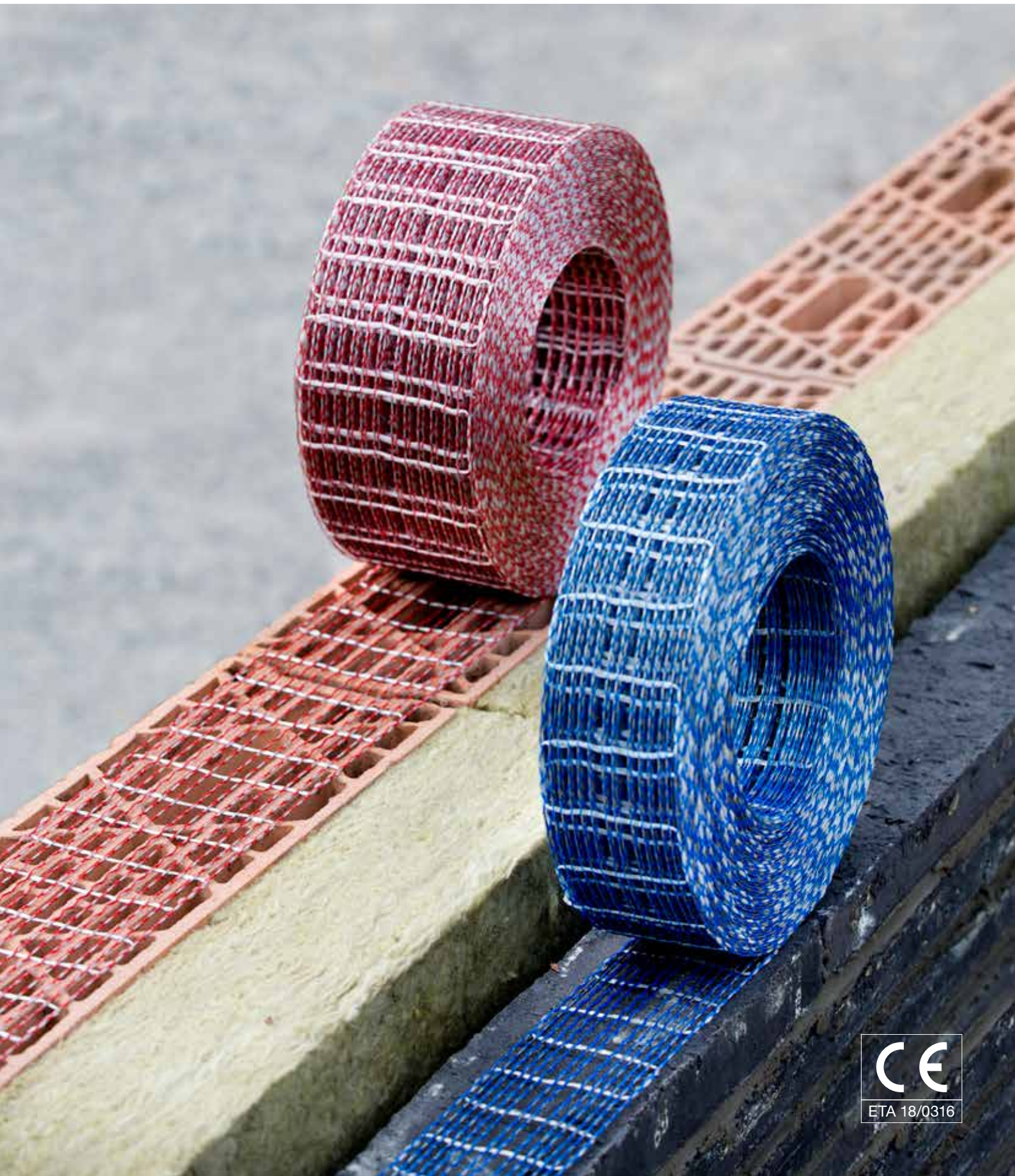


 **BEKAERT**

better together

Murfor® Compact Manual



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INTRODUCTION

Murfor® Compact

ETA 18/0316 CERTIFIED PRODUCT

Murfor® Compact is certified through ETA 18/0316 for structural use, which allows for CE marking of the product. By marking their products, manufacturers declare compliance with the obligations laid down for marking and their responsibility for free movement and sales throughout the European Economic Area (EEA).

The marking proves that the product has been evaluated and meets the European requirements for safety, health and environmental protection. It applies to products manufactured in the EEA as well as to products that are manufactured outside and then marketed in the EEA.

