



Impact Protection





Impact Protection



Impact Protection

eibe Impact Protection
eibe impact protection coverings ensure the avoidance and minimization of the danger of injury. Our children are therefore guaranteed a safe and comfortable playtime. Through numerous various forms, we offer you a maximum design freedom with the erection of play and recreational facilities.

Individual design features are often desired in the production of play and recreational facilities. The **eibe** range of products can take all these special requests into account.

See the wide-ranging spectrum of products for yourself on the following pages.

An Overview of Materials:

- Rubber granulate: elastic ground covering with outstanding attenuation properties.
- Hot-dip galvanised steel: corrosion-resistant layer of the metal parts.

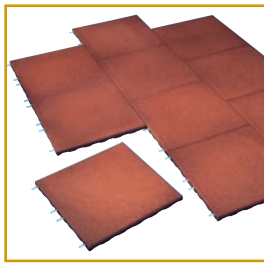
For a detailed overview of materials, see from page 540.



- Interlocking impact-attenuating tiles** from page 516
- Impact-attenuating floor covering** from page 518
- Granulate edgings and palisades** from page 520
- Granulate animals** from page 521



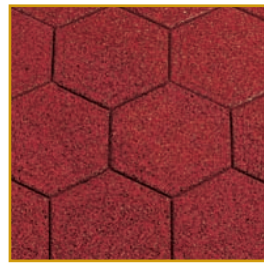
Impact Protection



5 63 510 0
Impact-Attenuating Tiles 1 m²
other versions, see page 517



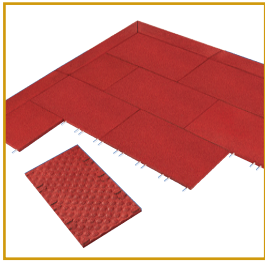
5 63 552 0
Regular plate 50x50x5 cm, sqm
other versions, see page 517



5 63 034 0
Honeycomb Matting 100x50x1,5 cm
see page 518



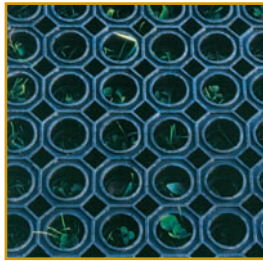
5 63 022 0
elbe Impact-Attenuating Interlocking Tiles
see page 518



5 63 550 0
Sports Field Tiles 50x50x1,5 cm, m²
see page 518



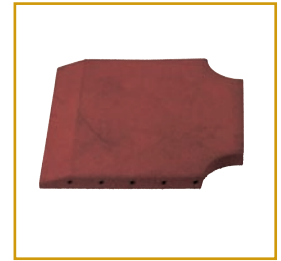
5 63 017 0
Ground Covering 70x70x1,5 cm
see page 518



5 35 000 0
elbe Perforated Rubber Matting 100x150x2,3 cm, black
see page 518



5 63 045 0
elbe floor tiles for single spring rocker
see page 519



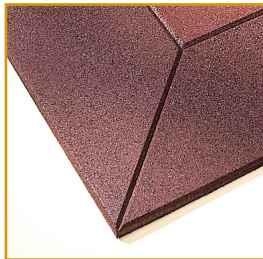
5 63 046 0
Extension Tile for Double Spring Rocker
see page 519



