

## matteco elastomer products

Elastomer made from recycled rubber raw materials



## Elastic solutions for the construction industry



**Sound insulation**

**Elastomeric bearings**

**Vibration reduction**

- Elastomer bearing ELR 8
- ecostep stair bedding
- ecowal wall and ceiling bearing
- Decoupling plates EKP



with general  
building authority approval/  
general type approval  
Z-16.32-497

**Conserving resources ++ Ecological ++ Sustainable ++ CO2-efficient**



Elastic solutions for the construction industry ++ Resource-saving ++ Ecological ++ Sustainable ++ CO2-efficient

## matteco GmbH

Based on a special binder and a unique process, matteco GmbH manufactures very high-quality technical elastomer products from recycled rubber powder, which in turn can be 100% recycled without the need to add binder again.

The raw material is a fine, recycled rubber powder. In combination with a special binder without plasticizers, both components are mixed and heated, pressed and then cooled down using special processes.

matteco elastomeric bearings have excellent properties for solving acoustic problems, reducing vibration and can also be combined very efficiently with insulation material.

Due to its own production facility, matteco GmbH can respond quickly and easily to the needs of customers and to tailor the products to their individual desired sizes. Using different recipes, products with the most diverse properties can be manufactured.

matteco GmbH only uses rubber raw materials from certified recycling companies to produce elastomeric bearings. These companies can supply the rubber powder in constant quality all year round according to matteco GmbH's requirements. The material composition, grain size and purity are constantly monitored by strict incoming inspections and the quality of matteco elastomer products is permanently ensured.



- ✓ Protection against vibrations and shocks
- ✓ Efficient insulation of structure-borne sound
- ✓ Sound insulation for all objects
- ✓ Long-term protection of the building fabric
- ✓ 100% ecological, sustainable and resource-saving
- ✓ No disposal costs - 100% recyclable by matteco
- ✓ CO2 emissions **reduced by at least 75% through energy-efficient production**



Errors and technical changes reserved.

Information on the general terms and conditions can be found at [www.matteco.de](http://www.matteco.de).

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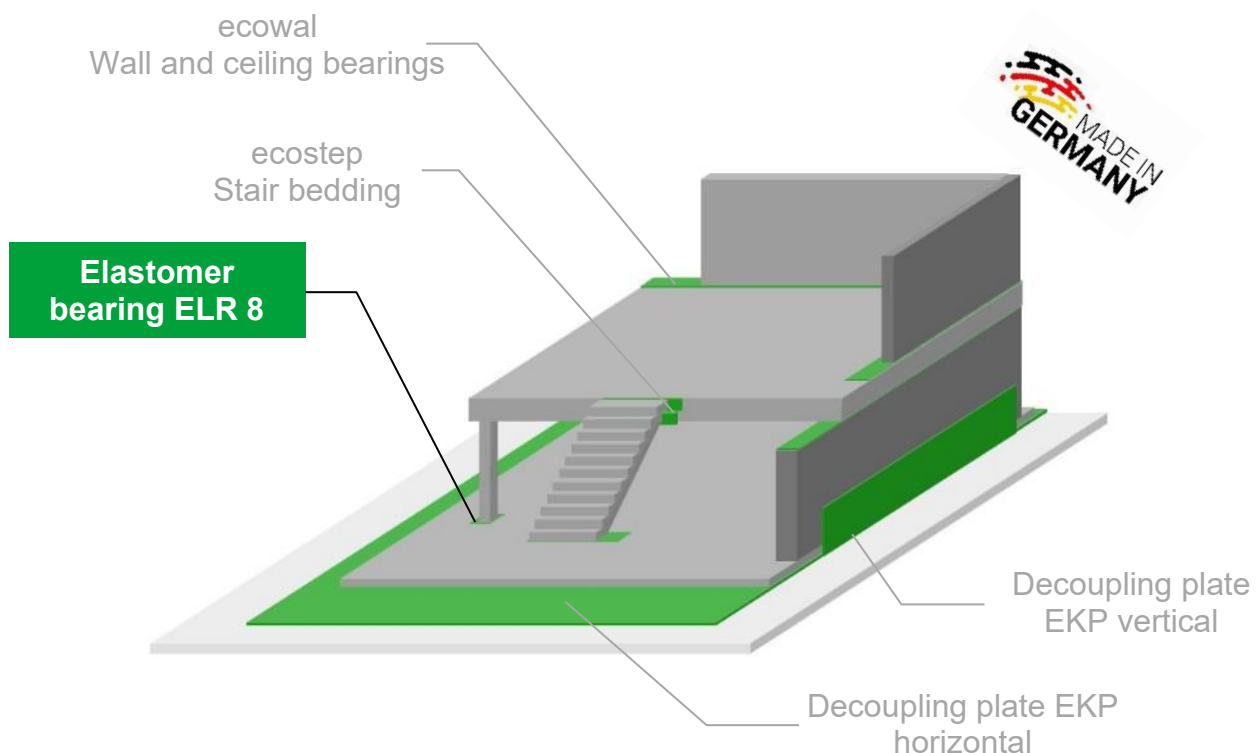
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## matteco elastomeric bearing ELR 8

Elastomer made from recycled rubber raw materials

**Unreinforced elastomeric bearing with** load capacity up to  
7.8 N/mm<sup>2</sup>

with general technical approval  
Approval number: Z-16.32-497



**Sustainable** and **ecological** elastomeric bearings  
made from recycled raw materials!

## matteco elastomeric bearing ELR 8



### matteco elastomeric bearing ELR 8

The matteco elastomeric bearing ELR 8 is an unreinforced, shear-soft elastomeric bearing whose main component SBR and NR is made of recycled old tires in powder form. It is intended for the bearings of components, especially prefabricated steel and prestressed concrete parts, but also wood and plastic constructions.

Experimental tests required by an independent institute in accordance with the guidelines of the Institut für Bautechnik in Berlin have been specified as proof of the classification for use in building construction and the associated building authority approval.

In building construction, matteco elastomeric bearings ELR 8 are mostly used as point bearings, in storey construction as strip bearings underneath surface bearing structures.

Due to its very good thermal insulation values, matteco elastomeric bearing ELR is also used for **thermal separation**.

matteco elastomeric bearings ELR 8 are also used very effectively for **structure-borne sound insulation** of external vibrations. By using matteco elastomeric mounts ELR 8 as elastic intermediate layer, the transmission of structure-borne noise is efficiently and cost-effectively prevented.

With the fire protection equipment, matteco elastomer bearing ELR 8 also meets the requirements of the **F90 fire resistance class**, proven by fire protection technical expert opinion.

## Notes on the assessment basis

In each individual case, the load safety of the elastomeric bearings in the ultimate limit state must be verified by means of a static calculation for all decisive design situations and load cases. The basis for approval is the verification concept according to DIN EN 1990:2010-12 in conjunction with the National Annex.

The design values of the effect of the action (stress)  $E_d$  are to be determined from the characteristic values of the actions, taking into account the partial safety factors  $\gamma_f$  and the combination values  $\psi$  according to the Technical Building Regulations.

In the ultimate limit state, the following verification must be carried out:

$$E_{\perp d} / R_{\perp d} \leq 1$$

with:

$E_{\perp d}$  Load of the elastomeric bearing perpendicular to the bearing plane [N/mm<sup>2</sup>].

$R_{\perp d}$  Rated value of the corresponding load capacity of the elastomeric bearing [N/mm<sup>2</sup>] perpendicular to the bearing plane as a function of the form factor  $S$  at a compression of  $\varepsilon = 25\%$ .

Shape factor for rectangular cross-sections

$$S = (a \cdot b) / (2 \cdot t \cdot (a + b))$$

with:

$a$  Shorter side of the bearing [mm]

$b$  Longer side of the bearing [mm]

$t$  Thickness of the unloaded bearing [mm]

Shape factor for strip-shaped cross-sections:  
(condition:  $b > 10 \cdot a$ )

$$S = a / (2 \cdot t)$$

Shape factor for round cross-sections

$$S = r / (2 \cdot t \cdot (a + b))$$

with:

$r$  Radius of the round bearing [mm]

**Performance features**

- Ecologically and sustainably produced elastomeric bearing with general building authority approval (Z-16.32-497).
- High restoring force due to shear-soft elastomer bearing.
- Excellent structure-borne sound insulation up to over 35 dB.
- Permanently elastic bearing.
- Very high homogeneity.
- Very robust and durable.
- Rot-proof.
- 100% recyclable.

**Delivery forms**

- As a blank with holes, cut-outs and diagonal cuts.
- Available as strips in all widths.
- Standard bearing thickness 10, 15 and 20 mm.  
Intermediate bearing thicknesses on request.
- For use in in-situ concrete, the bearing can be supplied with lost formwork, both for point and strip bearings.
- Special lost formwork for use in the required fire resistance class F90 available.

**Type designation for tender and order**

- matteco ELR 8 - thickness / length x width - F90 (optional)

**Assembly:**

Direct contact with materials containing plasticizers should be avoided. Support surfaces must be free of concrete residues, dust, oil, grease and solvents. A planned alignment of the bearing surfaces must be ensured.

**Tolerances:**

With regard to the tolerances to be observed for the dimensions, the following applies

Length:	Class L3 according to Table 1 of DIN ISO 3302-1:1999
Width:	Class L3 according to Table 1 of DIN ISO 3302-1:1999
Thickness:	Class M4 according to Table 1 of DIN ISO 3302-1:1999

**disposal:**

No disposal costs - return by matteco GmbH

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## Technical data

Description	Value
Material:	Recycled rubber powder with special binder (no PU binder)
Color:	black
Shape:	Plate, both sides flat
Surface:	smooth
Thickness:	10, 15, 20 mm
Width and length:	according to specification (max. width 1.2 m)
Design value of the load capacity: at room temperature	7.8 N/mm <sup>2</sup>
Density:	approx. 1050 kg/m <sup>3</sup>
Tear resistance:	2.6 N/mm <sup>2</sup>
Elongation at break:	65 %
Modulus of elasticity:	1,49 N/mm <sup>2</sup>
Shear modulus:	1.18 N/mm <sup>2</sup>
Structure-borne sound insulation:	up to 35 dB
Thermal conductivity:	0.15 W/mK
Operating temperature:	-25°C to +50°C, briefly up to 70°C
Shore A hardness:	58 ± 5
Fire behaviour Elastomer:	Efl
Dangerous substances:	none
No disposal costs - 100% recyclable by matteco	
75% reduction in CO2 emissions through energy-efficient production	

### Approval:

General building approval Z-16.32-497, issued by the German Institute for Building Technology in Berlin.

### Fire reports:

Expert opinion on fire behaviour 2551/2018 MPA Braunschweig.

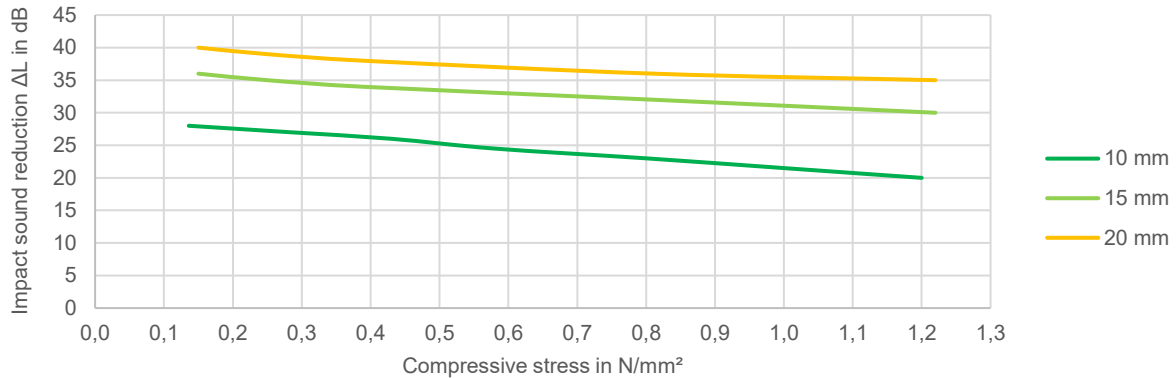


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## Very high sound insulation due to shear soft elastomer bearing!

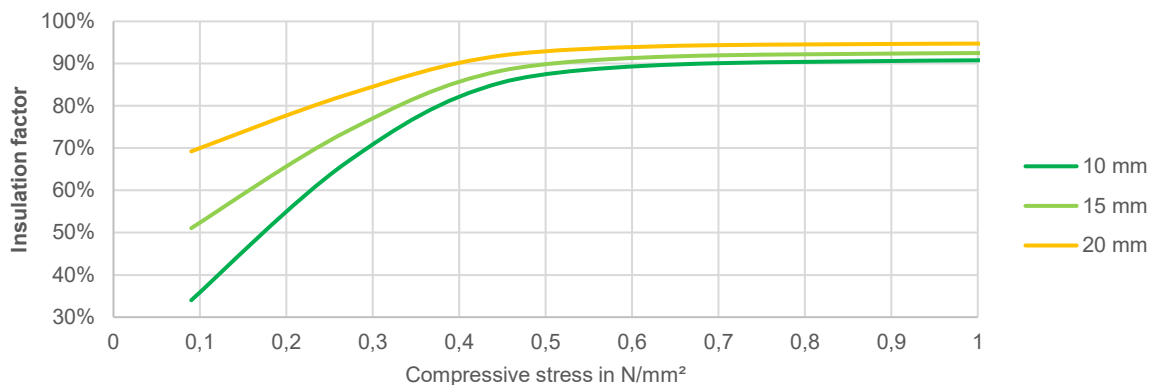
### Structure-borne sound insulation

according to DIN EN ISO 10140-3



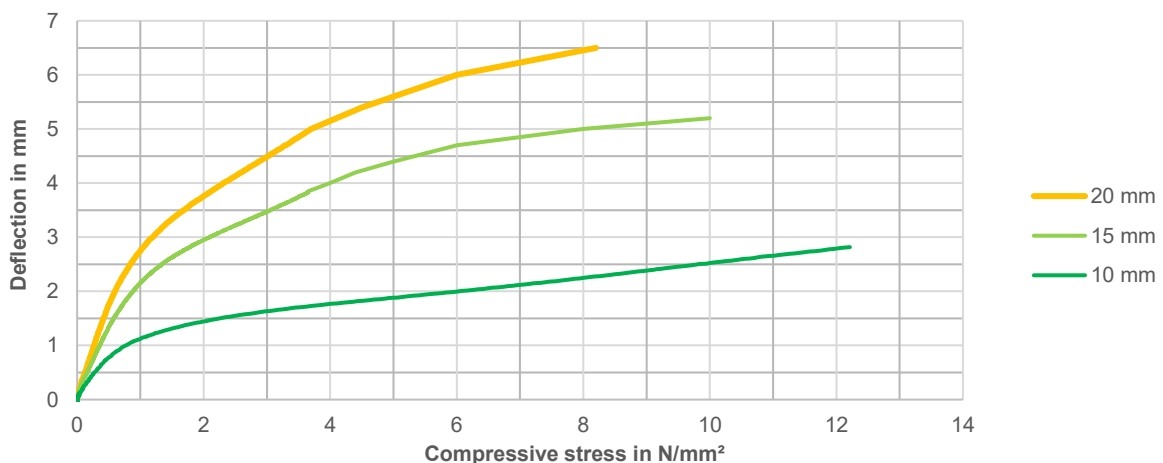
Due to the homogeneity of the material structure of matteco elastomeric bearings ELR 8, a relatively constant structure-borne sound insulation is achieved over a wide load range. This enables us to offer planners, architects, construction companies and building owners the greatest possible acoustic safety.

