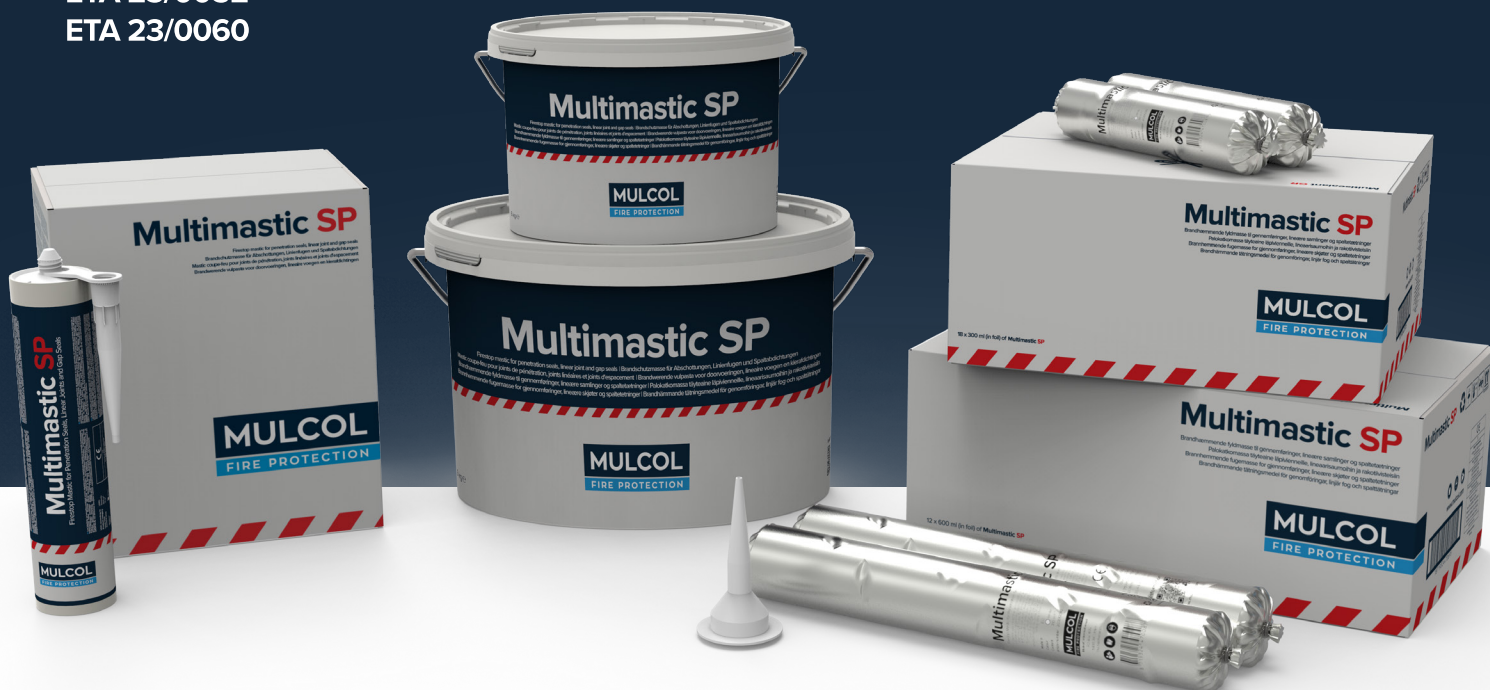


Multimastic SP

Firestop mastic

European
Technical Assessment
ETA 23/0052
ETA 23/0060



Technical Data Sheet

MULCOL
INTERNATIONAL

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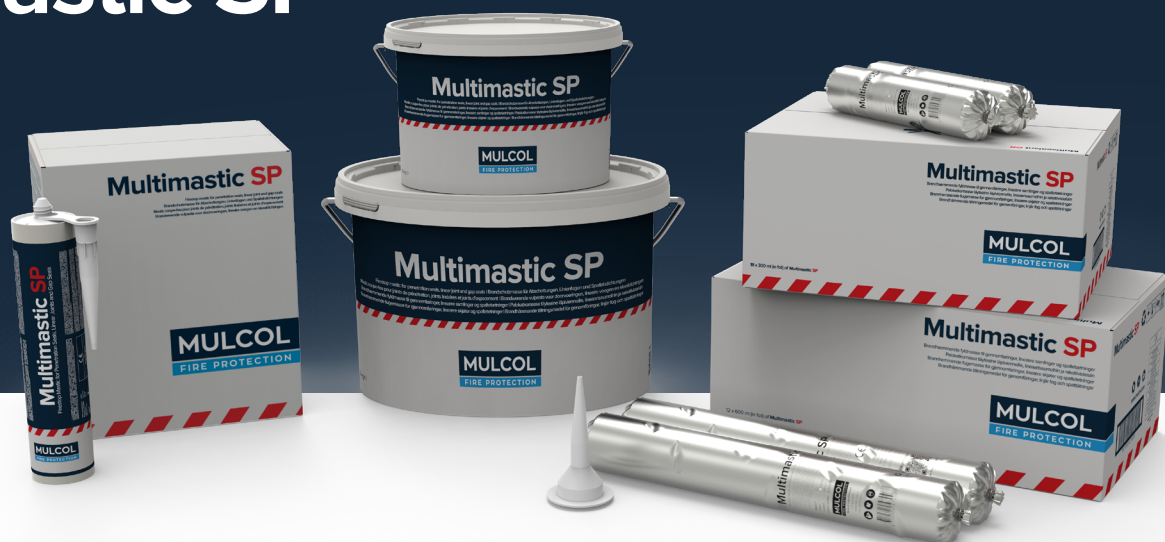
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INTERNATIONAL

