Multimastic SP

Firestop Mastic

European
Technical Assessment
ETA 23/0060

Technical Data Sheet

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Pragmatic, effective and applicable solutions

Contents

Multimastic SP

Firestop Mortar

Fire resistance
≤ 240 minutes

Acoustic insulation
Rw 54 dB

Working life
25 years

Firestop Mastic

Multimastic SP is an acrylic-based firestop mastic for the fire-resistant sealing of openings around cable trays, pipe and cable penetrations and for glueing Multimastic FB1/FB2 firestop boards (together). Multimastic SP expands light when exposed to heat and creates a fire-resistant and smoke-proof seal to adjacent rooms.

Multimastic SP forms part of the Mulcol® Penetration Seal System. Multimastic SP can also be used in combination with the Multimastic C firestop coating.

Advantages

- Fire resistance ≤ 240 minuten
- CE-certified
- Very high acoustic insulation
- Environmentally and user-friendly
- No primer needed for use on most surfaces
- Dries fast & recoatable
- Use i.c.w. Multimastic C

Application

- Rigid walls and floors
- Flexible walls
- Firestop boards
- Metal pipes with and without insulation
- Cable trays, cable ladders, electric cables and cable bundles
- Aluminium composite pipes with and without insulation
- Plastic pipes

Packaging

	Contents	Box	Pallet	Pallet	Article number
Cartridge	310 ml	12 pieces	128 boxes	1536 pieces	203012310
Bucket	6 kilos	-	80 buckets	480 kilos	203001006
Multimastic SP Bucket	12,5	-	40 buckets	500 kilos	203001125

1. Technical Data

Product:	EAN-code
Multimastic SP cartridge - 310 ml	8719324470087
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	18 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 max. 25 minutes
Non- adhesive	After max. 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 use$_{1)}$	Type Z_2 in accordance with EAD 350454-00-1104
Recoatable$_{2)}$	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: $R_{s,w}$ (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 23/0060
Compatibility	Suitable for use with most materials, but should not be used in direct contact with bituminous materials.
Function retention	30 years

1) Permissible environmental conditions
Conduit seal for use in conditions with < 85% RV, protected from temperatures below 0 °C, and without exposure to rain and/or UV (TR 024, type Z_2)

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

2. Acoustic properties

The same or higher sound insulation can be achieved with a deeper or double-sided seal. The sound insulation value only applies to the sealant and not to other elements in the building structure.

- ✓ With one-sided seal 12 mm deep, without backing: Rw 54 dB

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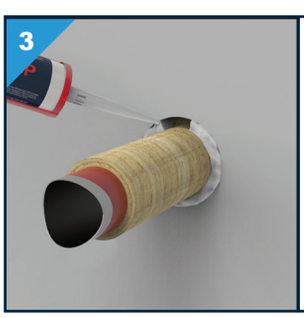
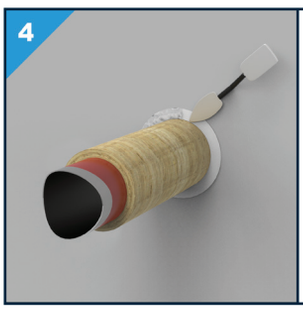
3. Installation Manual

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

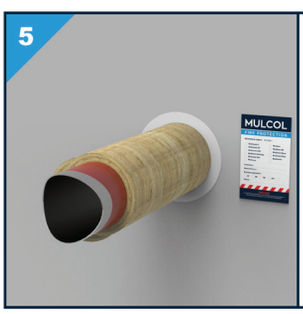
If backing is applied, cut it slightly wider than the gap width and make sure that it is applied to the correct depth in the structure.



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



Smooth the joint with a damp spatula or filler knife.



Fill in the conformity statement and paste it next to the fireproof seal.

MultiSelector

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**.