### Insulation effect



Shown is the insulating effect of ELR 8 at an excitation frequency of 100 Hz.

### Deflection



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## Product overview

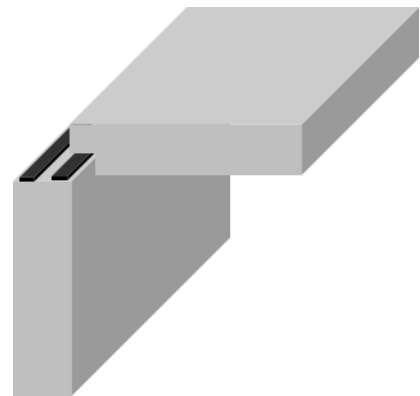
matteco elastomeric bearing ELR 8, **strip bearing**

Elastomer width a [mm]	Thickness t = 10 mm		Thickness t = 15 mm		Thickness t = 20 mm	
	Load capacity Rd [kN/m]	Perm. angle of rotation $\alpha$ [‰] 2000/a	Load capacity Rd [kN/m]	Perm. angle of rotation $\alpha$ [‰] 3000/a	Load capacity Rd [kN/m]	Perm. angle of rotation $\alpha$ [‰] 4000/a
25	30*	16	20*	16	-	-
40	70*	16	40*	16	30*	16
50	120	16	70*	16	50*	16
60	210	16	100	16	70*	16
70	340	16	150	16	100*	16
75	430	16	180	16	120*	16
80	550	16	220	16	140*	16
90	700	16	310	16	180*	16
100	780	16	430	16	240	16
110	860	16	600	16	320	16
120	940	16	830	16	410	16
130	1010	15	1010	16	530	16
140	1090	14	1090	16	680	16
150	1170	13	1170	16	870	16
160	1250	13	1250	16	1100	16
170	1330	12	1330	16	1330	16
180	1400	11	1400	16	1400	16
190	1480	11	1480	16	1480	16
200	1560	10	1560	15	1560	16
Maximum deflection [mm]		2,5		3,75		5
Perm. horizontal shear deformation [mm].		3		4,5		6

\* Formats outside the approval

According to the abZ, the following must be taken into account for torsion: obliquity with 10 ‰ and unevenness with 625/a ‰

- Use in in-situ concrete: Embedding in PE foam
- Use in fire resistance class F90 on request



### Example of calculation of the restoring force:

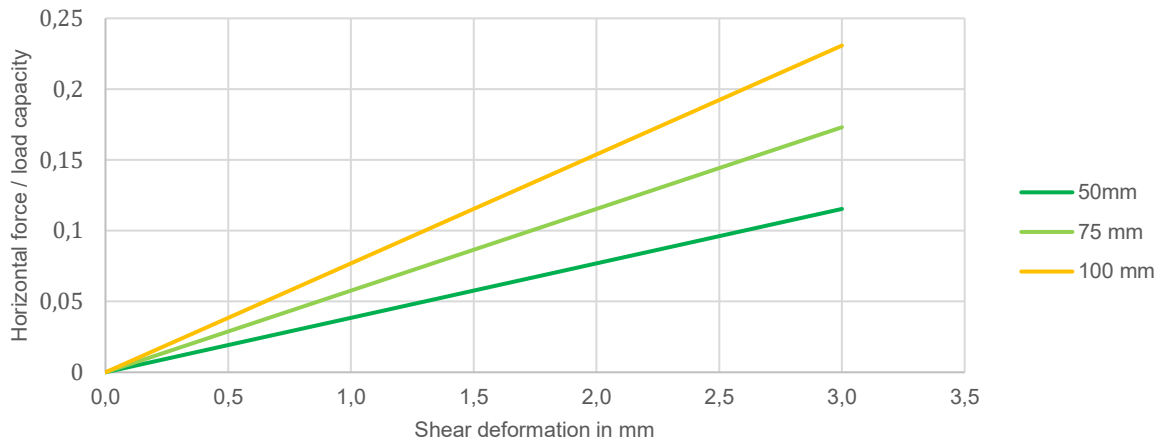
Existing line load: 175 kN/m  
Selected bearing thickness: 15 mm  
Selected bearing width: 100 mm  
expected horizontal deformation: 3.0 mm  
Horizontal force / load capacity: 0.1 (see diagram next page)  
Restoring force:  $0.1 \times 175 \text{ kN/m} = 17.5 \text{ kN/m}$

The values given above are indicative and have been determined over a longer, representative period of time in accordance with applicable testing standards or internal company methods. However, they are not considered binding specifications and are therefore in no way to be understood as an express assurance of certain properties. We reserve the right to make further technical developments and to reprint data sheets.

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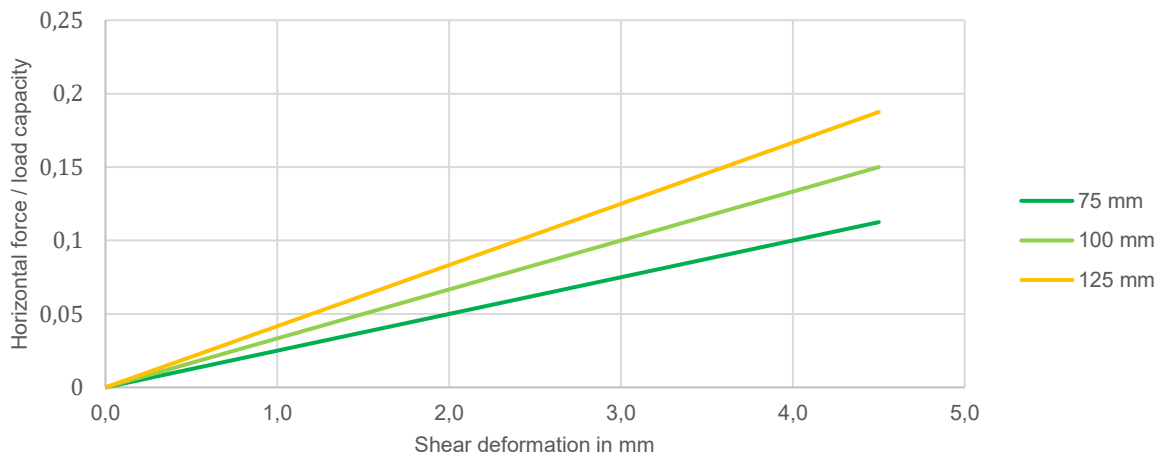
### Restoring force

Thickness 10 mm



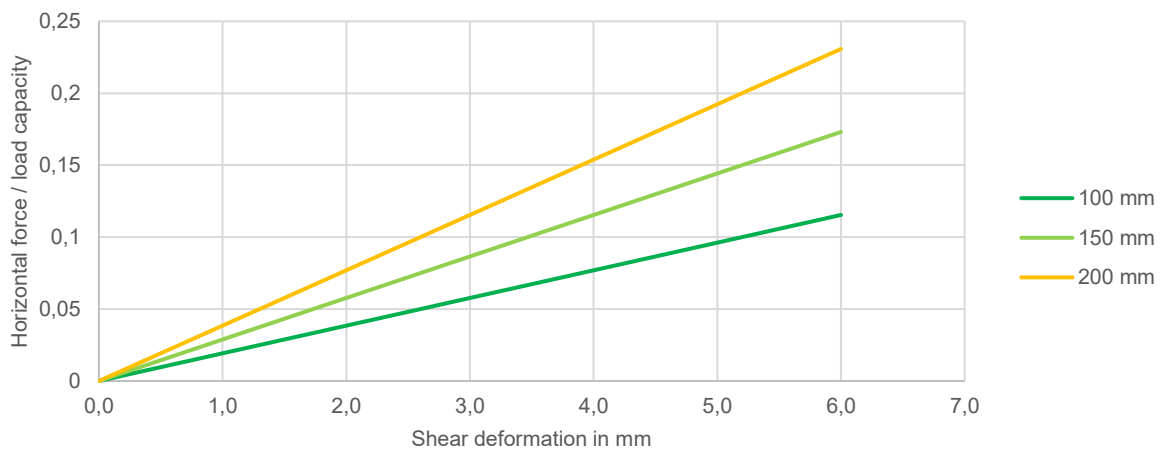
### Restoring force

thickness 15 mm



### Restoring force

thickness 20 mm



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matteco elastomeric bearing ELR 8, **point contact bearing**

Thick- ness t [mm]	Width a [mm]	Perm. angle of ro- tation α [‰]	Load carrying capacity Rd [N/mm²]													
			Length b [mm]													
			100	120	130	150	170	180	200	250	300	350	400	450	500	550
10	100	16	2,4	2,8	3,0	3,4	3,8	4,0	4,3	5,1	5,8	6,4	6,9	7,3	7,7	7,8
	110	16	2,6	3,1	3,4	3,9	4,3	4,6	5,0	6,1	7,0					
	120	16	2,8	3,4	3,7	4,3	4,9	5,2	5,8	7,1						
	130	15	3,0	3,7	4,1	4,8	5,5	5,9	6,6							
	140	14	3,2	4,0	4,4	5,3	6,2	6,6	7,5							
	150	13	3,4	4,3	4,8	5,8	6,8	7,3								
	200	10	4,3	5,8	6,6											
	250	8	5,1	7,1												
	300	7	5,8													
	350*	6	6,4													
	400*	5	6,9													
	450*	4	7,3													
	500*	4	7,7													

\* Formats outside the approval

Thick- ness t [mm]	Width a [mm]	Perm. angle of ro- tation $\alpha$ [‰]	Load carrying capacity Rd [N/mm²]														
			Length b [mm]														
			100	120	130	150	170	180	200	250	300	350	400	450	500	550	600
15	100	16	1,4	1,5	1,6	1,7	1,8	1,9	2,0	2,2	2,4	2,6	2,7	2,8	2,9	3,0	3,1
	110	16	1,4	1,6	1,7	1,8	2,0	2,1	2,2	2,5	2,7	3,0	3,1	3,3	3,4	3,6	3,7
	120	16	1,5	1,7	1,8	2,0	2,2	2,3	2,4	2,8	3,1	3,4	3,6	3,8	4,0	4,2	4,3
	130	16	1,6	1,8	1,9	2,1	2,3	2,4	2,6	3,1	3,5	3,8	4,1	4,4	4,7	4,9	5,1
	140	16	1,6	1,9	2,0	2,3	2,5	2,6	2,9	3,4	3,9	4,3	4,7	5,1	5,4	5,7	5,9
	150	16	1,7	2,0	2,1	2,4	2,7	2,8	3,1	3,7	4,3	4,9	5,3	5,8	6,2	6,5	6,9
	200	15	2,0	2,4	2,6	3,1	3,6	3,8	4,3	5,6	6,9	7,8					
	250	12	2,2	2,8	3,1	3,7	4,4	4,8	5,6	7,7							
	300	10	2,4	3,1	3,5	4,3	5,3	5,8	6,9								
	350	9	2,6	3,4	3,8	4,9	6,0	6,7									
	400	8	2,7	3,6	4,1	5,3	6,8	7,6									
	450	7	2,8	3,8	4,4	5,8	7,4										
	500*	6	2,9	4,0	4,7	6,2											

\* Formats outside the approval

Thick- ness t [mm]	Width a [mm]	Perm. angle of ro- tation $\alpha$ [%]	Load carrying capacity Rd [N/mm²]																	
			Length b [mm]																	
			100	120	130	150	170	180	200	250	300	350	400	450	500	550	600			
20	100	16	1,0	1,1	1,1	1,2	1,3	1,3	1,4	1,5	1,6	1,6	1,7	1,8	1,8	1,8	1,9			
	110	16	1,1	1,1	1,2	1,3	1,4	1,4	1,5	1,6	1,7	1,8	1,9	2,0	2,0	2,1	2,1			
	120	16	1,1	1,2	1,3	1,4	1,4	1,5	1,6	1,7	1,9	2,0	2,1	2,2	2,3	2,4	2,4			
	130	16	1,1	1,3	1,3	1,4	1,5	1,6	1,7	1,9	2,1	2,2	2,3	2,5	2,6	2,6	2,7			
	140	16	1,2	1,3	1,4	1,5	1,6	1,7	1,8	2,0	2,2	2,4	2,6	2,7	2,8	3,0	3,1			
	150	16	1,2	1,4	1,4	1,6	1,7	1,8	1,9	2,2	2,4	2,6	2,8	3,0	3,2	3,3	3,4			
	200	16	1,4	1,6	1,7	1,9	2,1	2,2	2,4	2,9	3,4	3,9	4,3	4,7	5,1	5,5	5,8			
	250	16	1,5	1,7	1,9	2,2	2,5	2,6	2,9	3,7	4,6	5,4	6,2	7,0	7,7	7,8				
	300	13	1,6	1,9	2,1	2,4	2,8	3,0	3,4	4,6	5,8	7,1								
	350	11	1,6	2,0	2,2	2,6	3,1	3,4	3,9	5,4	7,1									
	400	10	1,7	2,1	2,3	2,8	3,4	3,7	4,3	6,2										
	450	9	1,8	2,2	2,5	3,0	3,6	4,0	4,7	7,0										
	500	8	1,8	2,3	2,6	3,2	3,9	4,2	5,1	7,7										



## matteco quattro elastomeric bearing

Universally applicable shear soft elastomeric bearing for use as a sound insulation bearing, for structure-borne sound insulation, for thermal separation and as a compensating bearing. In the thickness 10 mm with general building authority approval!