Pragmatic, effective
and applicable
solutions



Multimastic SP

Firestop mastic



Fire resistance
≤ 240 minutes



Acoustic insulation
Rw 54 dB



Working life
25 years

Firestop mastic

Multimastic SP is an acrylic-based firestop mastic used for firestop sealing of openings around cable trays, pipe and cable penetrations, sealing joints, and for bonding Multimastic FB1/FB2 firestop boards. Multimastic SP slightly expands when exposed to heat, creating a fire-resistant and smoke-tight seal to adjacent spaces.

Multimastic SP is part of the Mulcol® Penetration Seal System. It can also be used in combination with Multimastic C fire-resistant coating.

Advantages

- ✓ Fire resistance ≤ 240 minutes
- ✓ CE-certified
- ✓ High acoustic insulation
- ✓ Environmental and user-friendly
- ✓ Quick and easy to apply
- ✓ No primer needed for use on most surfaces
- ✓ Dries fast & recoatable
- ✓ Use i.c.w. Multimastic C

Application

- ✓ Solid walls, stone and CLT (wood)
- ✓ Solid floors, stone and CLT (wood)
- ✓ Lightweight partition walls
- ✓ Stone wool firestop boards
- ✓ Metal pipes with and without insulation
- ✓ Cable trays, ladders, electrical cables, and cable bundles
- ✓ Aluminium composite pipes with and without insulation
- ✓ Plastic pipes

Available documents

Documents available

- ✓ Technical Data Sheet (TDS)
- ✓ Safety Data Sheet (SDS)
- ✓ CE certificate
- ✓ Emission reports
- ✓ EPD (Environmental Product Declaration)
- ✓ Acoustic report

Approvals

- ✓ Tested in accordance with EN 1366-3 & EN 1366-4
- ✓ Classification in accordance with EN 13501-2
- ✓ CE Certified in accordance with EAD 350454-00-1104
- ✓ CE Certified in accordance with EAD 350454-00-1106
- ✓ ETA report 23/0052
- ✓ ETA report 23/0060
- ✓ Declaration of Performance (DoP)

The above documents are available via www.mulcol.com/downloads

1. Technical data

Product:	EAN-code
Multimastic SP cartridge - 310 ml	8719324470087
Multimastic SP foil-packed - 300 ml	8719324470728
Multimastic SP foil-packed - 600 ml	8719324470469
Multimastic SP bucket - 6 kg	8719324470445
Multimastic SP bucket - 12.5 kg	8719324470650
Condition	Ready for use on acrylic base
Colour	White
Colour code	RAL 9002 / NCS S1002-Y
Shelf life	24 months in unopened packaging at a temperature between +5°C and +30°C
Transportation storage temp.	+5 °C to +30 °C
Application temperature	+5 °C to +30 °C
Temperature resistance	-20 °C to +70 °C
Film formation	After approx. 25 minutes
Non-adhesive	After approx. 75 minutes
Fully cured	3 to 5 days, depending on the thickness and the temperature
Specific weight	1.55 - 1.61 g/cm ³
Electrical conductivity	None, after complete curing
Category of use¹	Type Z ₂ in accordance with EAD 350454-00-1104
Recoatable²	Yes
Installation from 1 side possible	Yes
Air and smoke tight	S _a and S ₂₀₀ compliant NEN 6075
Acoustic properties	12mm depth + 15mm backing: R _{sw} (C;C _{tr}) = 54 (-3 ; -10) dB and R _{s,max,w} (C;C _{tr}) = 58 (-5 ; -13) dB
Fire class	E in accordance with EN 13501-1
VOC content	12 g/L
Approvals	ETA 23/0052 & ETA 23/0060
Compatibility	Suitable for use with most materials, but should not be used in direct contact with bituminous materials.
Function retention	25 years

¹ Permissible environmental conditions

Sealant for use in conditions with < 85% RV, protected from temperatures below 0 °C, and without exposure to rain and/or UV (TR 024, type Z₂)

² Recoatable

Mulcol® Multimastic SP can be painted with most emulsion or alkyd (gloss) paints.

