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Firetect is a registered brand of
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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; see tab per product on product web page.

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 $\geq 100\text{mm}$; metal or timber studs, plaster board type A + wall insulation
 - 2** rigid wall $\geq 100\text{mm}$: blockwork/concrete/masonry, density $\geq 600 \text{ kg/m}^3$
 - 3** rigid wall $\geq 150\text{mm}$: blockwork/concrete/masonry, density $\geq 600 \text{ kg/m}^3$
 - 4** flexible ceiling $\geq 150\text{mm}$: metal studs, plaster board type F
 - 5** rigid floor $\geq 150\text{mm}$: (aerated) concrete, density $\geq 600 \text{ kg/m}^3$

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 uncapped U / capped C at resp. exposed + unexposed side

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** $\leq 15\text{mm}$ with collar + wrap; if larger, use PA board:
 - walls: max. $600 \times 1200 \text{ mm} + 25\%$, floors: max. $1000 \times 1200 \text{ mm}$ up to $600 \times 5000 \text{ mm}$
 - allowed '**oversized**' collar $\leq 15\text{mm}$, eg use $\varnothing 90$ collar for $\varnothing 80$ pipe

Note

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

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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

EI

gaps + openings **without any service penetrations**

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.

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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

PP
polypropylene

PP-R
high pressure + temperature

PP-MD
low noise

PVC
polyvinyl chloride

| PE-LD + PE-HD |
|--|
| dØ up to 250 mm s1 3,2 up to 22,7 mm |
| pipes within range (dØ+s1) acc. |
| EN 1519-1 |
| EN 12666-1 |
| EN 12201-2 |
| EN ISO 15494 |
| DIN 8074 |
| DIN 8075 |
| DIN 19535-10 |
| eg Wavin TS Agru PE 100 Agru PE 100-RC |

| aluPE-X |
|---|
| dØ up to 75 mm s1 2,0 up to 7,5 mm |
| pipes within range (dØ+s1) acc. |
| EN 1519-1 |
| EN 12201-2 |
| EN 12666-1 |
| EN ISO 15494 |
| DIN 8074 |
| DIN 8075 |
| DIN 19535-10 |
| eg Uponor MLC TECEflex Geberit Mepla Kekelit Kelox KM 110 Rehau Rautitan stabil Henco Alupex Begetube Alpex |

| PE-Xa |
|---|
| dØ up to 32 (54) mm s1 2,2 up to 4,4 mm |
| pipes within range (dØ+s1) acc. |
| EN 1519-1 |
| EN 12201-2 |
| EN 12666-1 |
| EN 15875 |
| EN ISO 15494 |
| ISO 21003 |
| DIN 8074 |
| DIN 8075 |
| DIN 19535-10 |
| eg Uponor Aqua Geberit Mepla Kekelit Kelox KM 110 Rehau Rautitan flex Rehau Rautitan stabil |

| PP |
|---|
| dØ up to 250 mm s1 2,7 up to 22,7 mm |
| pipes within range (dØ+s1) acc. |
| EN 1451-1 |
| EN ISO 15494 |
| EN ISO 15874 |
| DIN 8077 |
| DIN 8078 |
| eg Dyka PP Agru PP-H |

| PP-R |
|--|
| dØ up to 110 mm s1 3,7 up to 15,1 mm |
| pipes within range (dØ+s1) acc. |
| EN 1451-1 |
| EN ISO 15494 |
| EN ISO 15874 |
| ISO 21003 |
| DIN 8077 |
| DIN 8078 |
| eg Aquatherm Blue Aquatherm Green Aquatechnik PP-R Akatherm PP-R Wavin Pilsa |

| PP-MD |
|--|
| dØ up to 160 mm s1 1,8 up to 5,4 mm |
| pipes within range (dØ+s1) acc. |
| EN 1451-1 |
| EN ISO 15494 |
| EN ISO 15874 |
| DIN 8077 |
| DIN 8078 |
| eg Uponor Decibel Geberit Silent-PP Pipelife Master 3 Rehau Raupiano Plus Poloplast Polo-Kal NG / 3S Wavin SiTech / AS Valsir Silere / Triplus |

| PP-MX |
|--|
| dØ up to 160 mm s1 2,7 up to 5,7 mm |
| pipes within range (dØ+s1) acc. |
| EN 1451-1 |
| EN ISO 15494 |
| EN ISO 15874 |
| DIN 8077 |
| DIN 8078 |
| eg Geberit Silent-Pro |

| 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).

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