- Ecologically and sustainably produced elastomeric bearing
- Permanently elastic bearing
- UV- and weather resistant
- Dimensionally stable
- Can be removed without tools
- 100% recyclable



Description	Value	
Material:	Highly compressed elastomeric bearing made of recycled rubber raw materials	
Color:	black	
Form of delivery:	Rolls	
Surface:	smooth	
Quality of material:	GM	ELR 8
General technical approval Z-16.32-497	no	yes
Density:	approx. 1050 kg/m³	approx. 1050 kg/m³
Thickness:	5mm	10 mm
Width:	200 mm	200 mm
Number of tear seams:	3 pieces	3 pieces
Width of the stripes:	50, 100, 150, 200 mm	
Length:	20 m on roll	10 m on roll
Weight per roll:	approx. 21 kg	approx. 21 kg
Rated value of the load capacity:	10 N/mm²	8 N/mm²
Structure-borne sound insulation:	up to 15 dB	up to 25 dB
Shore A hardness:	58 ± 5	58 ± 5
Thermal conductivity:	0.15 W/mK	
Operating temperature:	-25°C to +50°C, briefly up to 70°C	
Fire behaviour:	Efl	
Dangerous substances:	none	
No disposal costs - 100% recyclable by matteco		
Reduced CO2 emissions through energy-efficient production		

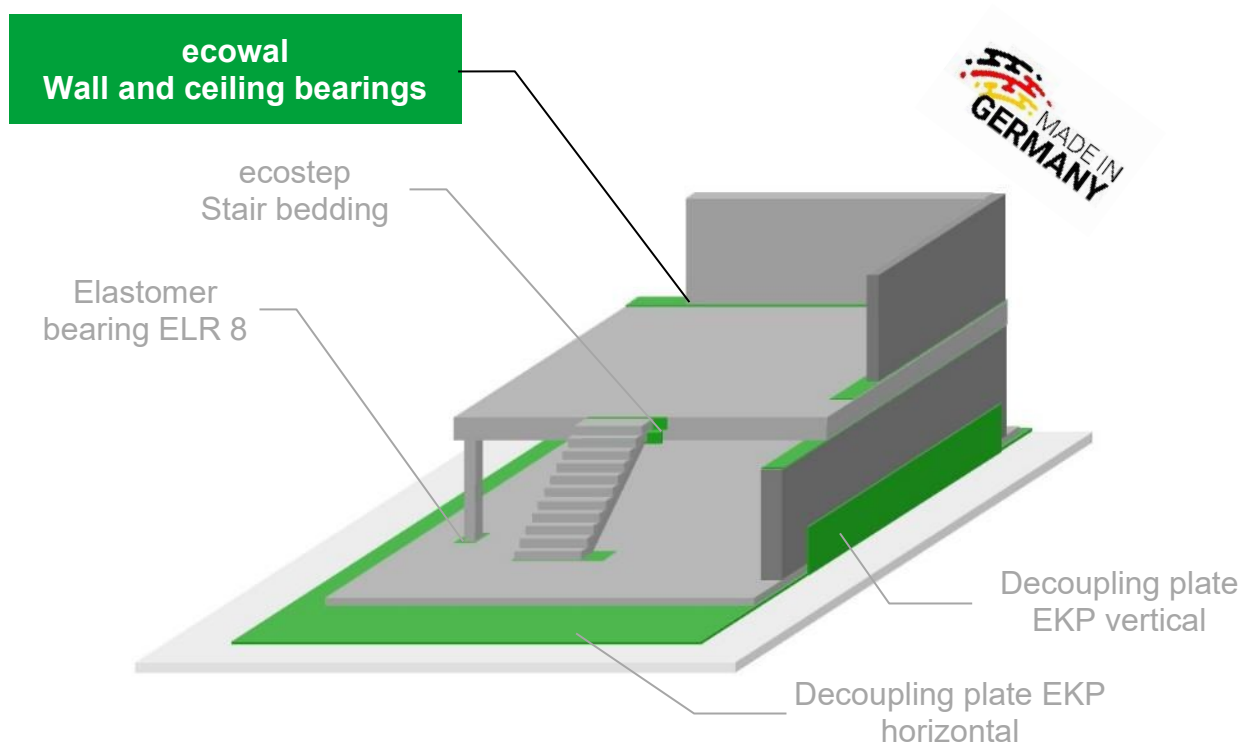
### Type designation for ordering:

- matteco quattro elastomeric bearings - thickness

## matteco ecowal wall and ceiling bearing

Elastomer made from recycled rubber raw materials

Sound insulation and protection for the building  
fabric



**Sustainable** and **ecological** elastomeric bearings  
made from recycled raw materials!

## matteco ecowal wall and ceiling bearing

### Field of application

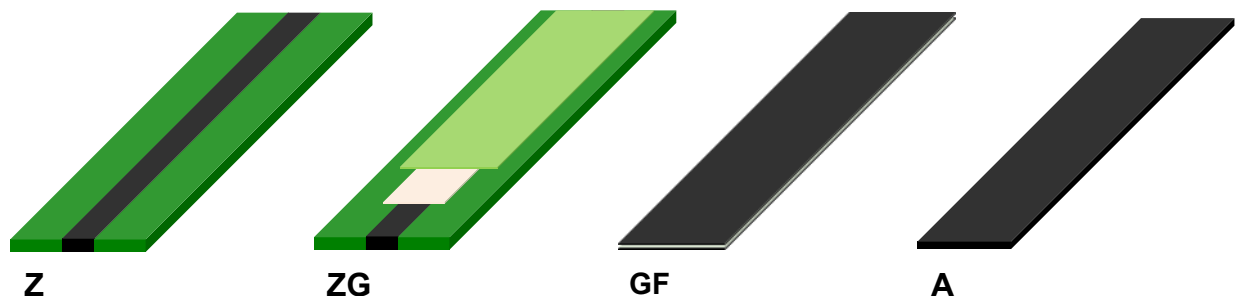
matteco ecowal wall and ceiling bearings with their properties and product performance in solid and timber construction offer an economical and technically safe solution for all load ranges. The flexible **elastomeric bearing ELR 8 with building authority approval** is the supporting basis for all matteco ecowal wall and ceiling bearings.

matteco ecowal wall and ceiling bearings are used:

- For load centering.
- Allow length expansion.
- For the compensation of unevenness.
- For acoustic separation (decoupling) from wall and ceiling.
- Use on or under load-bearing and non-load-bearing masonry.
- To avoid cracks between wall and ceiling.

### Product overview

- |                       |                         |
|-----------------------|-------------------------|
| • matteco ecowal - Z  | Center bearing          |
| • matteco ecowal - ZG | Centering slide bearing |
| • matteco ecowal - GF | Slide film              |
| • matteco ecowal - A  | Wall bearing            |



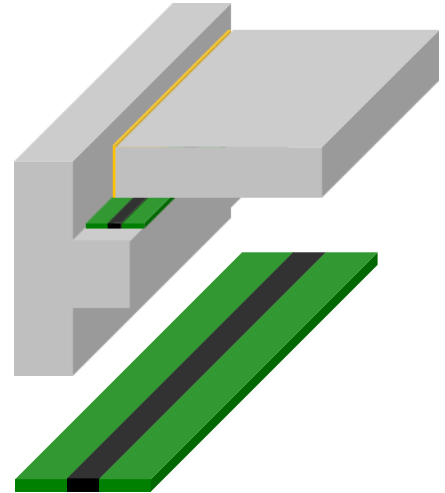
### Performance features

- Ecologically produced, shear-soft elastomeric bearing matteco ELR 8 with building authority approval.
- High-quality cross-linked and easily cut PE foam.
- High quality and tested sliding foils.
- Improvement of the decoupling of the joints.
- The bearing types ecowal Z and ecowal ZG are also available in **fire resistance class F90**. (Expert's certificate: 2551/2018 MPA Braunschweig).

## matteco center bearing ecowal type Z

Slab bearings designed as core strip bearings with load centering for use as locating and non-locating bearings. The **elastomer bearing ELR 8 with abZ** is flexible and absorbs length changes and torsion. Overstressed edge pressure and crack formation are avoided by centred load introduction.

- Thick elastomer: 5 mm and 10 mm.
- Element length: 1,000 mm.
- Standard widths: see table (other dimensions on request).
- Eccentric bearings and double bearings on request.
- Available in fire resistance class F90 with certificate.
- Elastomer strip with abZ!
- High-quality, highly compressible, cross-linked PE foam.



Thickness elastomer	Total bearing width	Width Elastomer	Design Bearing force	Rotation angle $\alpha$	Perm. horiz. movement
mm	mm	mm	kN/m	o/oo	mm
5*	115	30	100	16	$\pm 2,1$
	150	55	430	16	$\pm 2,1$
	175				
	200	75	585	13	$\pm 2,1$
	240				
	300	100	780	10	$\pm 2,1$
	365				
10	115	55	160	16	$\pm 5,1$
	150	75	430	16	$\pm 5,1$
	175				
	200	100	780	16	$\pm 5,1$
	240				
	300	100	780	16	$\pm 5,1$
	365				

The values given in the table are based on a compression of max. 25%.

\* Formats outside the approval

### Type designation for ordering

- matteco ecowal type Z - bearing thickness - bearing width - bearing force - (Optional: F90)

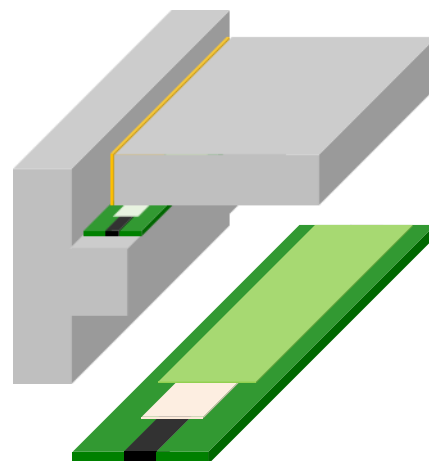
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## matteco center slide bearing ecowal type ZG

Ceiling bearing designed as core strip bearing with load centering and permanent sliding function. The shear-soft **elastomeric bearing ELR 8 with abZ** absorbs torsion and the sliding film absorbs large changes in length. Overstressed edge pressure and crack formation are avoided by centred load introduction and free linear expansion.

- Thick elastomer: 5 mm and 10 mm.
- Element length: 1,000 mm.
- Standard widths: see table (other dimensions on request).
- Available in fire resistance class F90 with certificate.
- Elastomer strip with abZ!
- High-quality, highly compressible, cross-linked PE foam.
- MPA-tested sliding film with coefficient of friction  $\mu < 0.1$
- Sliding film protected by PE foam lamination



Thickness elastomer	Total bearing width	Width Elastomer	Design Bearing force	Rotation angle $\alpha$	Perm. horiz. movement
mm	mm	mm	kN/m	o/oo	mm
5*	115	30	90	16	$\pm 7,8$
	150	55	165	16	$\pm 16,5$
	175				
	200	75	225	13	$\pm 16,5$
	240				
	300	100	300	10	$\pm 16,5$
	365				
10	115	55	160	16	$\pm 16,5$
	150	75	225	16	$\pm 16,5$
	175				
	200	100	300	16	$\pm 16,5$
	240				
	300	100	300	16	$\pm 16,5$
	365				

\* Formats outside the approval

### Type designation for ordering

- matteco ecowal type ZG - bearing thickness - bearing width - bearing force - (Optional: F90)

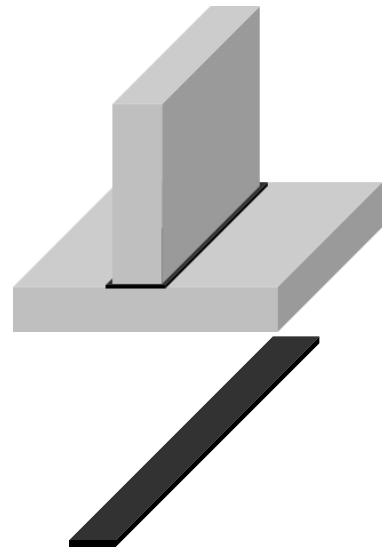
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## matteco wall bearing ecowal type A

The wall bearing matteco ecowal type A (insert under the wall) causes a reduction of the sound transmission via the adjacent components. This effectively reduces the longitudinal sound transmission between two floors and compensates unevenness. Airborne sound, such as loud voices or music, spreads through the living space, stimulates walls, ceiling and floor and is transmitted as structure-borne sound to adjacent usage units.

In walls without matteco wall bearing ecowal type A, the structure-borne sound is directly transmitted to other floors.

- Pressure-resistant, homogeneous material.
- Maximum resistance to ageing.
- Low deflection.
- Thicknesses: 3 mm, 5 mm and 10 mm
- Length 1,200 mm in strips or 10 m on rolls.



Thickness in mm	Design Support force in kN/m								
	Width in mm								
	100	120	125	145	150	175	180	200	300
3									
5	250	300	310	360	375	435	450	500	750
10									

Other dimensions on request.

### Type designation for ordering

- matteco ecowal type A - bearing thickness - bearing width

### Airborne sound

Airborne sound is transmitted through the air in the form of sound waves. The sound waves are excited by movements such as fans, ventilation machines or talking people.

### Structure-borne sound

Structure-borne noise is caused by vibrating solids or components caused by hammering, tapping or drilling. Building services equipment such as heat pumps, washing machines or dryers also cause structure-borne noise, as do people walking on the floor. This impact sound is transmitted into the adjacent room via the structure-borne sound and radiated again as secondary airborne sound in the adjacent rooms.



## Technical data

Description	Value
Material:	Recycled rubber powder with special binder (no PU binder)
Density:	1050 kg/m <sup>3</sup>
Thermal conductivity:	0.15 W/m*k
Shore A hardness:	58 ± 5
Reduction of the structure-borne sound conduction:	3 - 6 dB in solid construction, up to 10 dB in timber frame construction
Operating temperature:	-25°C to +50°C, briefly up to 70°C
Fire behaviour:	Efl
Dangerous substances:	none

## Selection of the correct bearing width

Wall bearings matteco ecowal type A are designed at least 20 mm wider than the wall. The wall including plastering and the floor must not touch each other.

Example:

Wall width = 125 mm → Width wall bearing = 145 mm

The wall bearing ecowal A is wider or longer than the brickwork at the long and short sides. The plastered wall and the concrete ceiling remain acoustically separated, thus avoiding structure-borne sound bridges with a high degree of certainty.

## Noise insulation in timber construction

Today, single-family homes and apartment buildings as well as industrial company buildings are increasingly built of wood. This creates new challenges for the materials used for sound insulation.

matteco ecowal **type A - 10 - ... L** and **type A - 10 - ...H** are used load-dependent for sound insulation in timber frame construction to reduce sound transmission at flanks and walls in order to create a pleasant living climate.

Wood as a building material is very popular and ecological, but it has the disadvantage in terms of sound technology that it can be excited very easily with little energy and radiates sound. Special attention should be paid to the connecting elements between partition walls, ceilings and longitudinal walls.