2. Packaging

	Contents	Box	Pallet	Article number
Cartridge	310 ml	12 pieces	1536 pieces	203012310
Foil-packed	300 ml	18 pieces	1764 pieces	203018300
Foil-packed	600 ml	12 pieces	1092 pieces	203012600
Bucket	6 kg	-	480 kg	203001006
Bucket	12.5 kg	-	500 kg	203001125

3. Installation manual for penetration seals

1



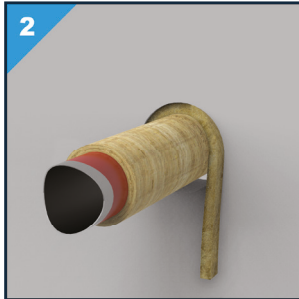
Make sure that the service penetration and the gap are free from dust, dirt and grease. Moisten the structure.

4



Smooth the sealant with a damp spatula or filler knife.

2



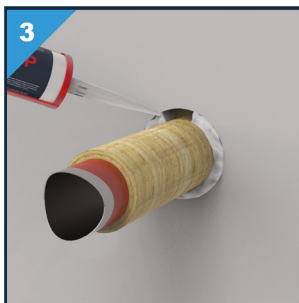
If backing is applied, cut it slightly wider than the gap width and make sure that it is applied to the correct depth in the structure.

5



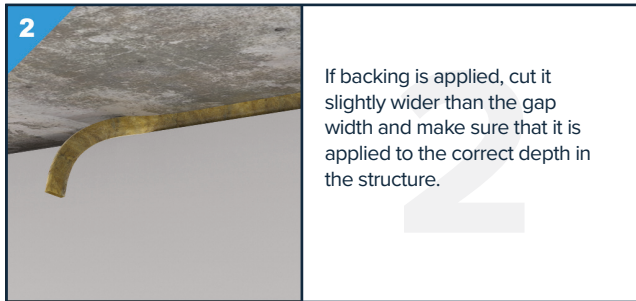
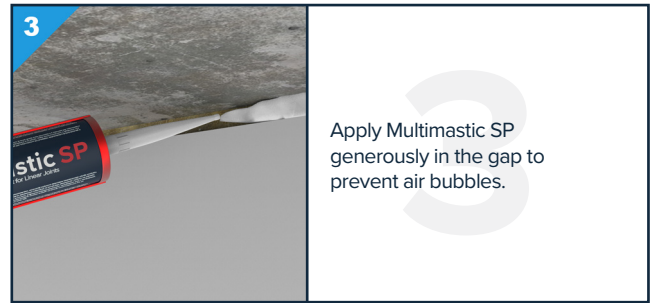
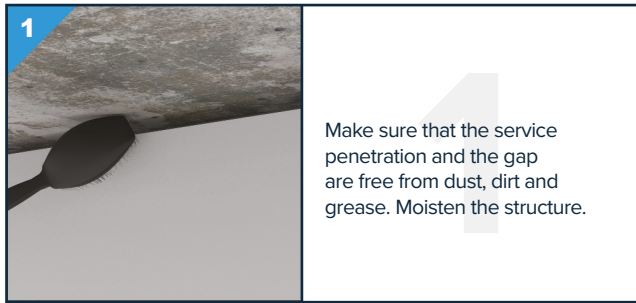
Fill in the conformity statement and apply it next to the service penetration.

3



Apply Multimastic SP generously in the gap to prevent air bubbles.

4. Installation manual for linear joint seals



5. Consumption tables

Per cartridge of 310 ml & foil-packed of 300 ml

Joint width	10 mm	15 mm	20 mm	25 mm	30 mm	40 mm	50 mm	60 mm	80 mm	100 mm
Joint depth 12,5 mm	2.45 m ¹	1.65 m ¹	1.20 m ¹	1.00 m ¹	0.80 m ¹	0.60 m ¹	0.50 m ¹	0.40 m ¹	0.30 m ¹	0.25 m ¹
Joint depth 15 mm	2.05 m ¹	1.35 m ¹	1.00 m ¹	0.80 m ¹	0.65 m ¹	0.50 m ¹	0.40 m ¹	0.30 m ¹	0.25 m ¹	0.20 m ¹
Joint depth 25 mm	1.20 m ¹	0.80 m ¹	0.60 m ¹	0.50 m ¹	0.40 m ¹	0.30 m ¹	0.25 m ¹	0.20 m ¹	0.15 m ¹	0.10 m ¹

