supporting construction

Constructive element must be classified acc. EN 13501-2 for the required fire resistance period:

1: flexible wall ≥ 100 mm, insulated
1-n: flexible wall ≥ (xxx) mm, **non-insulated**
1-sh: shaft wall ≥ (xxx) mm, **non-insulated**
1-sw sandwich wall ≥ 100 mm
2: rigid wall ≥ 100 mm
3: rigid wall ≥ 150 mm
4: flexible ceiling ≥ 150 mm
5: rigid floor ≥ 150 mm
6: CLT wall ≥ 100 mm
7: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

► INDEX
PE + PP + PVC
plastic cable conduits
PP-R
PP-MD
PP-MX
aluPE-X
PE-Xa
copper
steel
steel conduits
cast iron
trays + ladders + wire mesh
cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
acoustical
environmental