

EUROFLEX®

# IMPACT PROTECTION SLABS

High-Level quality for our childrens` safety

No playground should be without them...















### **20 YEARS EXPERIENCE** WITH PROTECTION SLABS



KRAIBURG RELASTEC impact protection slabs provide outstanding absorption of impact shock and protect against serious head romp and play to their hearts' content. Protection from serious and potentially permanent injuries in these surroundings is extremely important. The shock absorption of EUROFLEX® Impact Protection Slabs provides safety without sacrificing problemfree use and durability. Unharmed by weathering and extreme temperatures, they let children play without a care - day in and day out. Our impact protection slabs are constantly being developed and improved. And all of this since 20 years now.





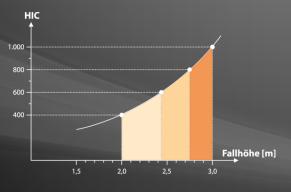


### **SHOCK ABSORPTION TESTING EN 1177:2008**



The European standard EN 1177:2008 defines requirements and test procedures for shock-absorbent surfacing systems. These regulations specify use of shock-absorbent surfaces when expected fall heights exceed 60 cm.

The test is carried out on four or more adjoining slabs covering an overall area of at least 1 x 1 m. The slabs are located on a flat and rigid subsurface with all connecting and anchoring elements used in playground installation. Four different fall heights are evaluated with at least 9 individual tests per height. Various points on the surfacing are impacted including slab centres, slab joints, junctions of slab joints and any apparent discontinuities. The critical fall height is the minimum fall height causing an HIC value of 1000.



Sylvia Karras is doing the shock absorption test on site

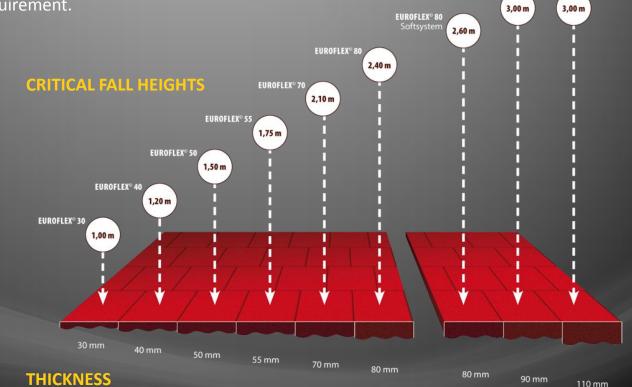






### CRITICAL FALL HEIGHTS & SHOCK-ABSORBENT PRODUCTS







Please note:

Slabs.

Different critical fall

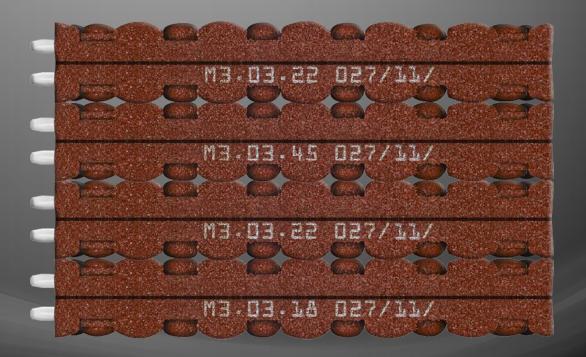
heights apply for EUROFLEX EPDM Impact Protection



### **CONSISTENT QUALITY & TRACEABILITY — TILE MARKING**



Each part of a product has to be in the right place at the right time, in the required quantity and quality. In order to guarantee the quality level, all our products are tagged with a tile marking code. This enables us to track back our quality assurance standards through every single step and location in the supply chain. It is thus possible to carry out process optimisations or upset analyses very rapidly and easily.







# GOOD REASONS FOR CHOOSING EUROFLEX®



#### 01. Tested quality

- · ISO 9001 certified, with third-party QC inspection.
- · Compliance with impact protection standards EN 1177:2008 and ASTM F 1292:2004.
- · Compliance with EN 71/3 Safety of Toys / Migration of Certain Elements.
- · Compliance with national equipment safety laws.
- · Compliance with fire and abrasion resistance standards.
- **02.** 20 years' field experience.
- **03.** Environment-friendly manufacturing process.
- 04. Produced from high-quality rubber granulate and binding agents.
- **05.** Highly effective, uniform cushioning protection ensures maximum safety and outstanding durability.