5 63 543 0
elbe Edging Tile
see page 519



5 63 533 0
Granulate Border Mounting 100 x 25 x 5 cm
see page 519



5 63 546 0
Corner Tile 125 x 25 x 5 cm
rising: 5 cm
Other sizes see page 519



5 59 091 3
elbe Sandpit Safety Surround
see page 520



5 63 534 0
Granulate Palisade Ø25 x 40 cm
see page 520



5 63 535 0
Granulate Palisade Ø25 x 60 cm
see page 520



5 63 536 0
Granulate Palisade Ø25 x 80 cm
see page 520



5 63 549 0
elbe seating cube
see page 520



5 63 531 0
Stair Block 100 x 30 x 15 cm
see page 520



elbe granulate animal Elephant
other colors, see page 521



elbe granulate animal, Rhino
other colors, see page 521

Impact Protection

Ground Material	Description	Min. layer thickness *2	Material Approved Up to Free Fall Height
Concrete, stone, tarred surface			< 60 cm *1
Topsoil, waterbound coverings			< 100 cm
Lawn/Grass *3			< 150 cm (< 100 cm)
Wood shavings	Wood, reduced in size mechanically (no derived timber products), without bark or foliage, grain 5 to 30 mm	20 cm	< 300 cm
Mulch from tree bark	Cut-up conifer bark, grain size 20 to 80 mm	20 cm	< 300 cm
Sand	Without coarse clay or argillaceous components, washed, grain size 0.2	20 cm	< 300 cm
Gravel	Round and washed, size 2 to 8 mm	20 cm	< 300 cm
eibe impact-attenuating tiles	5 63 359 0 / 5 63 551 0	3,0 cm	< 100 cm
	5 63 510 0 / 5 63 552 0	5,0 cm	< 160 cm
	5 63 540 0 / 5 63 553 0	5,5 cm	< 175 cm
	5 63 541 0 / 5 63 554 0	7,0 cm	< 210 cm
	5 63 542 0 / 5 63 555 0	11,0 cm	< 300 cm
Interlocking Impact as required Protection			< 300 cm as required

What ground surface materials can you select from?

The table shows the different types of ground surface contained in the EN 1177. It lists the various types of surface and indicates which should be used for a given free falling height.

*1
For equipment where the user executes a forced movement (e.g. swing, slide, spring rockers) we recommend an impact-attenuating ground surface which covers the entire impact zone.

*2
+20 cm to cater for the displacement-through-use effect, see EN1176, 4.1.3

*3
With the exception of Germany, all European countries stipulate that lawn is only permissible for a max. free falling height of 100 cm.

Please note that lawn is a surface material that requires much maintenance; it is unsuitable for heavily used areas.

European Safety Norm for Children's Play Equipment EN 1176/1177

eibe playground equipment fulfils the European norms.

The norms are subdivided into:

EN 1176 part 1	General Requirements
EN 1176 part 2	Swings
EN 1176 part 3	Slides
EN 1176 part 4	Aerial Cableways
EN 1176 part 5	Roundabouts
EN 1176 part 6	Seesaws
EN 1176 part 7	Maintenance and Operation
EN 1177	Ground Surfaces in the Playground

For the planner or operator of playgrounds the main items of relevance are the minimum space guidelines and ground surface requirements. A brief overview of the regulations is presented below.

EN 1176 Part 1 designates the following 5 zones for children's play equipment:

1. Equipment Space

The space that is taken up by the equipment.

2. Falling Space

The space that a user requires during a fall in order to avoid injury (calculated from the width of the impact area multiplied by the free falling height).

3. Clearance

The space taken up by the user's movement during play which he or she cannot stop spontaneously (compulsory movement) e.g. sliding, swinging, seesawing (this is included in the data of your planning documents).

The sum of these three zones is designated as the minimum space. According to EN 1176 Part 1 this is the minimum space required for safe use.

In your planning documents this minimum space is indicated by a broken line. Here, we have also taken into consideration that for children, a suitable area of movement has to remain free for the head. Therefore we have, when necessary, designated the head clearance as 180 cm in addition to the standing height.

4. Free Falling Height

The free falling height indicates the height which can be measured between the surface intended to support the body - for example the edge of the platform - and the surface located vertically below this - e.g. lawn.

These important details are of course to be found in the catalogue.

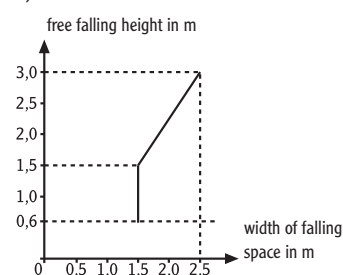
5. Width of the Impact Area

The width of the impact area (base area of the falling space/formerly the safety zone) is determined according to EN 1176 by the free falling height. You can a) calculate this width, b) read it off from a table or c) read it off from a diagram.

a) Calculation:

With a free falling height of 150 – 300 cm the width of the falling space = free falling height x 2/3 + 50 cm.

b) read it off from a table



c) Reading off from a table:

free falling height	Width of falling space
0-60 cm	150 cm
60-150 cm	150 cm
165 cm	160 cm
180 cm	170 cm
195 cm	180 cm
210 cm	190 cm
225 cm	200 cm
240 cm	210 cm
255 cm	220 cm
270 cm	230 cm
285 cm	240 cm
300 cm	250 cm

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Interlocking impact-attenuating tiles

With interlocking impact-attenuating tiles, there are almost no limits for designing the play areas. The individual impact protection for fanciful playing worlds.

Interlocking impact-attenuating tiles help to avoid stumbling hazards and guarantee perfect connections to play equipment and borders. This covering, which is also ideally suited for wheelchairs, promotes barrierless communication between children with special needs and others.