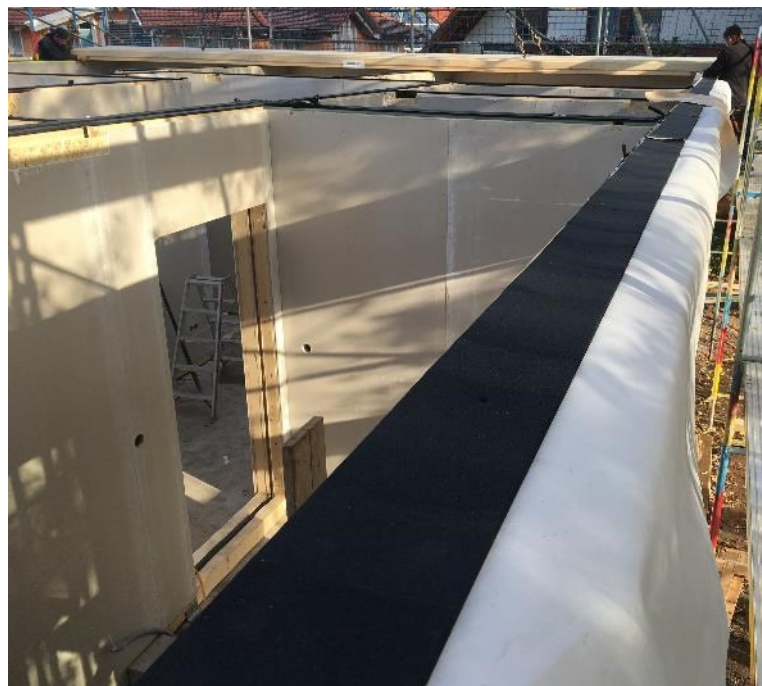
Elastic solutions for the construction industry ++ Resource-saving ++ Ecological ++ Sustainable ++ CO2-efficient

## Technical data

Description	Value	
Item number:	matteco ecowal type A - 10 - (L/H)	
Width:	according to specification	
Length:	10 m on roll	
Strength:	10 mm ± 0,5 mm	
Material:	Recycled rubber powder with special binder (no PU binder)	
	<b>High (H)</b>	<b>Low (L)</b>
Density:	1050 kg/m <sup>2</sup>	880 kg/m <sup>2</sup>
Continuous static load:	up to 7.8 N/mm <sup>2</sup>	4,0 N/mm <sup>2</sup>
Hardness - Shore A:	58 ± 5	45 ± 5
Operating temperature:	-25°C - 70°C, briefly up to 70°C	
Thermal conductivity:	0.15 W/m*k	
Fire protection class:	Efl	
Dangerous substances:	none	

## Type designation for ordering

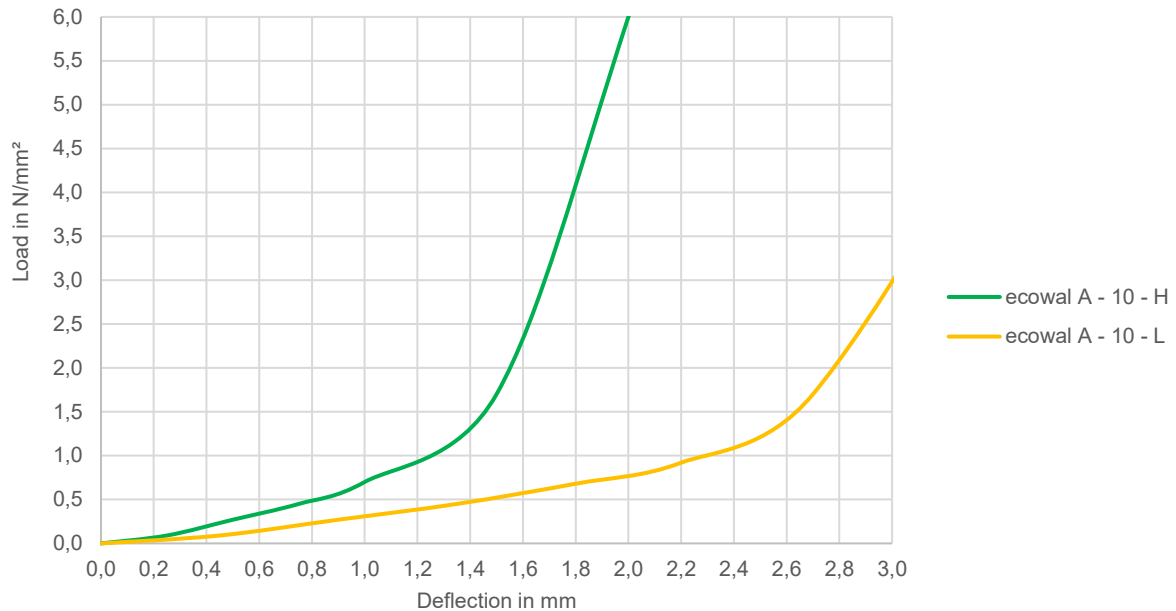
- matteco ecowal type A - bearing thickness - bearing width - L or H



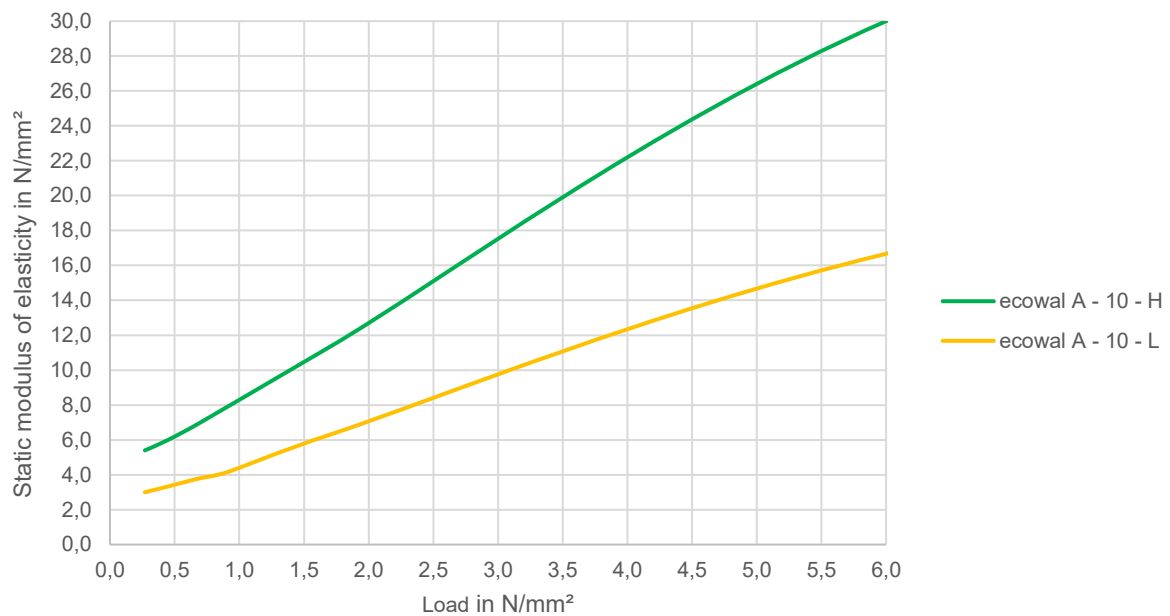


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### Deflection

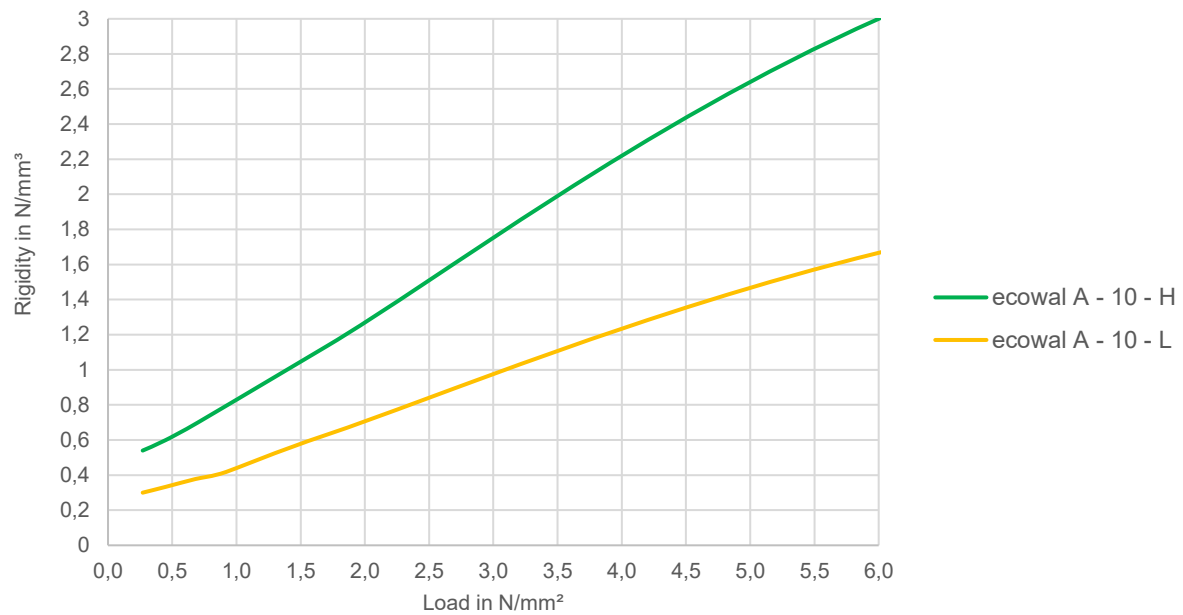


### Static modulus of elasticity

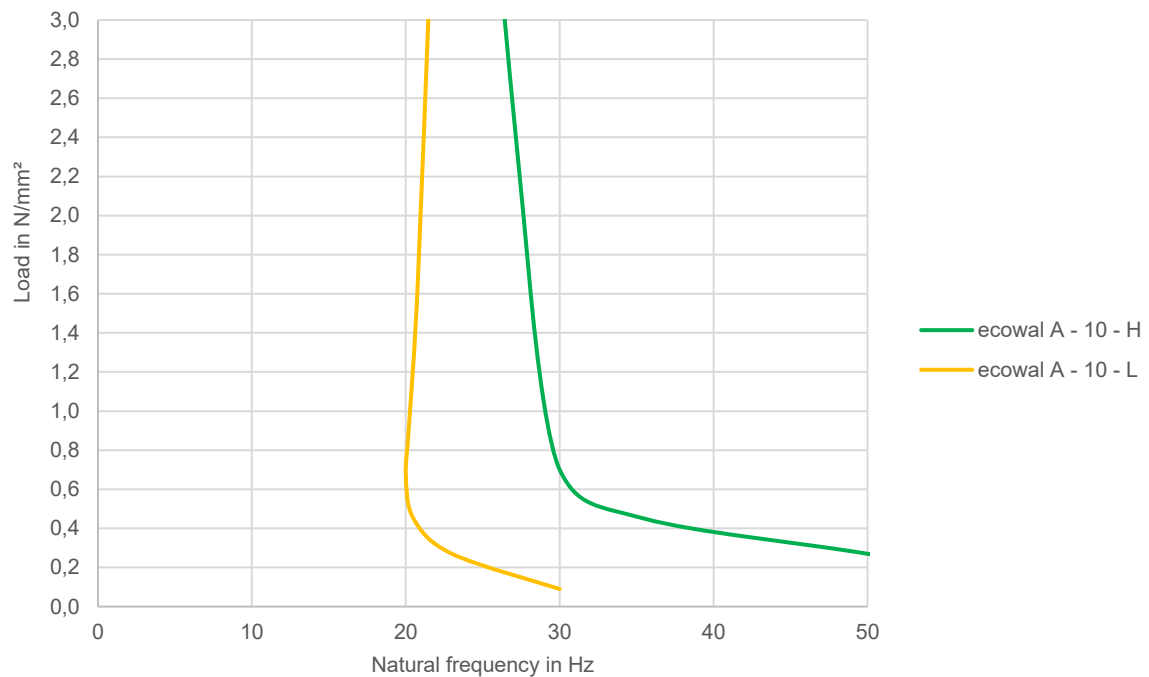


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### Stiffness

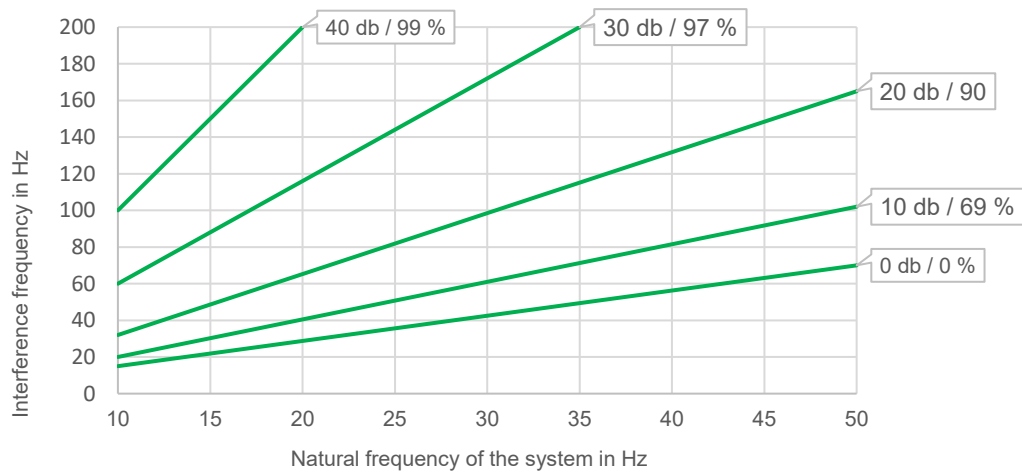


### Natural frequency

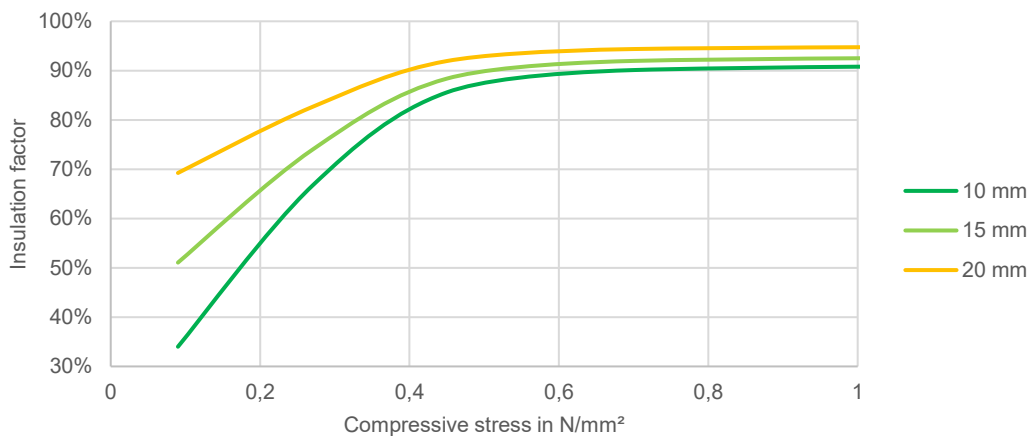


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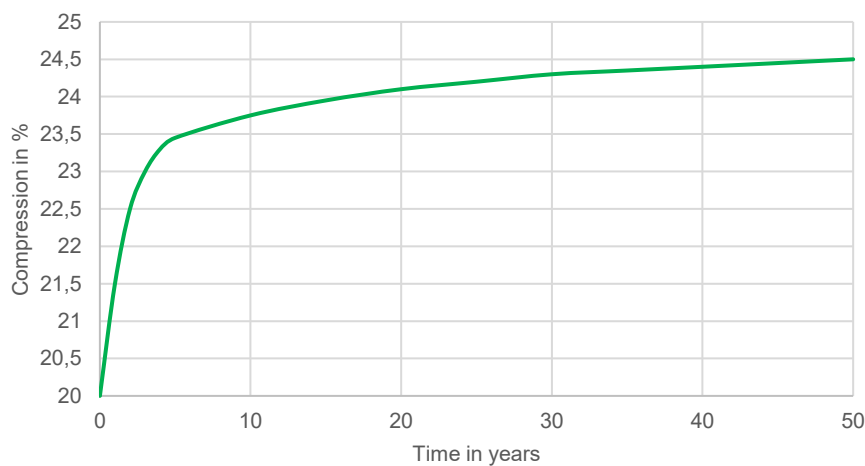
### Vibration isolation