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4. Consumption tables

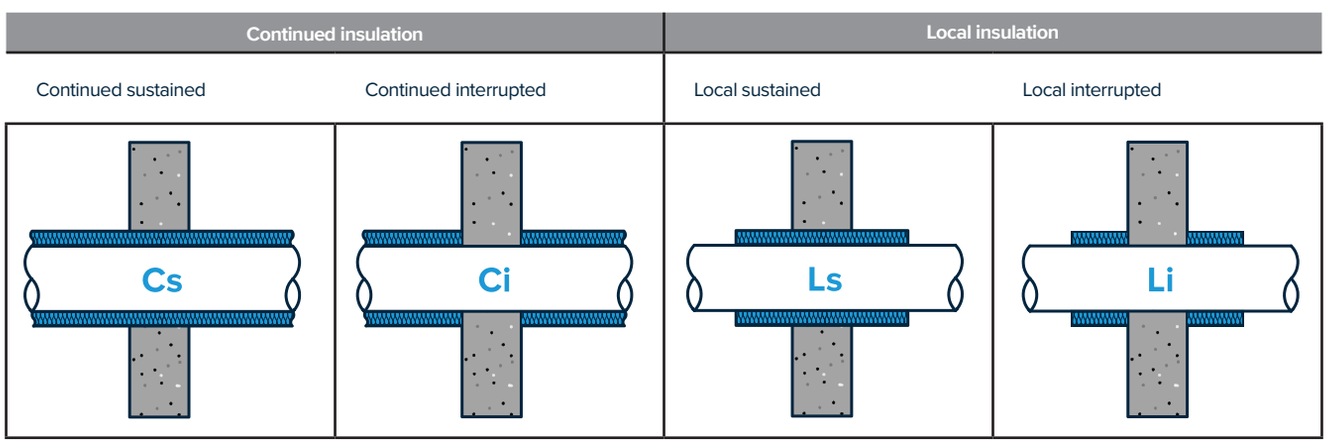
Per cartridge of 310 ml

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

5. 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:

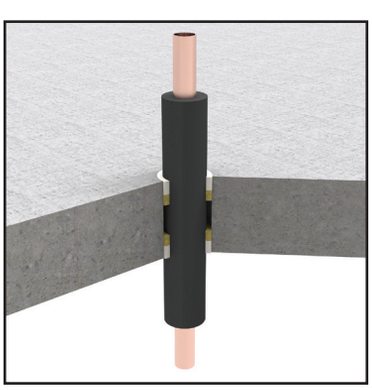


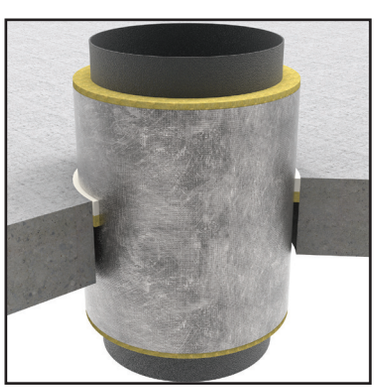
6. Permitted Insulation Materials

Multimastic SP Firestop foaming mastic have been extensively tested with various insulation materials; the table below shows the permitted insulation materials. For principle details, refer to the Multiselector and our test reports:
ETA 21/0110 and ETA 16/0120.

Insulation types	Pipe types	Permitted[1)]
Stone wool insulation *Fire class A1, in accordance with EN 13501-1*	✓ Copper pipes ✓ (Stainless) steel pipes ✓ Cast iron pipes	✓ Rockwool, min. 80 kg / m^3 or equal
Elastomeric insulation *Brandklasse BL-s1,d0 of B-s1,d0 to D-s3,d0 or DL-s3,d0 in accordance with EN 13501-1*	✓ (Stainless) steel pipes ✓ Cast iron pipes ✓ Fibre composite pipes ✓ Multilayer pipes	✓ ArmaFlex AF (EVO) / XG / SH / NH / HT / Ultima ✓ Kaiflex KK Plus S1 / S2 / ST / HT ✓ K-Flex EC (AD) / ST / SK / SRC (Eco) ✓ Of gelijkwaardig

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





7. Performance

Always consult ETA 23/0060 for the appropriate application and classification.