The multitude of possible layout variations results above all from the modelling of the terrain. The use of different colours and inlays enhances the playground's attractiveness and offers unlimited design opportunities.

Our interlocking impact-attenuating tiles are manufactured in the form of a two-layered "sandwich". The lower elastic layer has the protective function of absorbing the impact. The polyurethane-bound rubber fibres and granulates used are quality-monitored recyc-

led products. The maximum free falling height up to which a synthetic impact-attenuation surface may be used is determined by means of the test trials conducted by the certifying body.

The upper surface is manufactured as a sealed, wear-resistant layer made of a mixture of polyurethane and UV-resistant coloured EPDM granulates. All coverings are tested and certified by independent test institutes in accordance with **EN 1176** and ASTM F1292-99.

We would be happy to advise you on the appropriate product for your application and to submit a corresponding offer.





Now also available in green!

Standard board red

- 5 63 539 0**
eibe Impact-Attenuating Tiles
Free falling height: <100 cm
- 5 63 510 0**
Impact-Attenuating Tiles 1 m²
Free falling height: <160 cm
- 5 63 540 0**
Standard tiles 50 x 50 x 5 cm, m²
Free falling height: <150 cm

5 63 541 0
Standard tiles 50 x 50 x 7 cm, m²
Free falling height: <210 cm

5 63 542 0
Standard tiles 50 x 50 x 11 cm, m²
Free falling height: <300 cm

Scope of delivery / material data:
1 m² Impact-Attenuating Tiles: rubber granulate

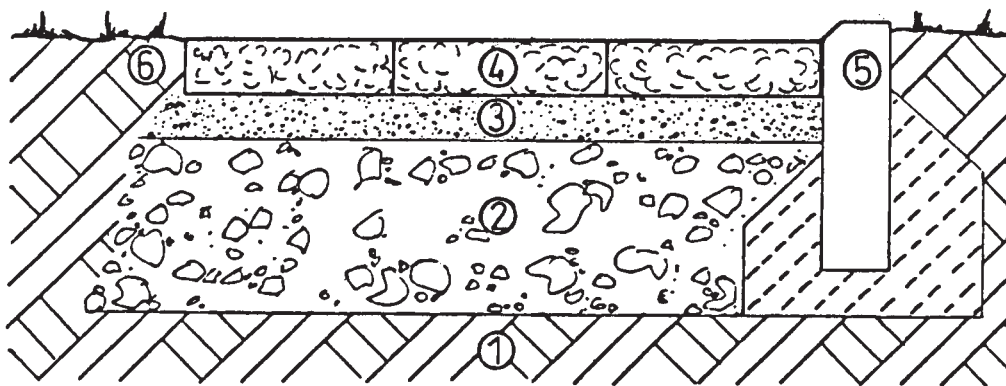
Standard board green

- 5 63 551 0**
Regular plate 50x50x3 cm, sqm
free falling height: <100 cm
- 5 63 552 0**
Regular plate 50x50x5 cm, sqm
free falling height: <160 cm
- 5 63 553 0**
Regular plate 50x50x5.5 cm, sqm
free falling height: <175 cm

5 63 554 0
Regular plate 50x50x7 cm, sqm
free falling height: <210 cm

5 63 555 0
Regular plate 50x50x11 cm, sqm
free falling height: <300 cm

Scope of delivery / material data:
1 m² Impact-Attenuating Tiles: rubber granulate



Laying eibe Impact-Attenuating Tiles and paving on loose surfaces:

- ① Consolidate the substrate
- ② Load-bearing layer, depending on location, approx. 15 cm mixture of broken stones
- ③ Paving bed, approx. 3 cm fine gravel
- ④ eibe Impact-Attenuating Tiles/paving tiles
- ⑤ Border edging if required

eibe Impact-Attenuating Tiles/ paving tiles

Prevent injury with the excellent impact-attenuating characteristics of these tiles. Particularly suitable for use under playground equipment and as a cover for paths requiring a soft surface, such as keep-fit paths, walking paths, terraces etc. We also recommend the installation of these tiles under equipment subject to heavy use such as swings, in order to prevent the formation of unsightly hollows in the ground.

eibe Impact-Attenuating Tiles are made of recycled rubber and have been independently tested and evaluated by the German TÜV GS. They fulfil the requirements of EN 1177.

eibe Impact-Attenuating Tiles consist of 100% recycled rubber, are hard-wearing, weatherproof, quick-drying and hygienic. The completely new design of the underside ensures permeability to water and good ventilation.