Per foil-packed of 600 ml

Joint width	10 mm	15 mm	20 mm	25 mm	30 mm	40 mm	50 mm	60 mm	80 mm	100 mm
Joint depth 12,5 mm	4.80 m ¹	3.20 m ¹	2.40 m ¹	1.90 m ¹	1.60 m ¹	1.20 m ¹	0.95 m ¹	0.80 m ¹	0.60 m ¹	0.45 m ¹
Joint depth 15 mm	4.00 m ¹	2.65 m ¹	2.00 m ¹	1.60 m ¹	1.30 m ¹	1.00 m ¹	0.80 m ¹	0.65 m ¹	0.50 m ¹	0.40 m ¹
Joint depth 25 mm	2.40 m ¹	1.60 m ¹	1.20 m ¹	0.95 m ¹	0.80 m ¹	0.60 m ¹	0.45 m ¹	0.40 m ¹	0.30 m ¹	0.20 m ¹

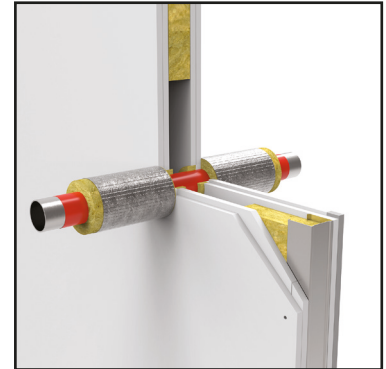
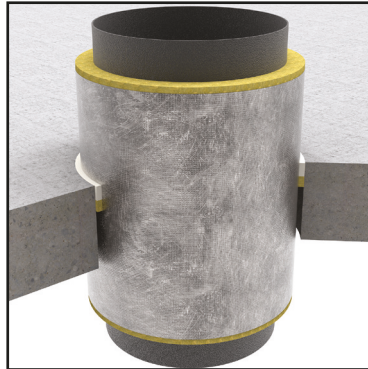
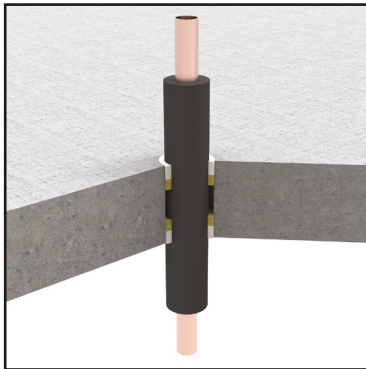


For use and for more information about an application, refer to the Mulcol documentation, local and international approvals.

See the **Mulcol Fire Protection app** for the correct application in combination with fire resistance, or use our **selector** at www.mulcol.com.

6. Permitted penetration insulation materials

Multimastic SP Firestop mastic have been extensively tested with various insulation materials; For details, refer to the Multiselector and our European Technical Assessments: ETA 23/0050 & ETA 23/0060.

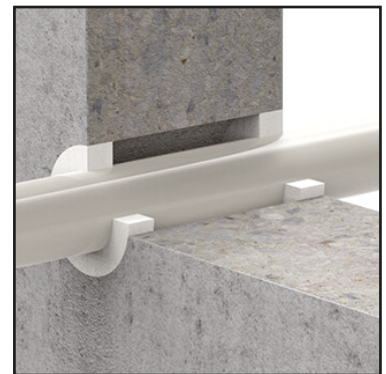
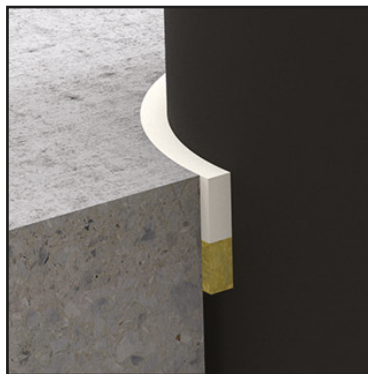
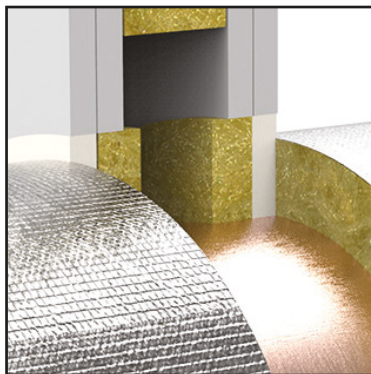


Insulation types	Pipe types	Permitted ¹⁾
Stone wool insulation <i>Fire class A1, in accordance with EN 13501-1</i>	<ul style="list-style-type: none"> ✓ Copper pipes ✓ (Stainless) steel pipes ✓ Cast iron pipes 	<ul style="list-style-type: none"> ✓ Stone wool, min. 80 kg / m³ or equal
Elastomeric insulation <i>Fire class BL-s1,d0 of B-s1,d0 to D-s3,d0 or DL-s3,d0 in accordance with EN 13501-1</i>	<ul style="list-style-type: none"> ✓ (Stainless) steel pipes ✓ Cast iron pipes ✓ Fibre composite pipes ✓ Multilayer pipes 	<ul style="list-style-type: none"> ✓ ArmaFlex AF (EVO) / XG / SH / NH / HT / Ultima e.g. ✓ Kaiflex KK Plus S1 / S2 / ST / HT e.g. ✓ K-Flex EC (AD) / ST / SK / SRC (Eco) e.g.