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
					✓		≤ EI 240-U/C
	≤ 50					✓	
Plastic pipes with cable(s)	≤ 40					✓	
Multilayer pipes	≤ 75	Rock wool	✓	✓	✓		≤ EI 90-C/U
	≤ 20	Rock 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	Rock 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
Cabels ≤Ø 21 mm	✓					✓	≤ EI 180
Cabels ≤Ø 50 mm	✓			✓	✓		≤ EI 120
Cabels ≤Ø 80 mm	✓			✓	✓		≤ EI 90
Cable bundles ≤Ø 100 mm	✓			✓	✓	✓	≤ EI 60
Cabels ≤Ø 80 mm, bundles ≤Ø 100 mm		✓		✓	✓		≤ EI 120
			✓	✓	✓		≤ EI 90
Cables without sheathing ≤Ø 24 mm		✓		✓	✓		≤ EI 45
			✓	✓	✓		≤ EI 60
Plastic pipes ≤Ø 16 mm		✓		✓	✓		
			✓	✓	✓		≤ EI 120
					✓		≤ EI 180
Copper pipes ≤Ø 16 mm		✓		✓	✓		≤ EI 45
			✓	✓	✓		
Steel pipes ≤Ø 16 mm		✓		✓	✓		≤ EI 60
			✓	✓	✓		≤ EI 90

Wet layer thickness[1]

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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

8. Actually tested solutions

All the latest tested solutions with the Multisealant GR 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.

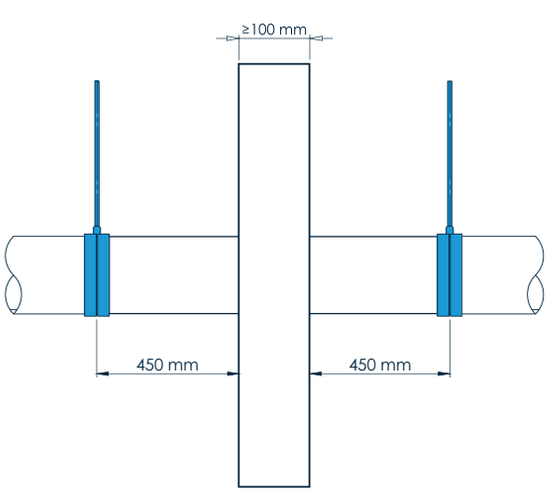
MultiSelector

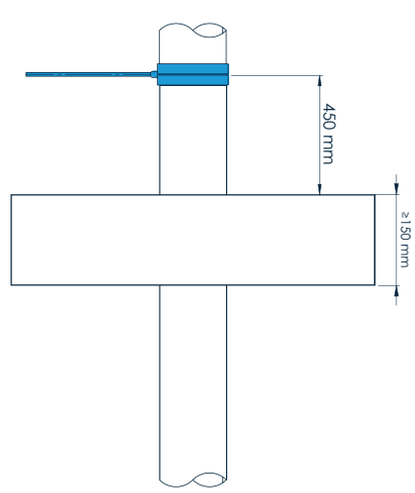
Our **Multiselector** can also be found in our **Mulcol Fire Protection App**.
It can be downloaded from the **App Store** (iOS) or **Google Play Store** (Android).

App Store Google Play

9. Pipe Support Penetrations

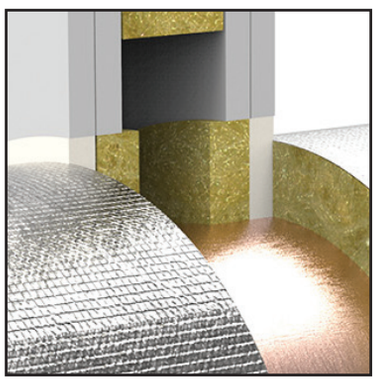
For pipes, the first bracket must be fitted at ≤ 450 mm from the fire separation, with cables and cable trays at ≤ 250 mm. For floors, the first bracket should be fitted at a distance of ≤ 450 mm from the top of the floor, for cables and cable trays at ≤ 250 mm.