Two connecting elements on either side of the tiles enables them to be connected together easily. This interlocking system prevents the tiles from shifting or being removed.

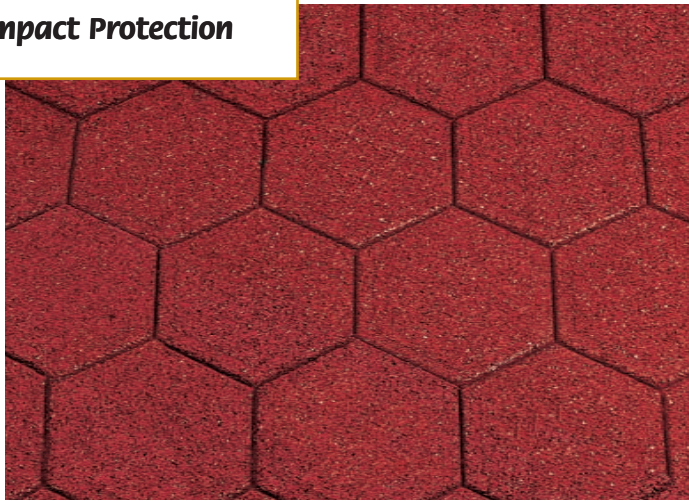
The tiles can be cut to any desired size with a fret saw. The standard tile is available in 6 variations: 3 cm, 5 cm, 5.5 cm, 7 cm and 11 cm thick.

With these Impact-Attenuating Tiles, it is possible to achieve a permanent and secure attachment to concrete and asphalt.

Requirement: 1 cartridge for 1m².

5 63 033 0
Impact-attenuating tile composite

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Honeycomb Matting 100x50x1,5 cm

The special choice for frequently used areas of all types: balconies, bathing areas, public places.

Infobox:

for 1 m²: 2 apiece

5 63 034 0

Honeycomb Matting 100x50x1,5 cm

Scope of delivery / material data:

1 honeycomb mat: rubber granulate.....



Interlocking impact-attenuating pavement

Beautiful design and top safety.

5 63 022 0

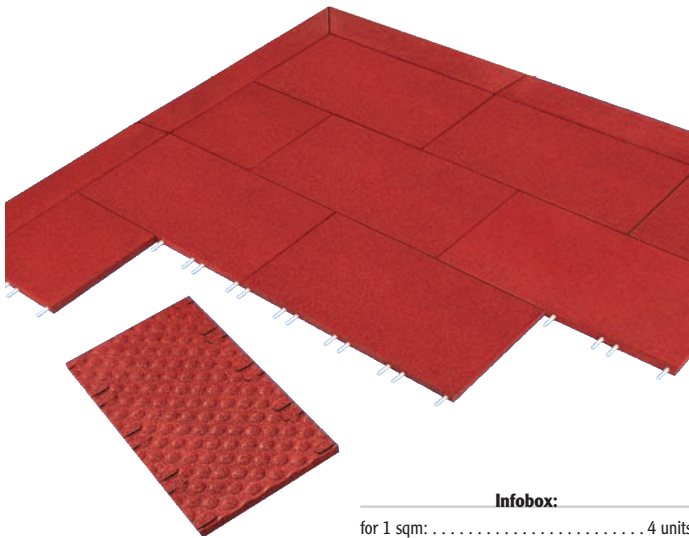
eibe Impact-Attenuating Interlocking Tiles

Scope of delivery / material data:

1 m² impact-attenuating interlocking tiles: rubber granulate

Infobox:

Free falling height: <150 cm



Sports field tiles

Ground covering for football, street ball, volleyball, basketball. Extremely hard-wearing.

Infobox:

for 1 sqm: 4 units

5 63 550 0

Sports Field Tiles 50x50x1,5 cm, m²

Scope of delivery / material data:

1 m² sports field tiles: rubber granulate.....



Floor covering

The slip-proof walking surface for areas and paths that you want to really highlight. Noise-reducing quality.