Murfor® Compact: the new standard in masonry reinforcement

Controlling crack formation in masonry is one of the many challenges of a construction project. Masonry has a high compressive strength, but the tensile strength is limited.

Reinforce your masonry with Murfor® Compact to add strength and prevent cracks.

Murfor® Compact enhances the structural performance of the wall by reinforcing the masonry, which significantly increases the in plane and out of plane capacities of the structure. This allows for greater moment capacities without alterations to the materials used or the dimensions of the panel.

You can rely on this new generation of reinforcement in all applications:

- Structural applications
- Crack control

Bekaert offers two types of Murfor® Compact:

Murfor® Compact I for use in a dry environment (MX1).

Murfor® Compact E for masonry exposed to a damp environment (MX3 and MX4).

TWO TYPES OF MURFOR® COMPACT



Murfor® Compact I for masonry with concrete and ceramic blocks in a dry environment. (MX1)



Murfor® Compact E for masonry that is exposed up to MX4



THE ADVANTAGES OF MURFOR® COMPACT

- ① **Fast and simple installation:**
Unroll the reinforcement onto the masonry joints and cut to size; no overlap needed, no material lost. Each roll contains 30 m of reinforcement and weighs only 3 kg, about 1/10 of the weight of regular masonry reinforcement.

- ② **Efficient and durable crack control:**
Murfor® Compact controls cracks and strengthens masonry. The composition of the steel cords has an exceptionally high yield strength.

- ③ **Structural use:**
Murfor® Compact increases the lateral load capacity when used as bed joint reinforcement by increasing tensile strength within the panel.

- ④ **Simple to stack and transport:**
Murfor® Compact rolls are packed in boxes of 30x30x30 cm that can be easily stacked, stored and transported.

- ⑤ **Suitable for any wall width:**
Murfor® Compact is available in two convenient widths that can be combined to reinforce any wall width..

PRODUCT RANGE

Murfor® Compact	Exposure class*	Masonry type	Wall width (mm)	Type of joint
Murfor® Compact I-50	MX1	Ceramic and concrete blocks	≤ 130 mm	3 to 12 mm
Murfor® Compact I-100			> 130 mm < 200 mm	
Murfor® Compact I-50 x2			≥ 200 mm	
Murfor® Compact E-35	MX2, MX3, MX4	All facing bricks	65 to 103 mm	3 to 12 mm
Murfor® Compact E-70			> 103 mm	

* According to Eurocode 6 – EN 845-3

Exposure classifications

MX1 – Dry environment

MX2 – Exposure to a damp environment

MX3 – Exposure to a damp and frosty environment

MX4 – Exposure to chlorides in the environment





MURFOR® COMPACT I

1. Types

There are two types of Murfor® Compact I:

- **Murfor® Compact I-50:** mesh of 7 steel cables
- **Murfor® Compact I-100:** mesh of 14 steel cables



≤ 130 mm

Wall width of ≤ 130 mm:
Murfor® Compact I-50



> 130 mm < 200 mm

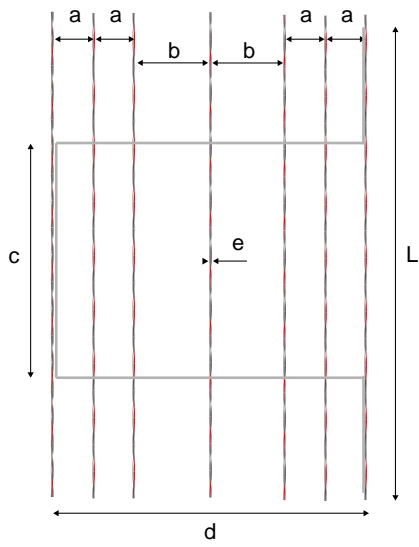
Wall width of > 130 mm
 < 200 mm: Murfor®
Compact I-100