### Insulation effect ecowal A - 10 - H



### Compression



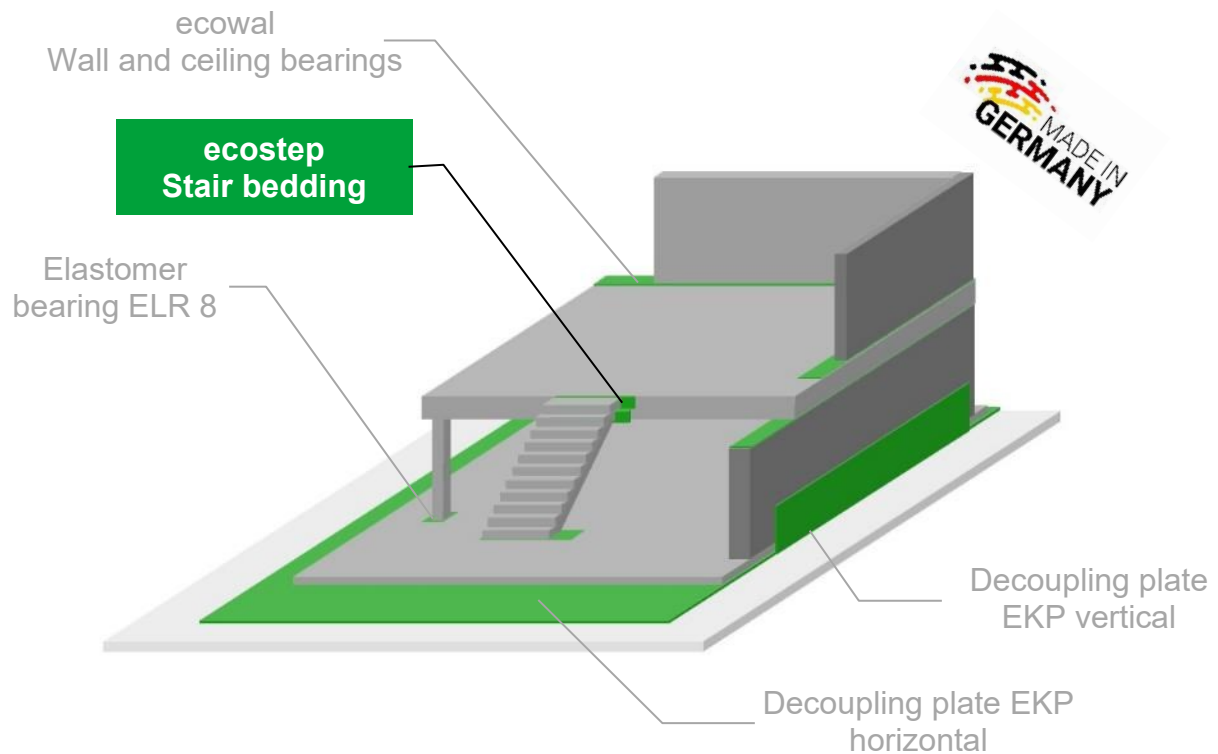
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## matteco ecostep stair bedding

Elastomer made from recycled rubber raw materials

Increased sound insulation for the staircase

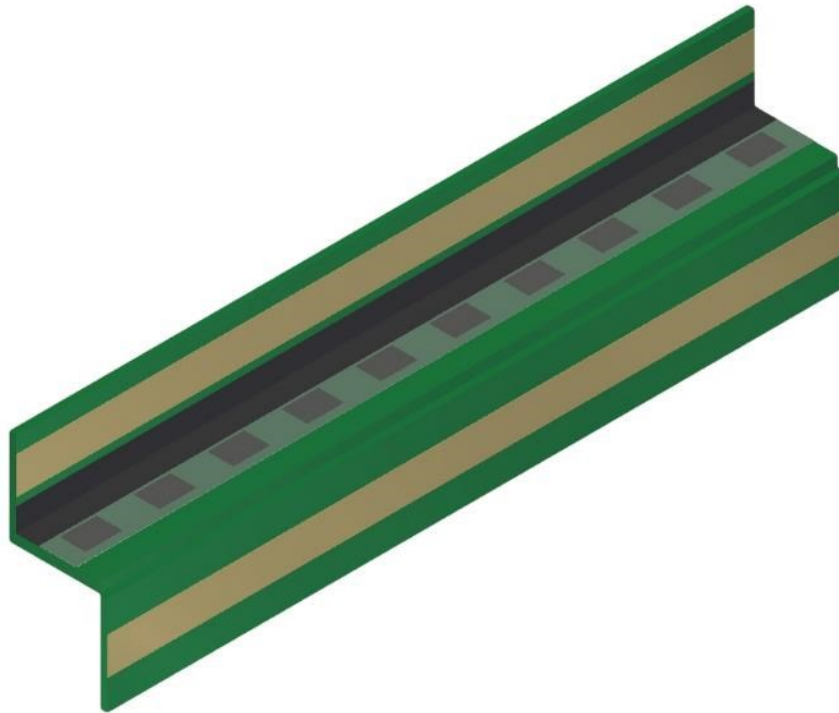
**up to 35 dB !**



**Sustainable** and **ecological** elastomeric bearings  
made from recycled raw materials!



## matteco ecostep type Z

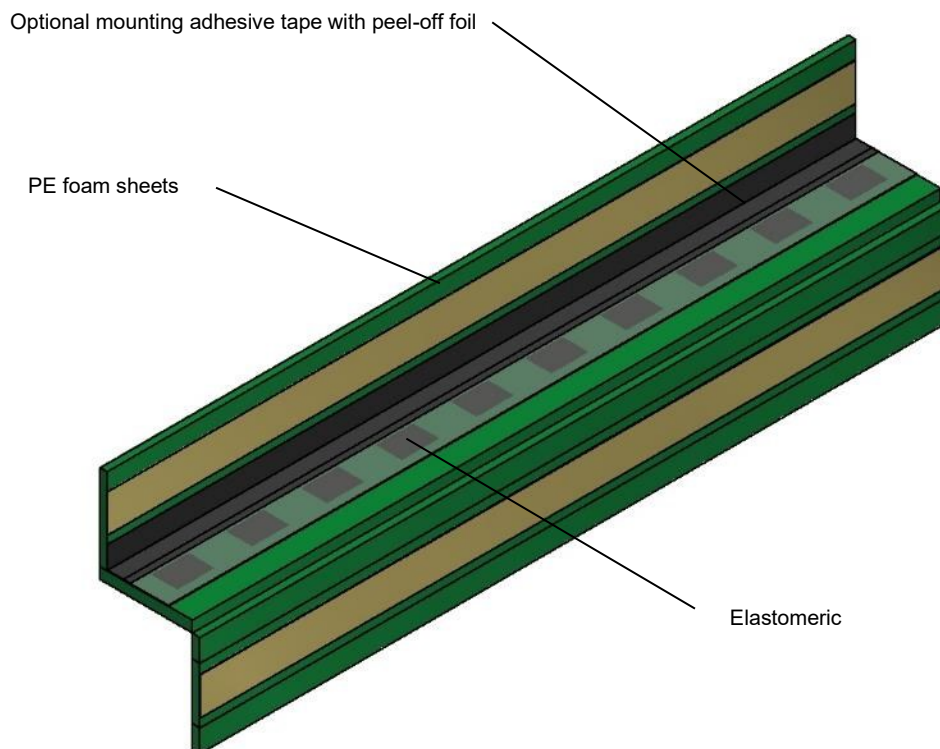


### **matteco ecostep type Z**

Staircase bedding for impact sound insulation between precast staircase flight and landing.

### Performance features

- Ecologically and sustainably manufactured and tested matteco elastomer bearing ELR 8 from our own production.
- High-quality and easily cut PE foam.
- Acoustically tested according to DIN EN ISO 10140-3 and DIN 7396.
- Two load capacity classes,  $V_{RD}$ : 43 kN/m and  $V_{RD}$ : 60 kN/m. Further load capacity classes on request.
- In accordance with expert opinion GA-2018/001-Nau, the matteco stair support can be classified in fire resistance class F90 according to DIN 4102.
- Easy adjustment to console depth.
- Length can be adjusted by the customer in 100 mm steps.
- Optional: pre-mounted assembly adhesive tapes and joint fixation with edge protection for quick and safe stair assembly.



### Variants

- matteco ecostep type Z is available in standard lengths from 1,000 mm to 1,500 mm in 100 mm steps.
- Special sizes on request.

### Type designation for ordering

- matteco ecostep type Z - Length - Load capacity class  
 matteco ecostep type Z - 1.200 - H

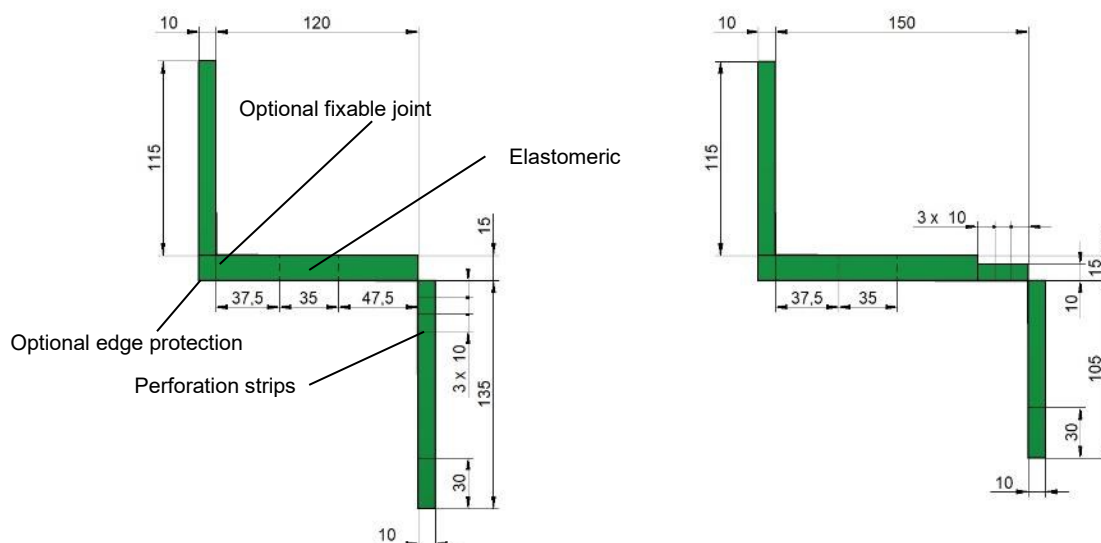
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## Technical data

Description	Value	
Designation:	matteco ecostep type Z	
Load capacity class L, $V_{RD}$ :	43 kN/m	
Load capacity class H, $V_{RD}$ :	60 kN/m	
Further load carrying capacity classes on request!		
Length:	1,000 mm to 1,500 mm, step size 100 mm	
Thickness:	15 mm	
Elastomer:	matteco ELR 8 - 15	
Material Elastomer:	Rubber powder with special binding agent (no PU)	
Material PE foam:	Cellular polyethylene, chemically cross-linked	
Impact sound level difference $\Delta L_w^*$ :	DIN EN ISO 10140-3	DIN 7396
	32 dB with $V_{RD}$ : 43 kN/m 35 dB with $V_{RD}$ : 60 kN/m	25 dB with $V_{RD}$ : 43 kN/m 24 dB with $V_{RD}$ : 60 kN/m
Fire behaviour: according to DIN EN 13503	Efl	
Dangerous substances:	none	

## Remark:

- For fire resistance class R90, a higher concrete cover according to DIN EN 11992-1-2 is required.

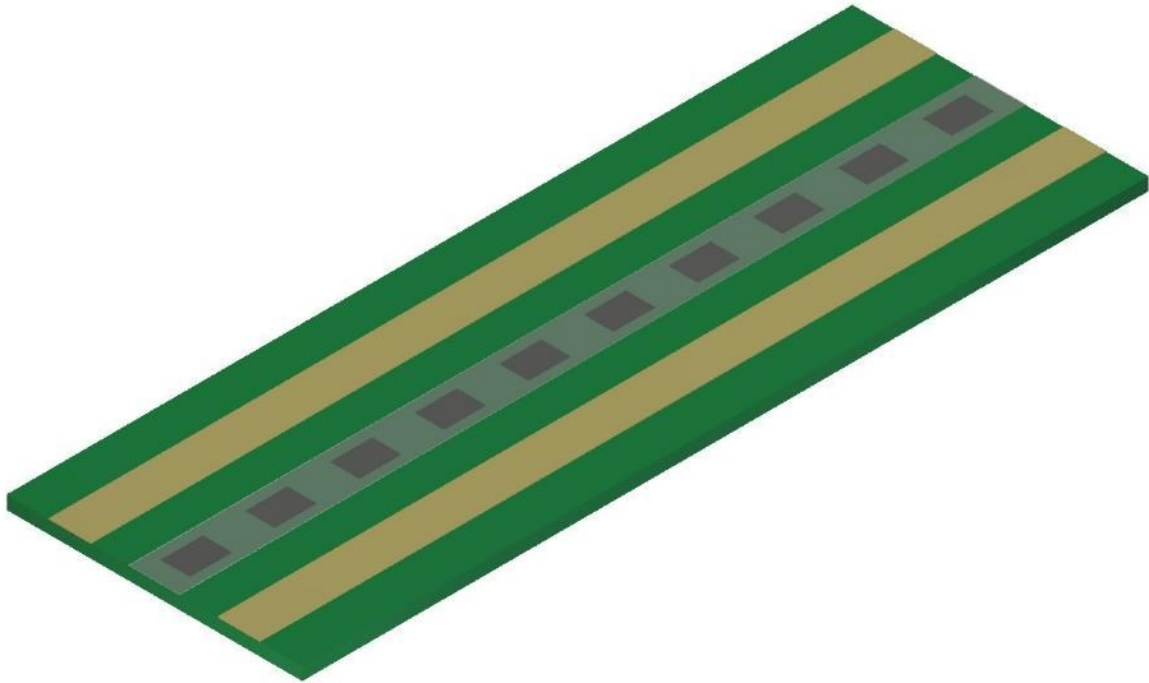


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**Assembly instructions**

- Depending on the static load, a deflection of the matteco ELR elastomer bearing of approx. 2.5 mm to 4.5 mm is to be expected.
- The position of the elastomeric bearings is specified in the PE foam sheet and must not be changed. Length adjustments must be made symmetrically.
- To avoid sound bridges between the staircase and the staircase wall, it is recommended to combine the staircase supports matteco ecostep type Z with the joints of matteco ecostep type S adjustment plates. This ensures acoustic decoupling.
- To avoid sound bridges between the stair flight and the floor slab, it is recommended to use matteco ecostep type F stair supports.