5 63 017 0

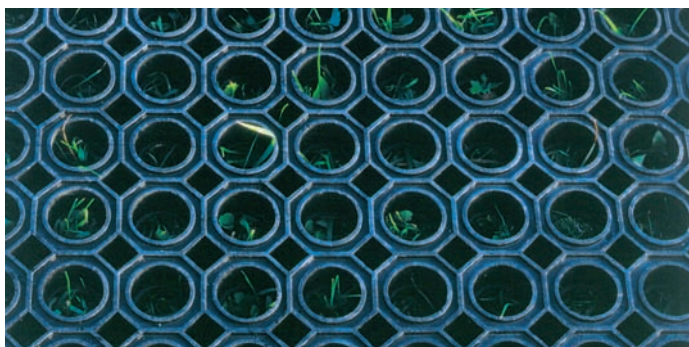
Ground Covering 70x70x1,5 cm

Scope of delivery / material data:

1 floor covering tile: rubber granulate.....

Infobox:

for 1 m²: 2.1 apiece



Hole ,at

Hard-wearing cover for heavily used lawn and grassed areas:

5 35 000 0

eibe Perforated Rubber Matting 100x150x2,3 cm, black

Scope of delivery / material data:

1 perforated mat: rubber.....

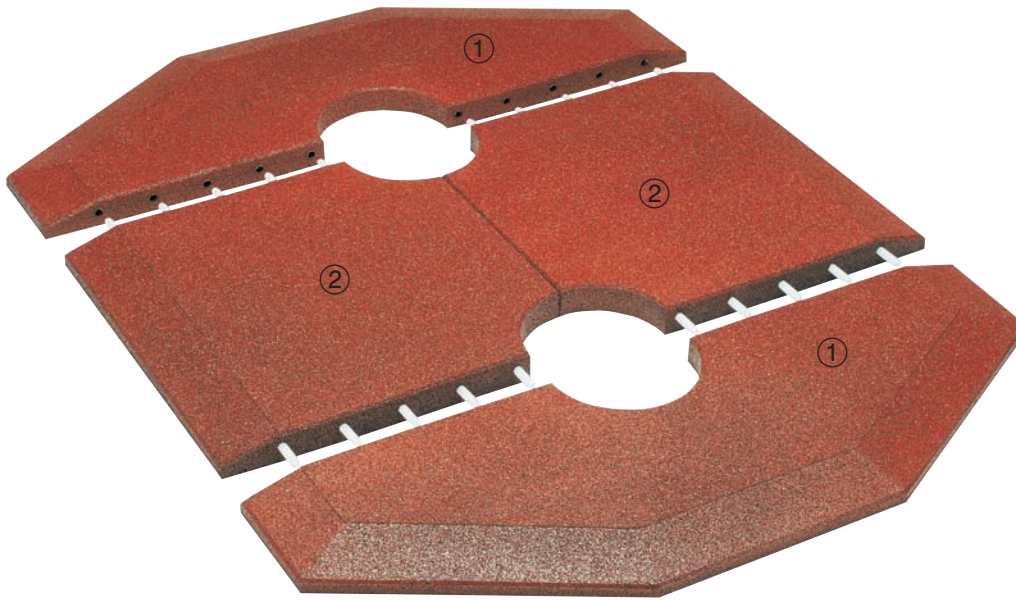
Infobox:

for 1 m²: 0.66 apiece



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① eibe floor tiles for single spring rocker

5 63 045 0

eibe floor tiles for single spring rocker

Scope of delivery / material data:

Two tile halves: rubber

② Extension Tile for Double Spring Rocker

5 63 046 0

Extension Tile for Double Spring Rocker

Scope of delivery / material data:

Two tile halves: rubber



eibe Edging Tiles

The professional transition between the surface and the impact-protection covering. Suitable for wheelchairs.

5 63 543 0

eibe Edging Tile

5 63 544 0

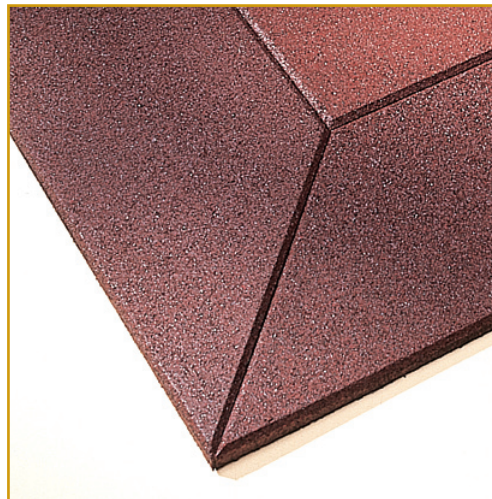
Edging Tile 100 x 25 x 7 cm

5 63 545 0

Edging Tile 100 x 25 x 11 cm

Scope of delivery / material data:

1 edging tile: rubber granulate



eibe Corner Tiles

5 63 546 0

Corner Tile 125 x 25 x 5 cm

rising: 5 cm

(Also suitable for 5.5 cm)

5 63 547 0

Corner Tile 125 x 25 x 7 cm

rising: 7 cm

5 63 548 0

Edging Tile 125 x 25 x 11 cm

rising: 11 cm

Scope of delivery / material data:

1 corner tile: rubber granulate

Granulate edging

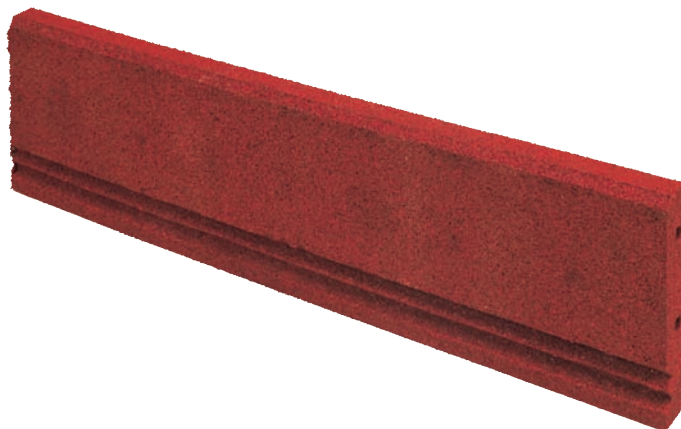
For side borders between loose ground surfaces and impact protecting areas or paths. Simply concrete in.

5 63 533 0

Granulate Border Mounting
100 x 25 x 5 cm

Scope of delivery / material data:

1 granulate border mounting: rubber granulate ..



Impact-attenuating tile composite

The Impact-Attenuating Tile Adhesive ensures a permanent and safe adhesion to concrete and asphalt surfaces.

5 63 033 0

Impact-attenuating tile composite

Scope of delivery / material data:

Cartridge, 310 ml, black

eibe

519.



Impact Protection

eibe Impact-Attenuating Tile Adhesive

An elegant border for playgrounds and sandpits. The galvanised steel pipe is 30 cm long and is to be concreted in.

for 1 running metre:5 apiece

Scope of delivery / material data:

1 granulate palisade: galv. steel, rubber granulate

5 63 534 0
Granulate Palisade Ø25 x 40 cm

5 63 535 0
Granulate Palisade Ø25 x 60 cm

5 63 536 0
Granulate Palisade Ø25 x 80 cm



eibe Sandpit Safety Surround

5 59 091 3

eibe Sandpit Safety Surround

Scope of delivery / material data:

Sandpit safety surround 100x40 cm:
rubber



Impact-attenuating tile composite

eibe Impact-Attenuating Tile Adhesive

The eibe sandpit safety surround is simply attached with adhesive to the flat, hard concrete or stone surface.

5 63 033 0

Impact-attenuating tile composite

Scope of delivery / material data:

1 cartridge for 400 cm of safety surround . . .



Block stair

Whether in the form of a flight of stairs, as a design element or as a seat: the stairs perfectly fit into the total design concept of the impact-attenuating tiles.

5 63 531 0
Stair Block 100 x 30 x 15 cm

Scope of delivery / material data:
1 stair block: rubber granulate

New



eibe seating cube

The granulate cube is used as a seat in the sandpit or to delimit individual areas.

Scope of delivery / material data:

1 seating cube: rubber granulate

5 63 549 0
eibe seating cube



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eibe granulate animal Elephant

The little elephant invites children to sit and play.

Play Value:

Relaxing Creativity
Role play Age range: from 1 year of age

5 63 556 80

eibe granulate animal Elephant, grey

5 63 556 30

eibe granulate animal Elephant, red

5 63 556 50

eibe granulate animal Elephant, green

Scope of delivery / material data:

1 elephant: rubber granulate . . . 2 anchoring posts
2 ground dowels

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Cute play companions

These two animals are a great accessory for all types of play areas. Elephant and rhinoceros are made from rubber granulate which, besides being very safe, has an agreeable warmth.



eibe granulate animal, Rhino

The children just love the rhino.

Play Value:

Relaxing Creativity
Role play
Age range: from 1 year of age

5 63 557 80

eibe granulate animal Rhino, grey

5 63 557 30

eibe granulate animal Rhino, red

5 63 557 50

eibe granulate animal Rhino, green

Scope of delivery / material data:

1 rhinoceros: rubber granulate
2 anchoring posts
2 ground dowels