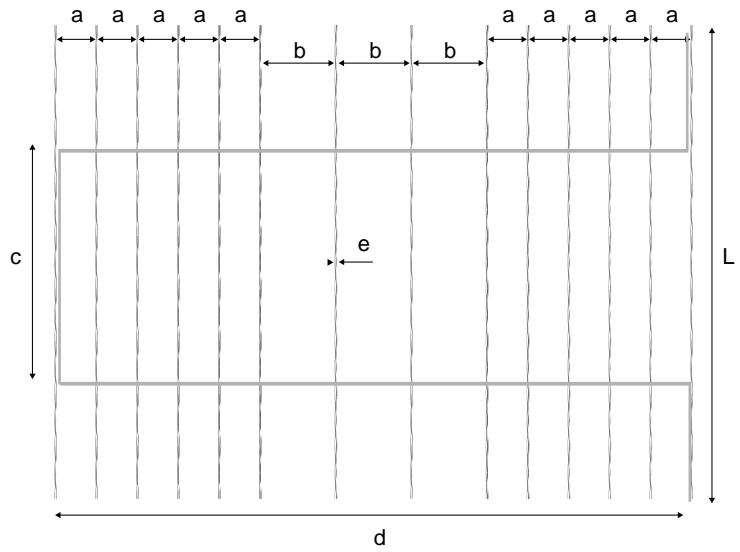
≥ 200 mm

Wall width of ≥ 200 mm:
2x Murfor® Compact I-50

2. Geometry



Murfor® Compact I-50.



Murfor® Compact I-100.

3. Measurements and weight

			Murfor® Compact I-50	Murfor® Compact I-100
Step _{short}	mm	a	7,5	7,5
Step _{long}	mm	b	10	10
Step _{transverse cord}	mm	c	33	33
Width	mm	d	50	100
Diameter	mm	d	1,7	1,7
Length	m	L	30	30
Weight	kg/roll		1,40	2,77

4. Technical specifications

		Murfor® Compact I-50	Murfor® Compact I-100
A* _{long cable}	mm ²	0,69	0,69
A* _{total}	mm ²	4,83	9,66
Yield strength	MPa	> 1770	> 1770
E-modulus	GPa	180	180
Agt	%	> 2,20	> 2,20
Zinc	g/m ²	40	40

*A = steel section

5. Packaging

- 36 boxes on a 900 x 1200 mm wooden pallet
- Identification on the box

		Murfor® Compact I-50	Murfor® Compact I-100
Per box	amount	6	3
	meter	180	90
Per pallet	boxes	36	36
	meter	6480	3240





MURFOR® COMPACT E

1. Types

There are two types of Murfor® Compact E:

- **Murfor® Compact E-35:** mesh of 7 Stainless steel chords
- **Murfor® Compact E-70:** mesh of 14 Stainless steel chords



65 to 103 mm

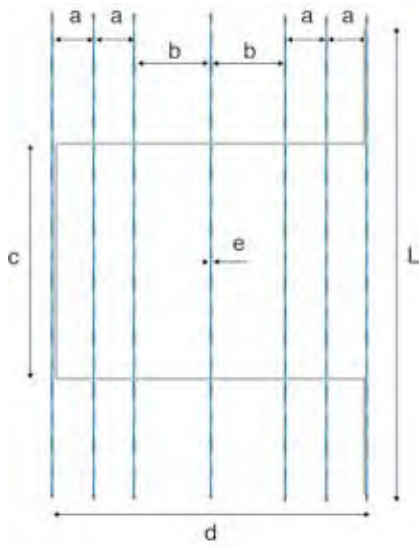
Use Murfor® Compact E-35 with a wall width of 65 to 103 mm.



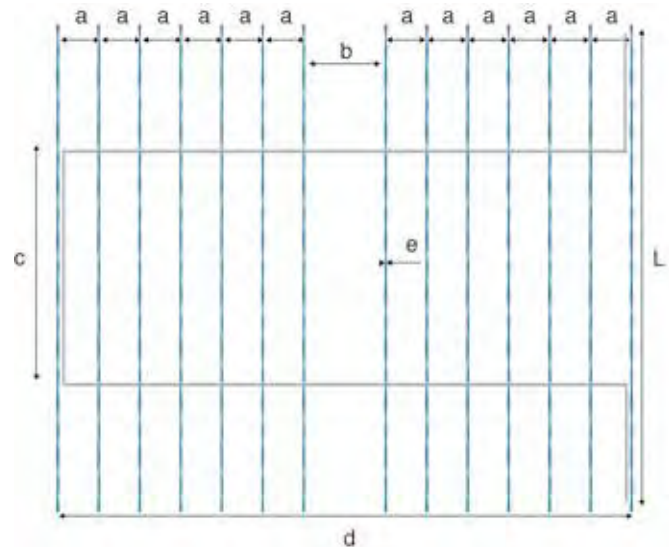
≥ 103 mm

Use Murfor® Compact E-70 with a wall width > 103 mm.

2. Geometry



Murfor® Compact E-35.