## matteco ecostep type F



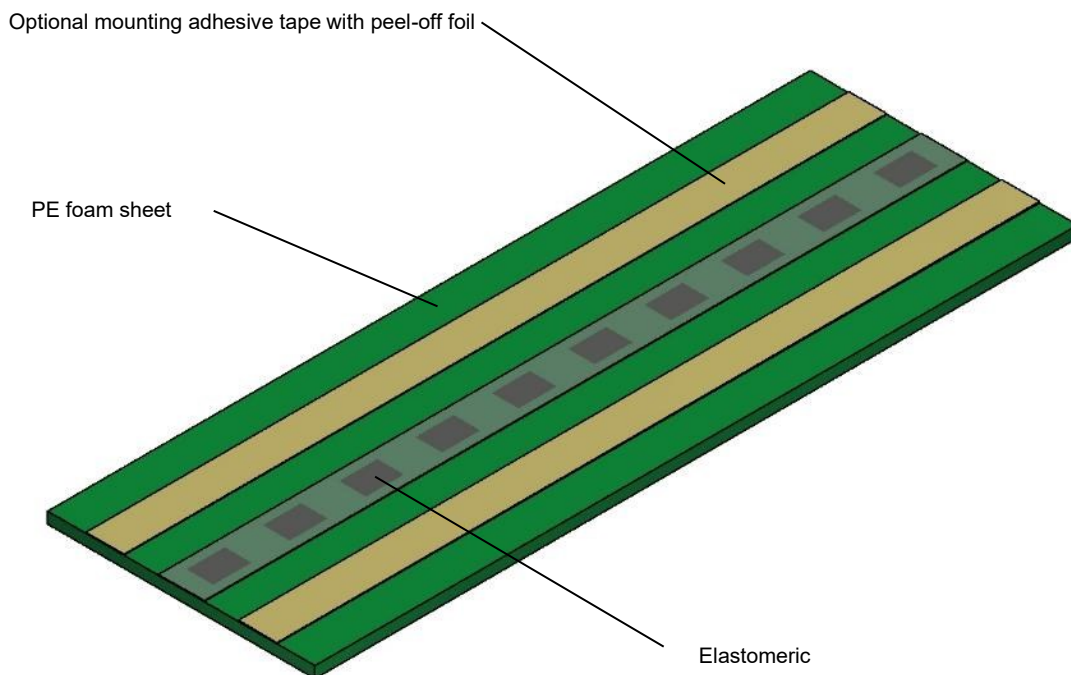
### **matteco ecostep type F**

Staircase bedding or impact sound insulation between precast staircase flight and floor slab.



### Performance features

- Ecologically and sustainably manufactured and tested matteco elastomer bearing ELR 8 from our own production.
- High-quality and easily cut PE foam.
- Acoustically tested according to DIN EN ISO 10140-3 and DIN 7396.
- Two load capacity classes,  $V_{RD}$ : 43 kN/m and  $V_{RD}$ : 60 kN/m. Further load capacity classes on request.
- Length can be adjusted by the customer in 100 mm steps.
- Optional: pre-mounted assembly adhesive tapes for quick and safe stair assembly.



### Variants

- matteco ecostep type F is available in standard lengths from 1,000 mm to 1,500 mm in 100 mm steps and in widths of 350 mm and 600 mm.
- Special sizes on request.

### Type designation for ordering

- matteco ecostep type F - length - width - load capacity class  
 matteco ecostep type F - 1,500 - 350 - L

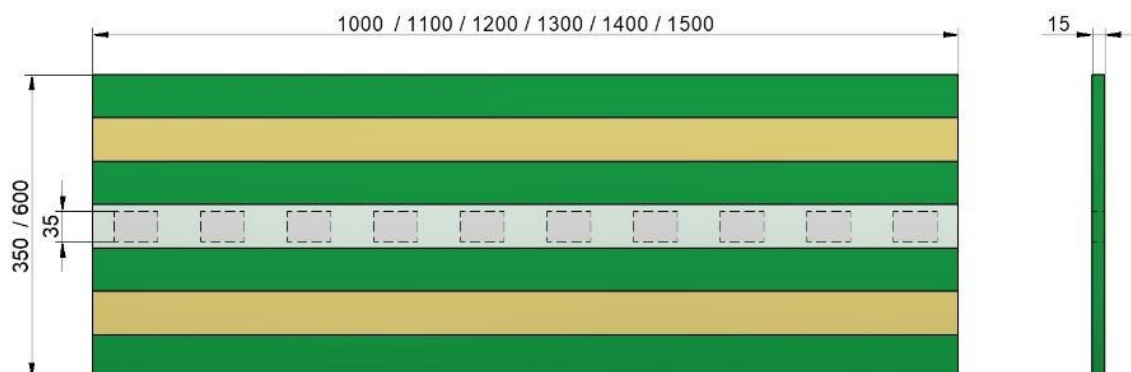
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## Technical data

Description	Value	
Designation:	matteco ecostep type F	
Load capacity class L, V <sub>RD</sub> :	43 kN/m	
Load capacity class H, V <sub>RD</sub> :	60 kN/m	
Further load carrying capacity classes on request!		
Length:	1,000 mm to 1,500 mm, step size 100 mm	
Thickness:	15 mm	
Width:	350 mm or 600 mm (others on request)	
Elastomer:	matteco ELR 8 -15	
Material Elastomer:	Rubber powder with special binding agent (no PU)	
Material PE foam:	Cellular polyethylene, chemically cross-linked	
Impact sound level difference ΔL <sub>w</sub> *:	DIN EN ISO 10140-3	DIN 7396
	32 dB with V <sub>RD</sub> : 43 kN/m 35 dB with V <sub>RD</sub> : 60 kN/m	25 dB with V <sub>RD</sub> : 43 kN/m 24 dB with V <sub>RD</sub> : 60 kN/m
Fire behaviour: according to DIN EN 13503	Efl	
Dangerous substances:	none	

### Remark:

- matteco ecostep type F is used exclusively for the transmission of vertical forces and low horizontal forces.

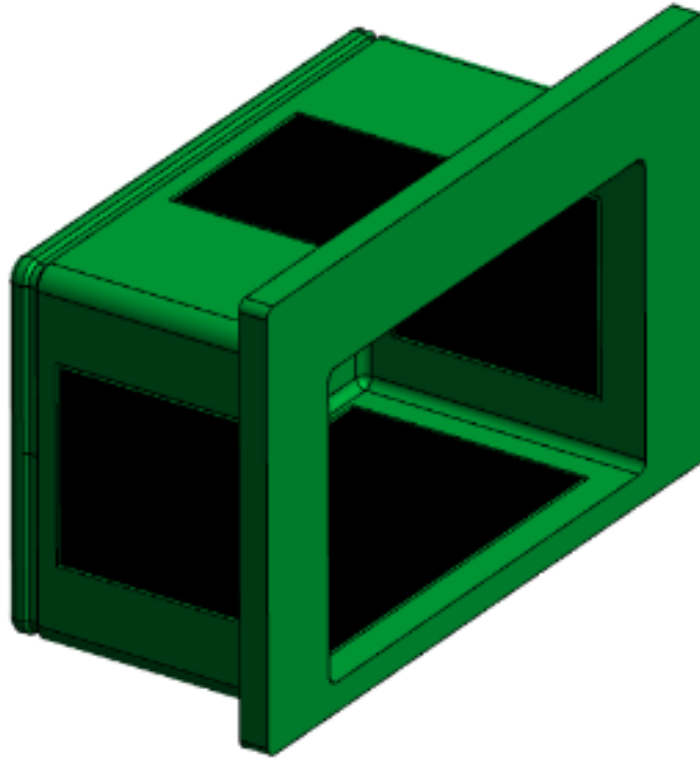


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**Assembly instructions**

- Depending on the static load, a deflection of the matteco ELR elastomer bearing of approx. 2.5 mm to 4.5 mm is to be expected.
- The position of the elastomeric bearings is specified in the PE foam sheet and must not be changed. Length adjustments must be made symmetrically.
- To avoid sound bridges between the staircase and the staircase wall, it is recommended to combine the staircase supports matteco ecostep type F with the joints of matteco ecostep type S adjustment plates. This ensures acoustic decoupling.
- To avoid sound bridges between staircase and landing, it is recommended to use matteco ecostep type Z stair supports.

## matteco ecostep type B



### **matteco ecostep type B**

matteco ecostep B landing supports very efficiently decouple impact sound vibrations from the stair landing to the staircase and other adjacent building components.

Depending on the design, horizontal and vertical transverse forces can be transmitted.

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### Performance features

- Ecologically and sustainably manufactured and tested matteco elastomeric bearings from our own production
- Supporting element with type approval.
- Impact sound level difference  $\Delta L_w^*$  up to 35 dB.
- Acoustically tested according to DIN EN ISO 10140-3.
- High-quality sound insulation body with stable flange for installation in wall element.
- Fire resistance class F90.
- For in-situ concrete or precast concrete platforms.
- Safe and simple assembly / fastening.

### Technical data

Description	Value		
variants:	B / u	B / u-o	B / u-o-r-l
Load directions:	below	bottom / top	bottom / top right / left
Load capacity below $V_{Rdu}$ :	76.0 kN		
Load capacity top $V_{Rdo}$ :	17,30 kN		
Load capacity right / left $H_{Rd,r/l}$ :	17,30 kN		
Thickness of platform:	$\geq 160$ mm		
Dimensions concrete console:			
Height:	158 mm		
Width:	252 mm		
Depth:	152 mm		
Impact sound level difference $\Delta L_w^*$ :	up to 35 dB		
Fire behaviour: according to DIN EN 13503	Efl		
Dangerous substances:	None		

### Variants

- Option with spacer "S" for use in in-situ concrete.
- Option with support element "T".

### Type designation for ordering

- matteco ecostep type B / Load direction / Option in-situ concrete / Option load-bearing element  
matteco ecostep type B / u-o / S / T

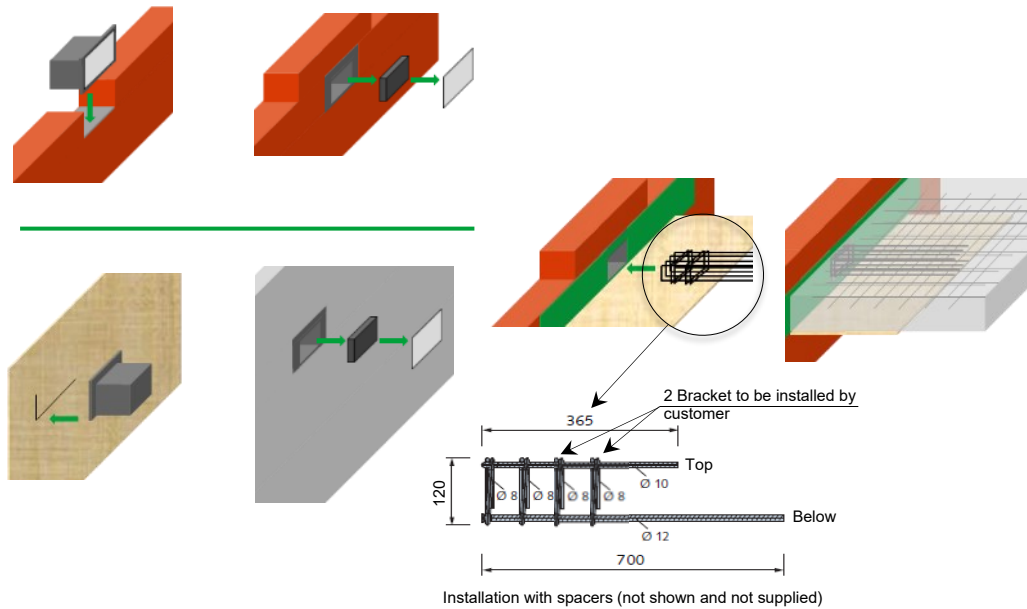
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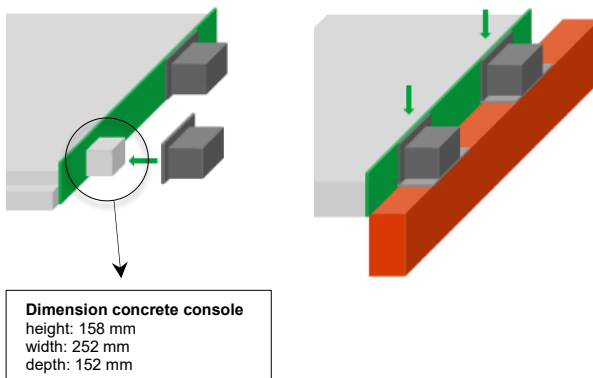
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## Assembly instructions

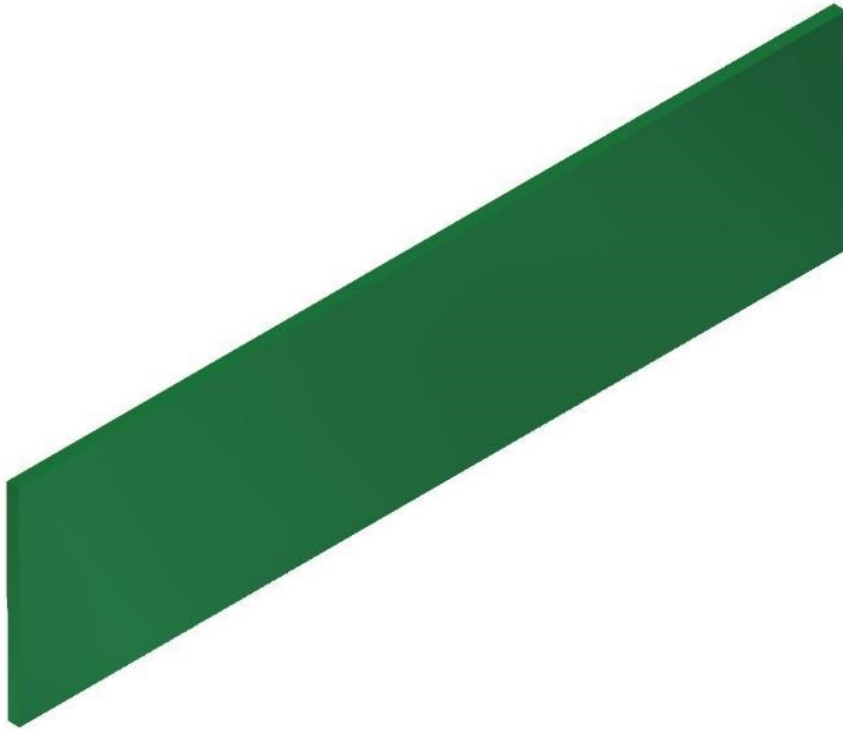
### In-situ concrete platform



### Prefabricated pedestal



## matteco ecostep type S



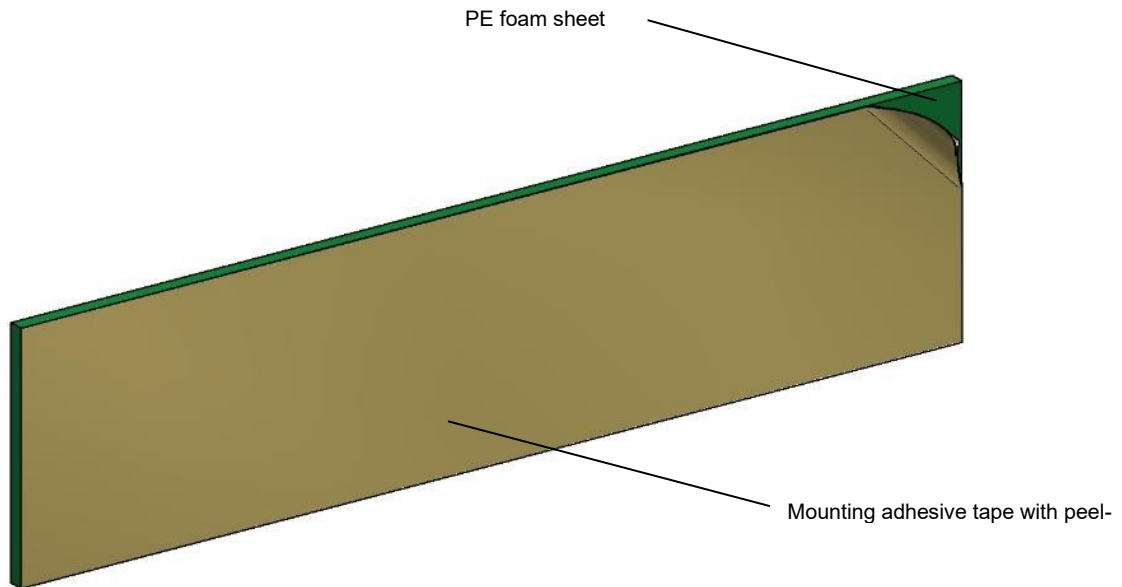
### **matteco ecostep type S**

Joint adjustment plates for safe decoupling of the staircase flight from the staircase wall.