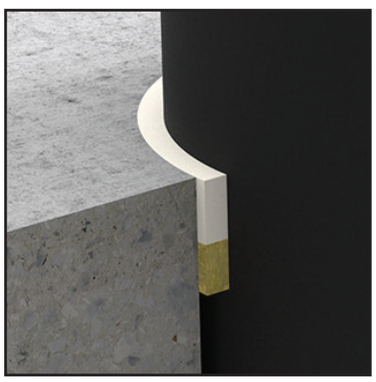


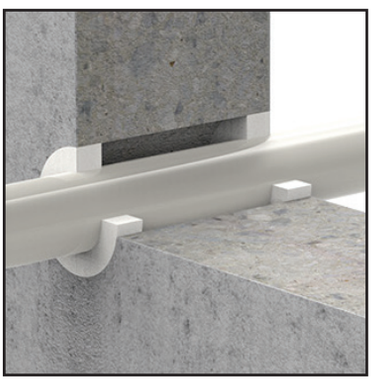


10. Joint Seals through Flexible Walls, Rigid Walls and Floors

Seams around pipe penetrations, whether with insulation or not, can be finished with Multimastic SP mastic to prevent the passage of smoke and hot gases to adjacent fire compartments. Depending on the type of penetration, either no backfilling, a rock-wool backfilling or Multitherm Backing will suffice.. For more information see ETA report 23/0060.



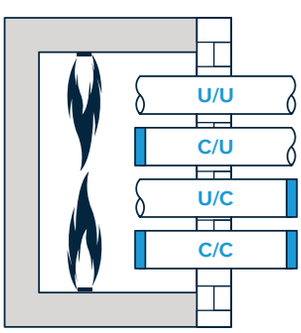




11. Test Configuration

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/U is covered

Plastic Pipes

Table H.1 shows a few examples of types of pipes 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.

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Table H.1 - Plastic Pipe Test Configuration per 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 table H.1 from 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, this due to the melting away of metal. Herewith is assumed that the suspension system remains in place. If the pipes are supported by a non fire resistant suspension system or are waste disposal shafts, the pipes are not sealed in the furnace, as shown in Table H.2.

Table H.2 - Test Configuration Metal Pipe by Application

Type of pipe	Construction		Test setup
	In the oven	Outside the oven	
Supported by a fire resistant[a] suspension	Capped	Uncapped	C/U
Supported by a non fire resistant suspension system	Uncapped	Capped	U/C
Shafts for waste disposal	Uncapped	Capped	U/C
[a]confirmed by testing or calculations (e.g. Eurocodes)			

12. Building Element Properties

Flexible walls

The minimum wall thickness must be 75 mm and the wall must consist of steel or timber studs* with at least 1 layer of cladding on both sides with a thickness of 12.5 mm.

Rigid walls

The minimum wall thickness is 75 mm and the wall must consist of concrete, aerated concrete or brickwork, with a minimum density of 650 kg/m^3 or wood (CLT) with a minimum density of 400 kg / m^3.

Rigid floors

The minimum floor thickness is 150 mm and the floor must consist of concrete or aerated concrete, with a minimum density of 650 kg/m^3. or wood (CLT) with a minimum thickness of 140 mm and a density of 400 kg / m^3.

**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 support structure must be classified in accordance with EN 13501-2 for the specified fire resistance.

13. Available Documents

Technical documents available

- Product Data Sheet (PDS)
- Technical Data Sheet (TDS)
- Safety Data Sheet (SDS)
- Installation Manual
- CE certificate
- Emission reports
- Acoustic report

Approvals

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

The above documents are available from your Mulcol contact or via **www.mulcol.com**

MultiSelector

For help in finding the right fire-stopping finish for penetrations, see our **Multiselector** at **www.mulcol.com** or download the **Mulcol Fire Protection App** in the **App Store** (iOS) or **Google Play Store** (Android).

DataManager

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**.

Available for Apple App Store · Available for Android Google play · YouTube · MultiSelector · DataManager

Mulcol International BV has compiled the technical data of this sheet with the utmost care and reserves the right to change product properties without prior notice. The user of this data remains responsible at all times for its correct application. In case of ambiguities or doubts, we advise you to consult with Mulcol International BV to ascertain whether this data meets the required application.

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