¹⁾ Insulation materials must have at least the same fire class as tested in accordance with EN 13501-1.

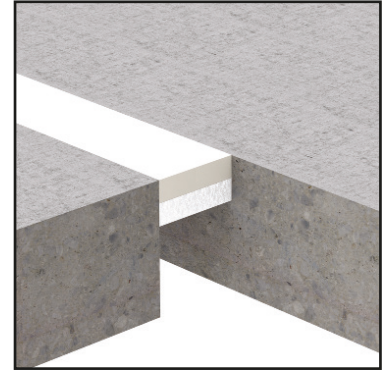
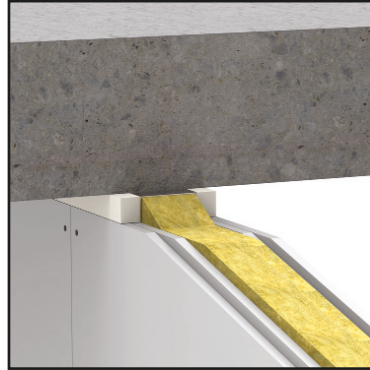
7. Penetration seals

Openings around pipe penetrations, whether insulated or not, can be finished with Multimastic SP to prevent the passage of smoke and hot gases to adjacent fire compartments. Depending on the type of penetration, either no backfilling, a stone wool backfilling or Multitherm Backing will suffice. For details, refer to the Multiselector and ETA 23/0050 & ETA 23/0060.



8. Linear joint seals

Joints and gaps between construction elements can be fire stopped with with Multimastic SP firestop mastic to compartmentalise fire and smoke. Depending on the type of construction, the orientation and material, a backfill material may need to be used. For details, refer to the Multiselector and ETA 23/0052



9. Performance

For the appropriate application and classification, always consult ETA 23/0052 for linear joint seals or ETA 23/0060 for penetration seals.

Service in lightweight partition walls, solid walls and floors

Type of Services	Size Ø [mm]	Insulation type	Construction				Classification minutes
			LSW-100	MW-100	MW-150	MV-150	
Plastic pipes	≤ 32	n.vt.	✓	✓	✓		≤ EI 120-U/C
	≤ 50				✓		≤ EI 240-U/C
	Plastic pipes with cable(s)		≤ 40			✓	
Multilayer pipes	≤ 75	Stone wool	✓	✓	✓		≤ EI 90-C/U
	≤ 20	Stone wool			✓		≤ EI 240-U/C
	≤ 75	Armaflex Protect	✓	✓	✓	✓	≤ EI 120-U/C
Copper, cast iron and steel pipes	≤ 15	n.vt.				✓	≤ EI 240-U/C
	≤ 26,9	Multimastic SP	✓	✓	✓		≤ EI 90-C/U
	≤ 60,3	Multimastic SP	✓	✓	✓		≤ EI 60-C/U
		Multimastic SP				✓	≤ EI 120-U/C
	≤ 114,3	Glass wool				✓	≤ EI 90-C/U
	≤ 219	Glass wool				✓	≤ EI 60-C/U
	≤ 324	Stone wool	✓	✓	✓		≤ EI 120-U/C
				✓	✓	≤ EI 240-U/C	

Cables and cable trays in lightweight and solid partition walls and floors

Type of Services	Coating			Wall		Floor	Classification minutes
	No Coating	Length 50 mm ≥ 1 mm ⁽¹⁾ Multimastic C	Length 150 mm ≥ 1.5 mm ⁽¹⁾ Multimastic C	FW-100	MW-100	MV-150	
Cable ladders, (un) perforated (wire) trays		✓		✓	✓		≤ EI 60
			✓	✓	✓		≤ EI 120
					✓		≤ EI 240
Cables $\leq \varnothing 21$ mm	✓					✓	≤ EI 180
Cables $\leq \varnothing 50$ mm	✓			✓	✓		≤ EI 120
Cables $\leq \varnothing 80$ mm	✓			✓	✓		≤ EI 90
Cable bundles $\leq \varnothing 100$ mm	✓			✓	✓	✓	≤ EI 60
Cables $\leq \varnothing 80$ mm, bundles $\leq \varnothing 100$ mm		✓		✓	✓		≤ EI 120
			✓	✓	✓		≤ EI 90
Cables without sheathing $\leq \varnothing 24$ mm		✓		✓	✓		≤ EI 45
			✓	✓	✓		≤ EI 60
Plastic pipes $\leq \varnothing 16$ mm		✓		✓	✓		≤ EI 120
			✓	✓	✓		≤ EI 120
					✓		≤ EI 180
Copper pipes $\leq \varnothing 16$ mm		✓		✓	✓		≤ EI 45
			✓	✓	✓		≤ EI 45
Steel pipes $\leq \varnothing 16$ mm		✓		✓	✓		≤ EI 60
			✓	✓	✓		≤ EI 90