Elastic solutions for the construction industry ++ Resource-saving ++ Ecological ++ Sustainable ++ CO2-efficient

### Performance features

- High-quality and easily cut PE foam.
- Secure protection against sound bridges between staircase wall and stair flight.
- Sound tested according to the latest test standard DIN-7396.
- Pre-assembled mounting tapes for quick and safe stair mounting.



### Variants

- matteco ecostep type S is available in widths of 250 mm, 355 mm and 420 mm.

### Type designation for ordering

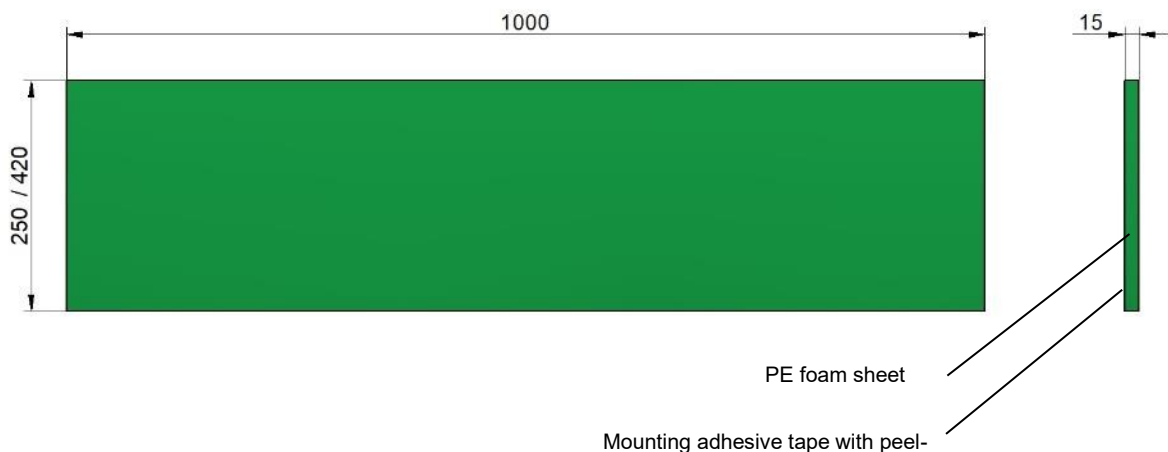
- Can be ordered individually or in a set of 15 pieces.
- matteco ecostep type S - width - set (optional)  
matteco ecostep type S - 420 - set

## Technical data

Description	Value
Designation:	matteco ecostep type S
Length:	1,000 mm
Thickness:	15 mm
Width:	250 mm, 355 mm or 420 mm
Material PE foam:	Cellular polyethylene, chemically cross-linked
Fire behaviour: according to DIN EN 13503	Efl
Dangerous substances:	none

## Remark:

- matteco ecostep type S does not transmit static forces

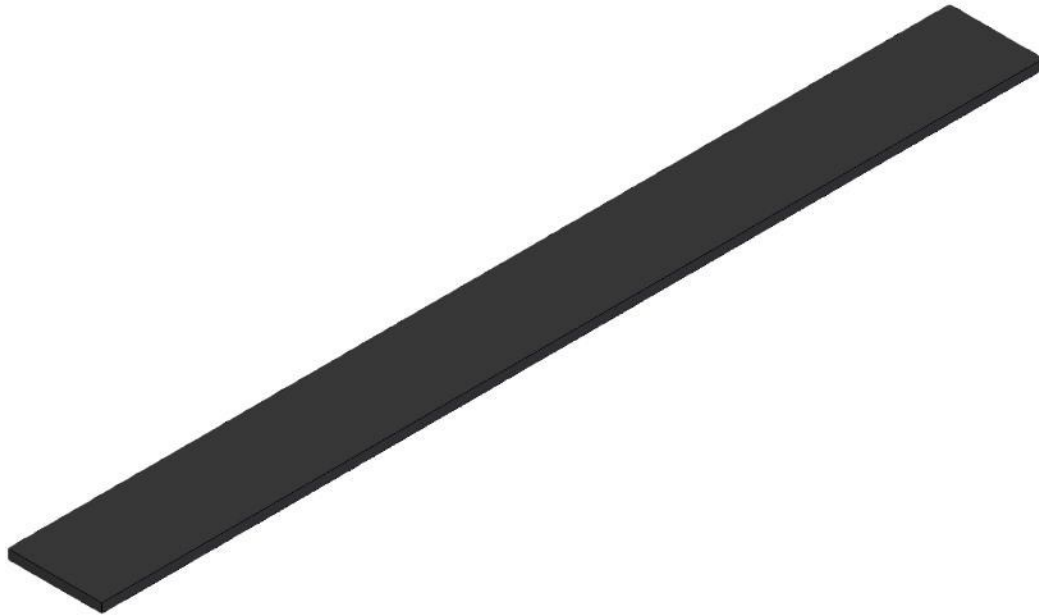


## Assembly instructions

- matteco ecostep type S can be combined with any matteco ecostep staircase support.
- Bonding matteco ecostep type S to the broom-clean staircase or to the staircase wall (for in-situ concrete stairs).
- Simple cutting with 3 cm projection (wooden slat) by hand with a sharp knife.

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## matteco ecostep type E



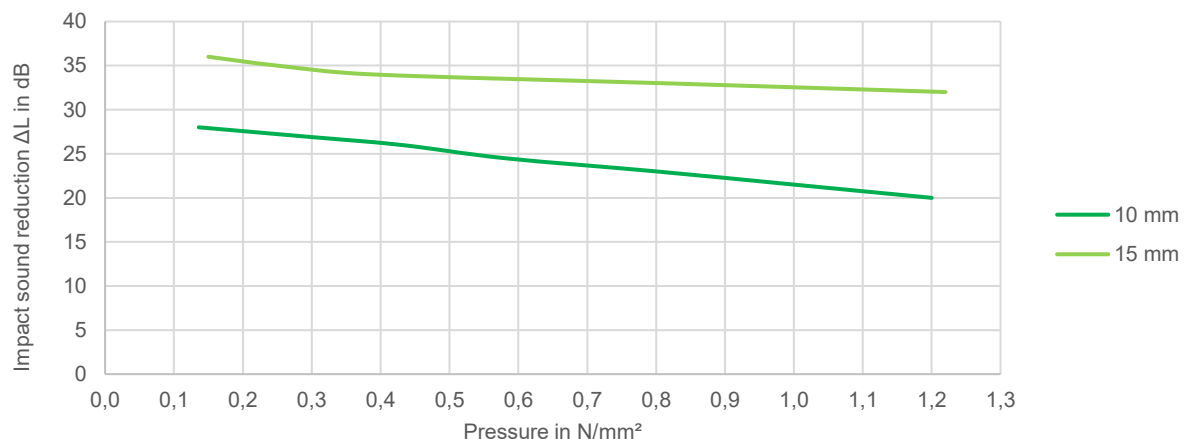
### matteco ecostep type E

Stair bedding separation strips for impact sound insulation of the precast staircase.

### Sound insulation

#### Structure-borne sound insulation matteco ELR 8

according to DIN EN ISO 10140-3



Due to the homogeneity of the material structure of matteco ELR 8 elastomeric bearings, a very constant structure-borne sound insulation is achieved over a wide load range. Thus, we offer planners, architects, construction companies and building owners the highest possible acoustic safety.



### Performance features

- Ecologically and sustainably manufactured and tested matteco elastomer bearing ELR 8 from our own production.
- Acoustically tested according to DIN EN ISO 10140-3 and DIN 7396.
- In accordance with expert opinion GA-2018/001-Nau, the matteco stair support can be classified in fire resistance class F90 according to DIN 4102.
- Length can be adjusted on site.

### Variants

- matteco ecostep type E is available in the standard length of 1,000 mm or on 10 m rolls in the widths required.
- Special sizes on request.

### Type designation for ordering

- matteco ecostep type E - thickness - width - length  
 matteco ecostep type E - 15 - 50 - 1.000

### Technical data

Description	Value	
Material:	Recycled rubber powder with special binder (no PU binder)	
Elastomer:	matteco ELR 8	
Width:	as needed	
Length:	1.000 mm or 10 m roll (others on request)	
Thickness:	10 mm, 15 mm and 20 mm	
Elastomer:	matteco ELR 8 - 10 or ELR 8 - 15	
Impact sound level difference $\Delta L_w^*$ :	DIN EN ISO 10140-3	DIN 7396
	10 mm up to 27 dB 15 mm up to 35 dB	10 mm up to 21 dB 15 mm up to 27 dB
Fire behaviour: according to DIN EN 13503	Efl	
Dangerous substances:	none	

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## matteco ecostep type TSM

The matteco ecostep TSM stair protection cover **protects** the stairs from damage and soiling during the construction phase or transport. Unrolled from above, the stair protection cover is fixed at each step with a cord or special adhesive tape.

- easy installation
- reliable protection against dirt and damage
- Slip resistance for the staff
- can be reused several times
- immediately available from our warehouse in your required dimensions



Description	Value
Material:	Recycled rubber powder with special binder (no PU binder)
Density:	950 kg/m <sup>3</sup>
Thickness:	3mm
Width / length:	max. 1230 mm / 10 m
Temperature resistance:	- 25°C to 70°C
Dangerous substances:	none
Execution:	Special dimensions on request

### Performance features

- one-sided fleece lamination - no staining!
- Very hard-wearing, robust and durable.
- Without plasticizer and solvent.
- Quick to lay, easy to cut and flat exposed.
- Resistant to rotting, mould and rot.
- No disposal costs - 100% recyclable by matteco
- Reduced CO2 emissions through energy-efficient production.

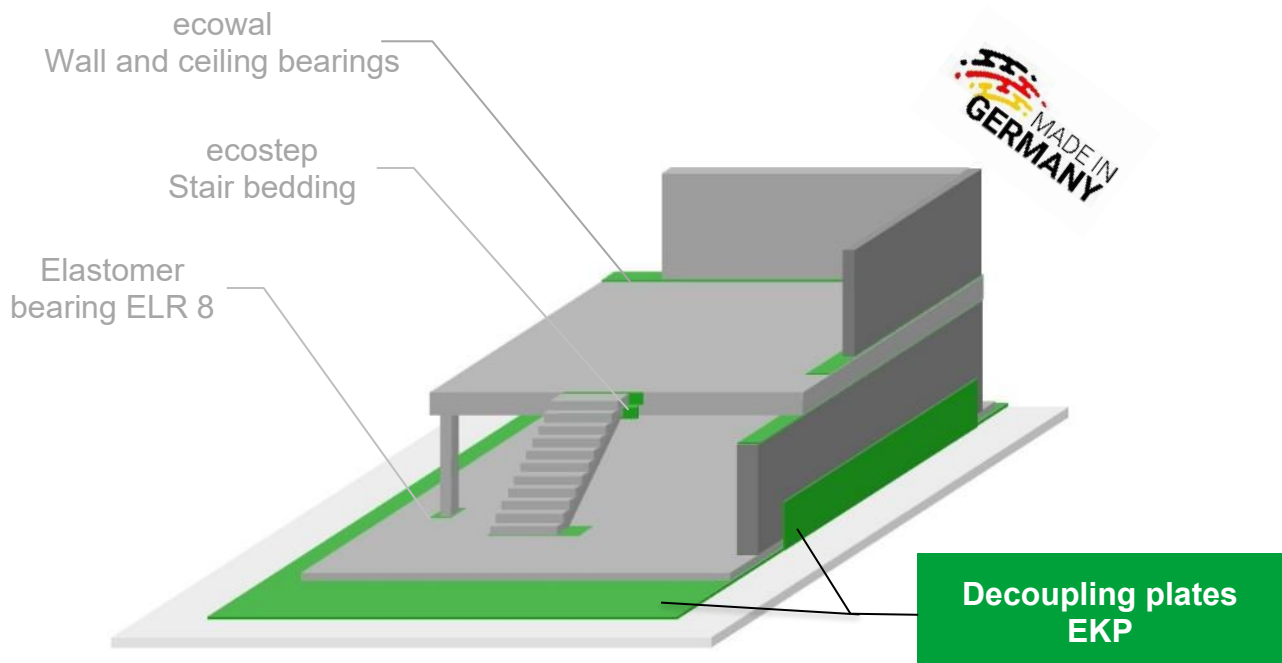


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## matteco decoupling plates EKP

Elastomer made from recycled rubber raw materials

### ecological vibration protection



**Sustainable** and **ecological** elastomeric bearings  
made from recycled raw materials!



## matteco decoupling plates EKP

matteco EKP decoupling panels are used for permanently elastic support of buildings, building parts, machine foundations, for spring-mass systems, for structure-borne sound insulation under floors and as vibration protection.