Murfor® Compact E-70.

3. Measurements and weight

			Murfor® Compact E-35	Murfor® Compact E-70
Step _{short}	mm	a	5	5
Step _{long}	mm	b	7,5	10
Step _{transverse cord}	mm	c	33	33
Width	mm	d	35	70
Diameter	mm	d	1,7	1,7
Length	m	L	30	30
Weight	kg/roll		1,32	2,63

4. Technical specifications

		Murfor® Compact E-35	Murfor® Compact E-70
A* _{long cable}	mm ²	0,69	0,69
A* _{total}	mm ²	4,83	9,66
Yield strength	MPa	> 1300	> 1300
E-modulus	GPa	150	150
Agt	%	> 2,00	> 2,00
Stainless steel		R1	R1

*A = steel section

5. Packaging

- 36 boxes on a 900 x 1200 mm wooden pallet
- Identification on the box

		Murfor® Compact E-35	Murfor® Compact E-70
Per box	amount	6	3
	meter	180	90
Per pallet	boxes	36	36
	meter	6480	3240



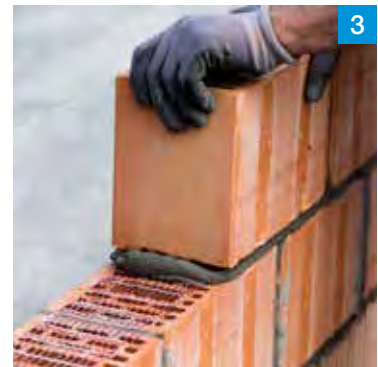
APPLYING MURFOR® COMPACT I



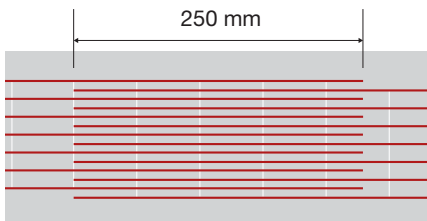
1 Apply Murfor® Compact I to the blocks.



2 Apply a layer of mortar.

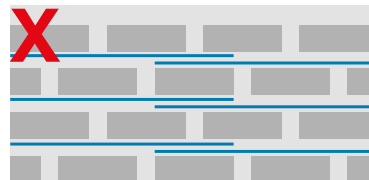


3 Put the blocks in place.



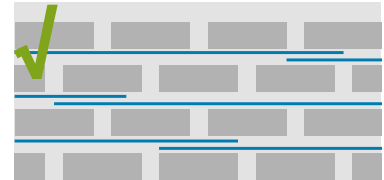
(overhead view of the wall)

Use a minimum overlap length of 250 mm.



(side view of the wall)

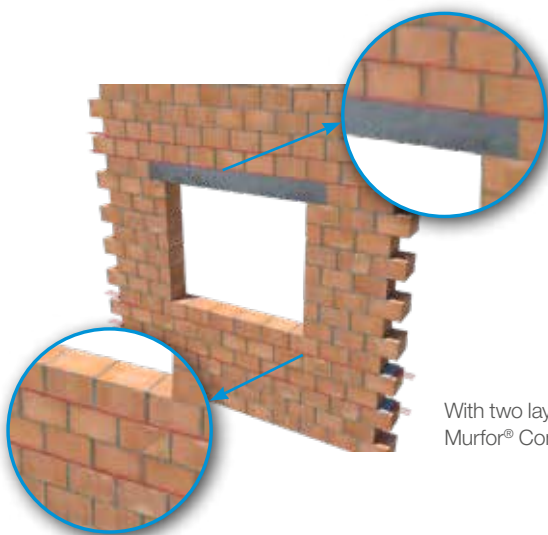
Avoid positioning the overlap on the same vertical face.



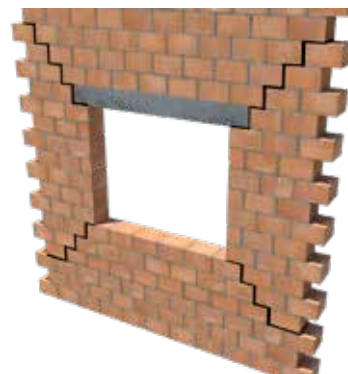
MURFOR COMPACT I - INTERIOR APPLICATIONS (MX1)

1. Stress concentrations

Stress concentrations around window openings can be absorbed by applying two layers of Murfor® Compact I above and below the window.



With two layers of Murfor® Compact I



Without two layers of Murfor® Compact I