Wet layer thickness⁽¹⁾

Blank seal in lightweight partition walls, solid walls and floors

Type of Services	Seal size [mm]	Construction				Classification minutes
		LSW-100	MW-100	MW-150	MV-150	
n.v.t.	≤ 187,5 x 187,5	✓	✓			≤ EI 120
	≤ 375 x 375			✓		
	≤ 150 x 150				✓	≤ EI 240

LSW-100: Lightweight partition wall, thickness 100 mm
 MW-100: Solid wall, thickness 100 mm
 MW-150: Solid wall, thickness 150 mm
 MV-150: Solid floor, thickness 150 mm

Linear joint seals between walls and wooden frame (e.g. window frame)

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes to
				Type	Depth [mm]		
Flexible wall - Wooden frame	≥ 100	1*	≥ 10	PE foam	≥ 10	≤ 15	≤ EI 90 - V - X - F - W 00 to W15
		2				≤ 30	≤ EI 90 - V - X - F - W 00 to W30
1*		≤ 15				≤ EI 90 - V - X - F - W 00 to W15	
2		≤ 30				≤ EI 90 - V - X - F - W 00 to W30	
Rigid wall - Wooden frame							

Vertical linear joint seals between flexible and rigid walls

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classificatie minutes to
				Type	Depth [mm]		
Flexible wall - Rigid wall	≥ 100	2	≥ 12,5	MS-profile	≥ 50	≤ 15	≤ EI 90 - V - X - F - W00 to W15
			≥ 25	None	-		≤ E 180 - V - X - F - W00 to W15
			≥ 12,5	Stone wool	≥ 12,5	≤ 30	≤ EI 120 - V - X - F - W00 to W30 ≤ E 180 - V - X - F - W00 to W30

Horizontal linear joint seals between flexible walls and rigid floors

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes to
				Type	Depth [mm]		
Flexible wall - Rigid floor	≥ 100 wall	2	≥ 12,5	MS-profile	≥ 50	≤ 30	≤ EI 120 - T - X - F - W00 to W30
	≥ 150 floor		≥ 25	MS-profile+	≥ 50 + 12,5		≤ E 180 - T - X - F - W00 to W30
			≥ 12,5	Stone wool			

Vertical linear joint seals between rigid walls

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes to
				Type	Depth [mm]		
Rigid wall - Rigid wall	≥ 100	2	≥ 10	PE foam	≥ 10	≤ 15	≤ EI 180 - V - X - F - W00 to W15
		1*					≤ EI 30 - V - X - F - W00 to W15
		2	≤ EI 120 - V - X - F - W00 to W30				
		1*	≤ EI 180 - V - X - F - W00 to W15				
	≥ 150	2	≥ 15			≤ EI 180 - V - X - F - W00 to W30	
		1*	≥ 20			≤ EI 60 - V - X - F - W00 to W30	
		2	≥ 15			≤ EI 180 - V - X - F - W00 to W30	
		1*	≥ 10			≤ EI 30 - V - X - F - W00 to W40	
			Stone wool	≥ 20	≤ 30	≤ EI 180 - V - X - F - W00 to W40	
				≥ 60	≤ 50	≤ EI 240 - V - X - F - W00 to W30	
						≤ EI 120 - V - X - F - W00 to W50	
						≤ E 180 - V - X - F - W00 to W50	

* No matter which side

** Top of floor

V Vertical joint

H Horizontal joint

T Horizontal application between walls and floors

X No movement absorption during the test

F Installed and applied on site, no prefabricated parts

W Certified and tested widths

Horizontal linear joint seals between rigid walls

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes to
				Type	Depth [mm]		
Rigid wall - Rigid wall	≥ 150	2	≥ 15	Stone wool	≥ 25	≤ 40	≤ EI 240 – T – X – F – W00 to W40
		1*					
		2	≥ 10				≥ 100

Horizontal linear joint seals between rigid walls and rigid floors

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes
				Type	Depth [mm]		
Rigid wall - Rigid floor	≥ 100 wall	2	≥ 10	PE foam	≥ 10	≤ 15	≤ EI 180 – T – X – F – W00 to W15
		1*					≤ EI 30 – T – X – F – W00 to W15
		2	≤ EI 180 – T – X – F – W00 to W15				
	≥ 150 floor	1*	≥ 15	Stone wool	≥ 20	≤ 30	≤ EI 180 – T – X – F – W00 to W30
		2					≤ EI 60 – T – X – F – W00 to W30
		1*	≥ 10				≥ 60