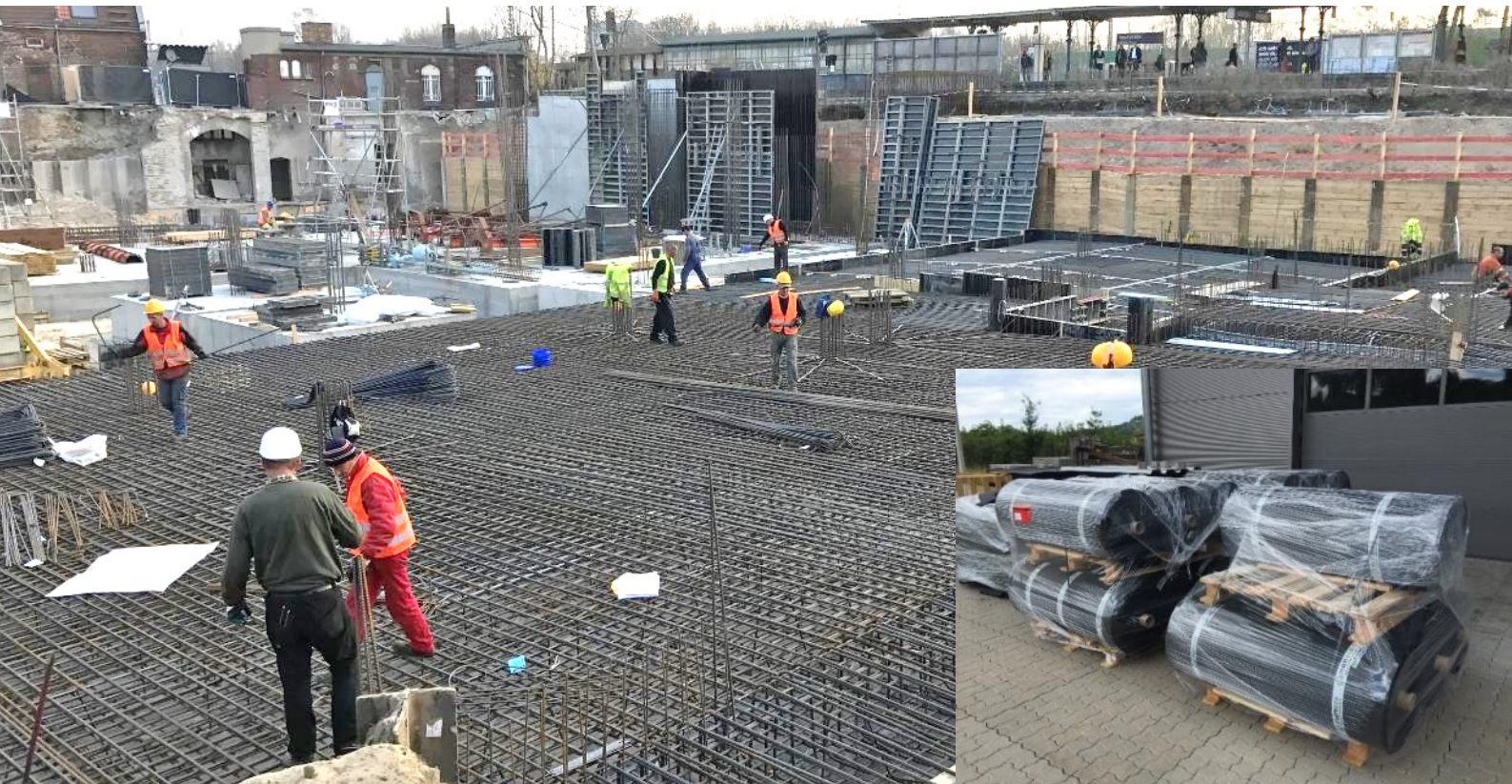
### Performance features

- Ecological and sustainable production.
- Closed surface on top and bottom.
- Excellent structure-borne sound insulation.
- Permanently elastic.
- Very high homogeneity.
- High resilience.
- Very robust and durable.
- Rot-proof.
- 100% recyclable.



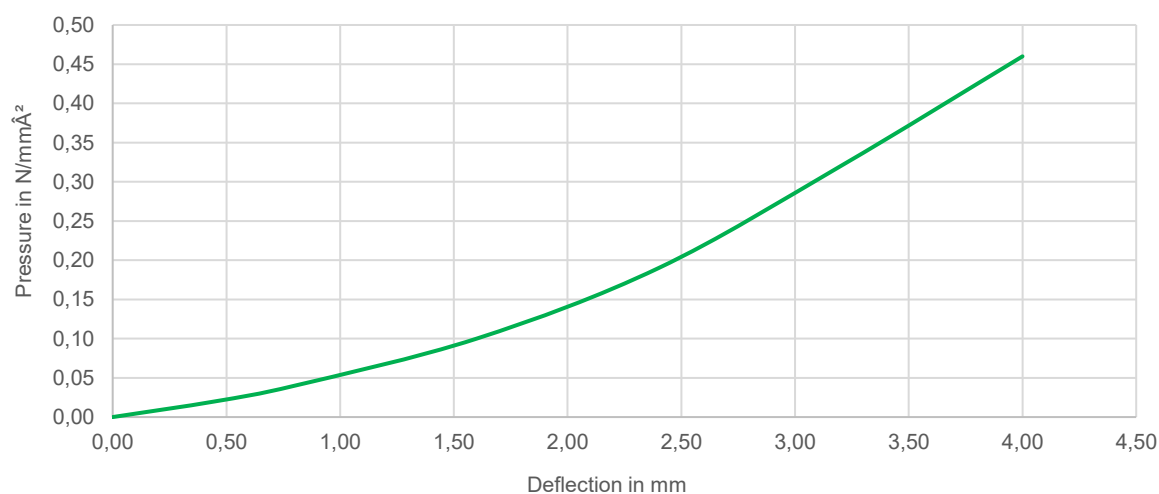
### Delivery forms

- matteco decoupling plates EKP are available in the standard length of 1,000 mm and the standard width of 500 mm.
- Standard thickness: 10 mm, 15 mm, 20 mm.
- Special sizes on request.



**Technical data**

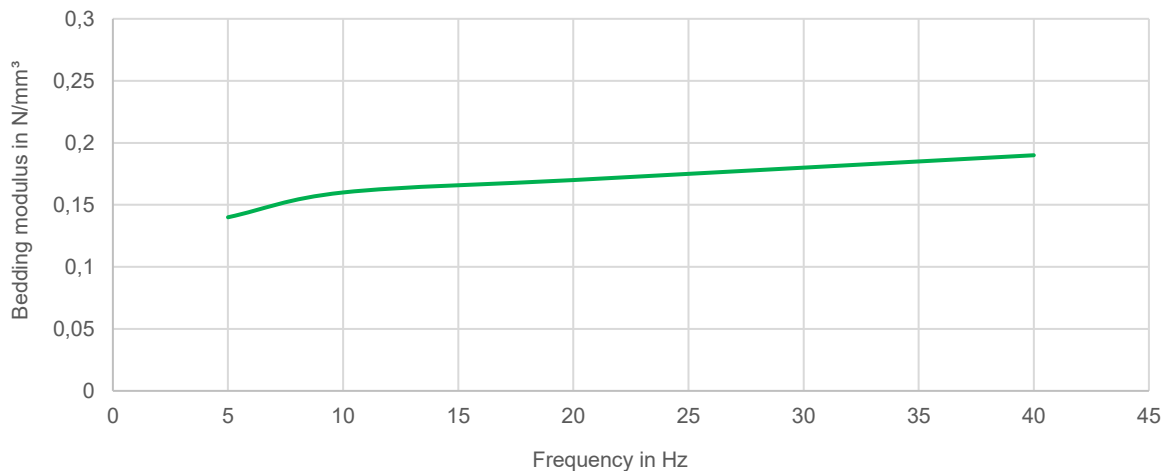
Description	Value				
Material:	Recycled rubber powder with special binder (no PU binder)				
Color:	black				
Shape:	Plate, both sides flat				
Surface:	smooth, closed				
Thickness x length x width:	20 x 1,000 x 500 mm				
Weight:	approx. 10 kg				
Static bedding module:	0.1 N/mm³, with preload 0.02 to 0.1 N/mm²				
Dynamic bedding modulus with preload 0.06 N/mm²:	5 Hz	10 Hz	20 Hz	30 Hz	40 Hz
	0.14 N/mm³.	0,16 N/mm³	0,17 N/mm³	0,18 N/mm³	0,19 N/mm³
Natural frequency in Hz:	Pressure in N/mm²				
	0.058 N/mm²	0,116 N/mm²	0,200 N/mm²	0,300 N/mm²	
Laying: 20 mm - 1 layer:	27 Hz	22 Hz	17 Hz	14 Hz	
Laying: 40 mm - 2-ply:	19 Hz	16 Hz	12 Hz	10 Hz	
Operating temperature:	-25°C to +50°C, briefly up to 70°C				
Thermal conductivity:	0,15 W/(m*K)				
Fire behaviour:	Efl				
Dangerous substances:	none				

**Deflection**


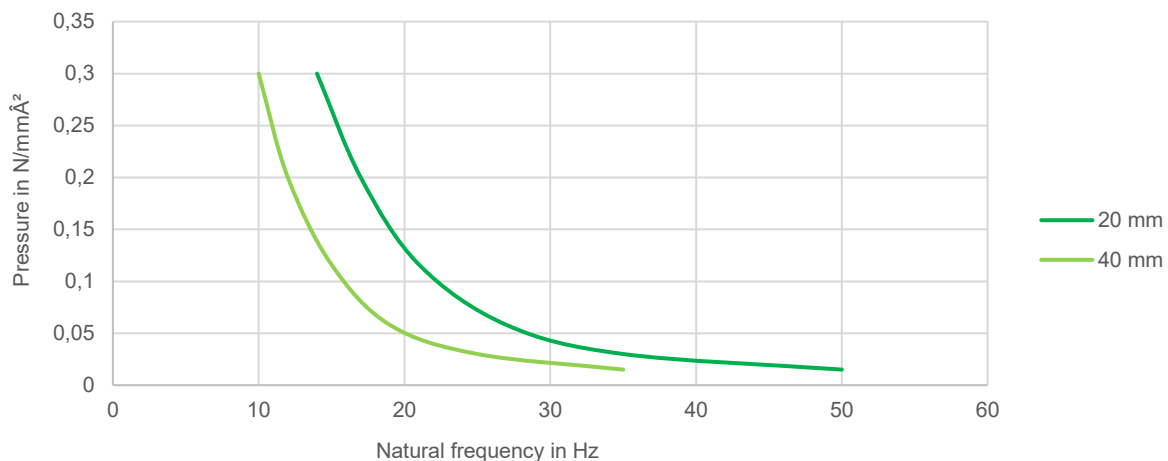


Elastic solutions for the construction industry ++ Resource-saving ++ Ecological ++ Sustainable ++ CO2-efficient

### dyn. bedding modulus



### Natural frequency



### Underground:

Direct contact with materials containing plasticizers should be avoided. Clean the floor free of concrete residues and other unevenness with a broom.

### Relocation:

Impacts are fully pushed and glued. Cover the surface with 2-layer PE foil.

### Processing notes:

When using auxiliary products, such as adhesives, the ambient temperature and humidity must meet the requirements of the auxiliary products used. The relevant product data sheets must be observed.

### disposal:

No disposal costs - return by matteco GmbH

The values given in this brochure are standard values which have been determined over a longer, representative period of time in accordance with the applicable testing standards or internal company methods. However, they do not constitute binding specifications and are therefore in no way to be understood as an express assurance of certain properties. We reserve the right to make further technical developments and to reprint data sheets.

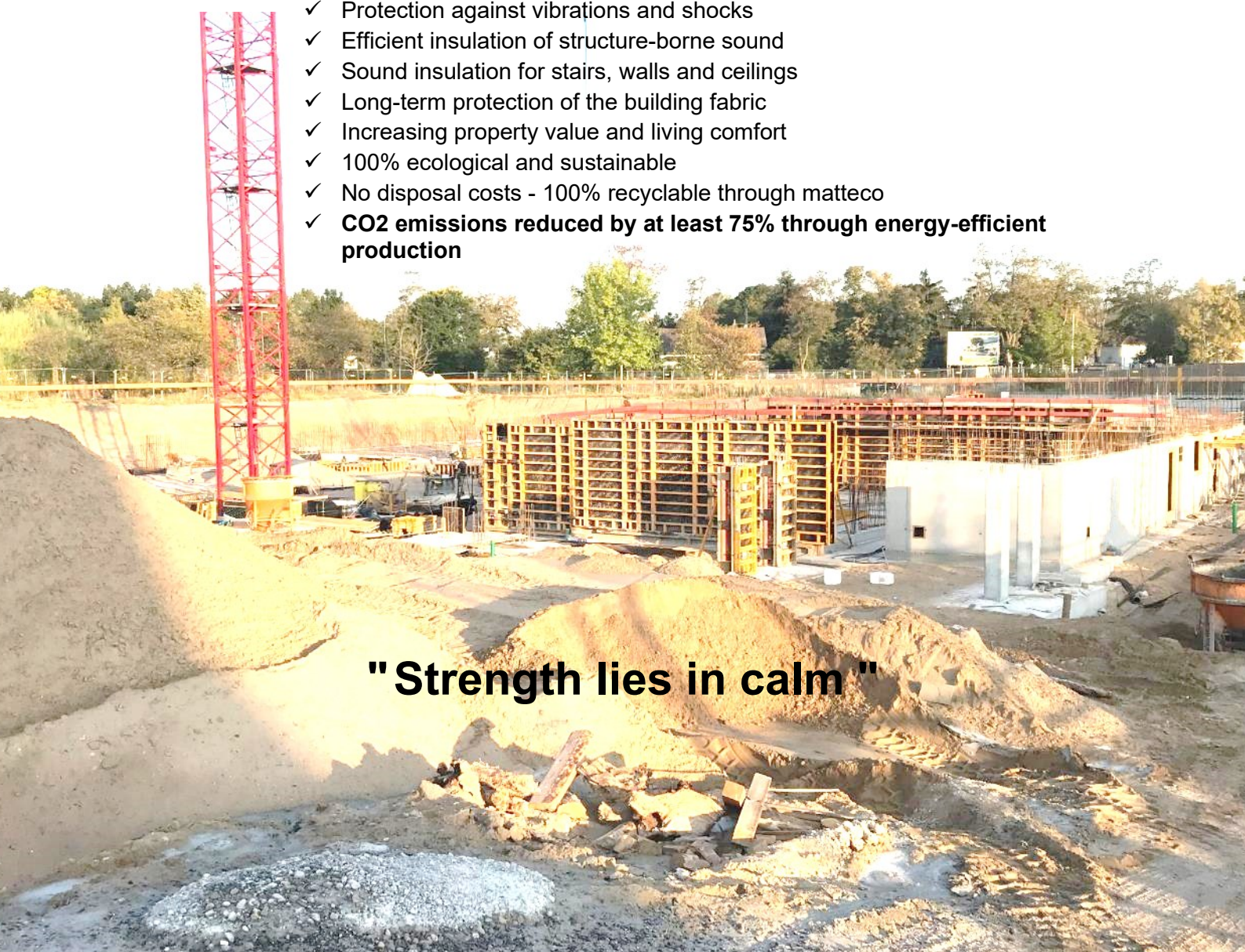
## matteco elastomer products

Elastomer made from recycled rubber raw materials



### Elastic solutions for construction industry

Products from matteco offer building owners, developers and architects the most economical and reliable solution. With first-class **ecological and sustainable products** we offer you the best possible support.

- 
- ✓ Protection against vibrations and shocks
  - ✓ Efficient insulation of structure-borne sound
  - ✓ Sound insulation for stairs, walls and ceilings
  - ✓ Long-term protection of the building fabric
  - ✓ Increasing property value and living comfort
  - ✓ 100% ecological and sustainable
  - ✓ No disposal costs - 100% recyclable through matteco
  - ✓ **CO2 emissions reduced by at least 75% through energy-efficient production**

**"Strength lies in calm"**