Horizontal linear joint seals between rigid walls and steel floors

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes to
				Type	Depth [mm]		
Rigid wall - Rigid steel floor	≥ 100 wall ≥ 150 floor	2	≥ 15	Stone wool	≥ 70	≤ 30	≤ EI 120 – T – X – F – W00 to W30 ≤ EI 180 – T – X – F – W00 to W30

Linear joint seals between solid floors

Construction	Thick-ness [mm]	Installation side(s)	Minimum joint depth [mm]	Backing		Maximum joint width [mm]	Classification minutes to		
				Type	Depth [mm]				
Rigid floor - Rigid floor	≥ 150	2	≥ 15	Stone wool	≥ 25	≤ 40	≤ EI 240 – H – X – F – W00 to W40		
		1*							
		1**	≥ 10				≥ 90	≤ 100	≤ EI 240 – H – X – F – W00 to W100
		2					≥ 50		

* No matter which side
** Top of floor

V Vertical joint
H Horizontal joint
T Horizontal application between walls and floors
X No movement absorption during the test
F Installed and applied on site, no prefabricated parts
W Certified and tested widths

10. Tested solutions

All the latest tested solutions with the Multimastic SP can be found in our **Multiselector**. Scan the QR code or press the Multiselector button to get directly to the tested solution for your project.

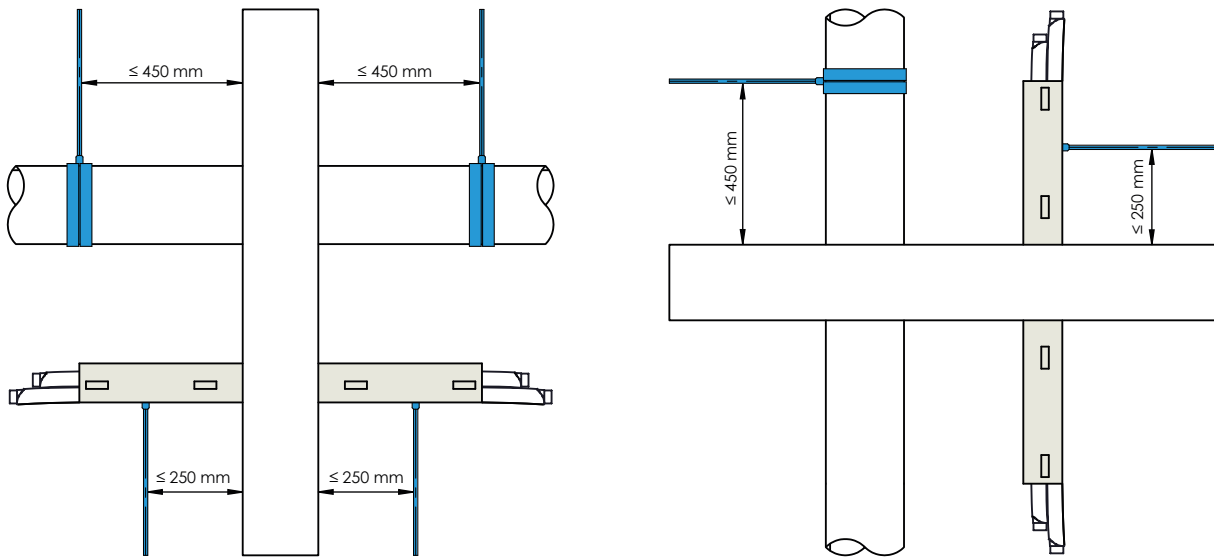


Our **Multiselector** can also be found in our **Mulcol Fire Protection App**. It can be downloaded from the **App Store** (iOS) or **Google Play Store** (Android).



11. Service support

For all services (except cables and cable trays), the first support must be fitted ≤ 450 mm from the fire separating element, with cables and cable carriers at ≤ 250 mm. For floors the first support should be fitted at a distance of ≤ 450 mm from the top of the floor and for cables and cable carriers at ≤ 250 mm.



12. Pipe insulation (configuration)

Insulations serve different functions and can therefore be arranged around pipes in different manners. This must be taken into account when applying fire stopping seals on these pipes. Possible configurations are shown below:

Continued Insulated		Locally Insulated	
Continued Sustained	Continued Interrupted	Locally Sustained	Locally interrupted
 Cs	 Ci	 Ls	 Li

13. Test configuration

Introduction

The test configuration determines the application of plastic pipes. Before testing a pipeline type, the intended use of the pipeline must be considered. Where will it be used in practice? Standard EN 1366-3 sets requirements in this regard. The end of the pipe must be capped or uncapped, based on this. See the test configuration in table 1 and 2.

In a test, the conditions to which the pipeline and the sealing system are exposed to are determined by asking whether one or both pipe ends are capped in practice. The pressure and flowrate of hot gases will be different in a pipe that is in contact with the outside air than in a capped pipe. It is important to ensure that the sealing system is tested under appropriate conditions.

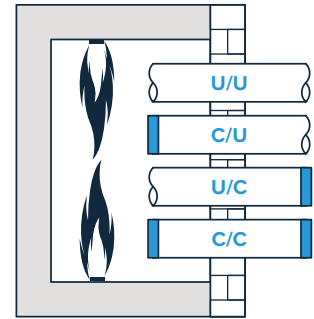


Table 1 - Test configuration plastic pipes

Test setup	Pipe end		Permitted use			
	In the oven	Outside the oven	U/U	C/U	U/C	C/C
U/U	Uncapped	Uncapped	✓	✓	✓	✓
C/U	Capped	Uncapped	✗	✓	✓	✓
U/C	Uncapped	Capped	✗	✗	✓	✓
C/C	Capped	Capped	✗	✗	✗	✓

Table 2 - Test configuration metal pipes

Test setup	Pipe end		Permitted use		
	In the oven	Outside the oven	U/C	C/U	C/C
U/C *	Uncapped	Capped	✓	✓	✓
C/U	Capped	Uncapped	✗	✓	✓
C/C	Capped	Capped	✗	✗	✓

* U/C tested and therefore /U is covered

Plastic pipes

Table below shows a few examples of pipe types and the intended use, where the end of the pipe is capped or uncapped. The table does not take all possible applications into account. The choice of whether to close the end or leave it open depends on a number of aspects: is the system under pressure and it is ventilated or unventilated? Consider the intended use of the pipe to determine whether it should be capped or left uncapped. If national regulations set different requirements than those contained in table H1, follow the regulations.

Table - Test configuration plastic pipe by application

Type of pipe	Pipe end		Test setup
	In the oven	Outside the oven	
Rainwater drainage	Uncapped	Uncapped	U/U
Sewage, Ventilated	Uncapped	Uncapped	U/U
Sewage, Unventilated	Uncapped	Capped	U/C
Gas pipe, drinking water pipe, hot water pipe	Uncapped	Capped	U/C

There is no application for a plastic pipe penetration with a test classification of C/U or C/C, according to EN 1366-3.

Metal pipes

Metal pipes will normally be closed in the furnace as no open end is to be expected in the event of a fire, due to the high melting point of metal. With this, it is assumed that the service penetration supporting construction remains in place. If the pipes are supported by a non fire resistant support system, the pipes are not closed in the furnace, as shown in the table below.

Table - Test configuration metal pipe by application

Type of pipe	Construction		Test setup
	In the oven	Outside the oven	
Supported by a fire supporting construction	Capped	Uncapped	C/U
Supported by a non fire supporting construction	Uncapped	Capped	U/C
Shafts for waste disposal	Uncapped	Capped	U/C

14. Constructions

Flexible walls

The minimum wall thickness is 100 mm and consists of steel or timber studs* with at least 2 layers of cladding on both sides with a thickness of 12.5 mm per layer.

Rigid walls

The minimum wall thickness is 100 mm and consists of concrete, aerated concrete or brickwork with a minimum density of 400 kg/m³.

Cross laminated timber (CLT) walls

The minimum wall thickness is 100 mm and has a minimum density of 376 kg/m³.

Sandwich panel walls

The minimum wall thickness is 100 mm and consists of metal sheets with a stone wool core with a minimum density of 115 kg/m³.

Rigid floors

The minimum floor thickness is 150 mm and consists of concrete or aerated concrete with a minimum density of 400 kg/m³.

Cross laminated timber (CLT) floors

The minimum floor thickness is 140 mm and has minimum density of 350 kg/m³.

**There must be a minimum distance of 100 mm from each part of the conduit seal to a timber stud and the gap between the conduit seal and the stud must be capped. The cavity between the conduit seal and the stud must have at least 100 mm class A1 or A2 insulation (according to EN 13501-1).*

The construction must be classified in accordance with EN 13501-2 for the specified fire resistance.

We have tested different constructions with a variety of our products, check for specific allowed constructions Annex C in the respective ETA or find the specific solution via our Multiselector.



For help in finding the right firestopping solution for penetration seals, see our **Multiselector** at www.mulcol.com or download the **Mulcol Fire Protection App** in the **App Store** (iOS) or **Google Play Store** (Android).



For the digital registration of firestopping in your buildings, you can use the **Mulcol Data Manager** free of charge. For registration on site, use our **Mulcol Fire Protection App**.



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