### GOOD REASONS FOR CHOOSING EUROFLEX®



- **06.** Integrated connector pins secure slabs against accidental displacement and theft.
- **07.** Superb drainage capacity provided by dimple texturing on lower surface.
- **08.** Highly cost-efficient due to rapid installation and permanent playability resulting from excellent water permeability.
- 09. Easy to cut and adapt e.g. to supporting feet of playground equipment.
- **10.** Wide range of peripheral accessories available.
- **11.** Certified for ball games with an bouncing rate amounting to 97%.
- 12. 2 years fitness-for-purpose guarantee, using high density round granules





### IMPACT PROTECTION SLABS APPLICATIONS















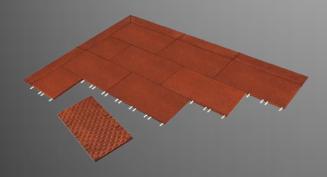




# IMPACT PROTECTION SLABS PRODUCT OVERVIEW



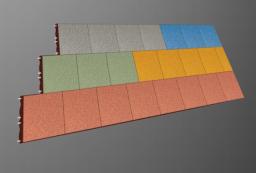




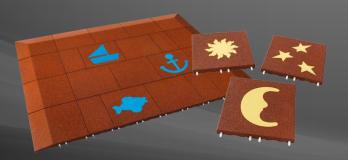
EUROFLEX® Impact Protection Slab EPDM



EUROFLEX® Impact Protection Slab Style



EUROFLEX®
Impact Protection Slab Design



EUROFLEX®
Impact Protection Slab Numbers & Letters



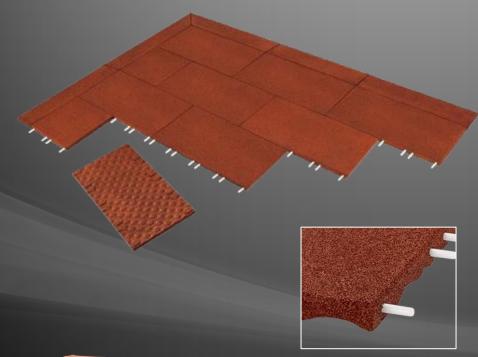


EUROFLEX®

# EUROFLEX® IMPACT PROTECTION SLABS



The shock absorption of EUROFLEX® Impact Protection Slabs provides safety without sacrificing problemfree use and durability. Unharmed by weathering and extreme temperatures, they let children play without a care – day in and day out.



rubber granulate with polyurethane binding agent

Available colours:













# EURO IMPACT PROTECTION SLAB STYLE



EUROFLEX® Style slabs are a new development in the EPDM impact protection sector: a rubber base slab surfaced with a smooth layer of high-quality EPDM laminate. As the EPDM layer enhances the resiliency of the base slab, EUROFLEX® Style attains the same fall heights as does monolithic rubber of equal thickness. The smooth surface of EUROFLEX® Style makes for problem-free cleaning and maintenance.

rubber granulate with polyurethane binding agent

peeled EPDM sheet, laminated

#### Available colours: Standard colours















# EURO EPDM IMPACT PROTECTION SLABS



EUROFLEX® EPDM impact protection slabs enable playground colour design without limits. They fulfil highest safety standards in accordance with EN 1177:2008, provide personalized colour patterns which blend in perfectly with any surroundings, showcase the playing options offered, enhance recreational value and promote childrens' creativity. The virgin EPDM coat (formulated in-house) is available a wide range of colour options including personalized blends to your specifications. Please note: the RAL colour codes given are approximate.

rubber granulate with polyurethane binding agent

**EPDM** rubber with PU binding agent

#### **EPDM Standard colours:**



#### **EPDM Special colours:**





Made in Germany



# EUR OFLEX® IMPACT PROTECTION DESIGN SLABS



EUROFLEX® Design Slabs are new impact protection slabs providing exciting design options for architects and planners. Used alone or in combination with EUROFLEX® Letter and Number slabs, EUROFLEX® Design slabs are offered in a variety of imaginative themes including animals, the sky and the sea. Custom versions are available to convey your message, e.g. information, advertising or sponsors' corporate logos. Play with designs and make your playground, fitness facility or running track a definite eye-

catcher.

Material slabs: rubber granulate with polyurethane binding agent Colours: red, green Material surface designs: 100% EPDM virgin rubber Colours surface designs: red, only with green slabs Colours surface designs: yellow, blue and green only with red slabs

#### Available surface designs:







































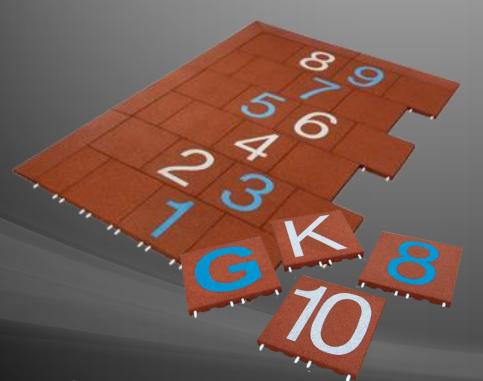




# EUROFLEX® LETTER & NUMBER SLABS



EUROFLEX® Letter and Number Slabs are particularly suitable for playgrounds in schools, kindergartens and childcare facilities and provide an add as educational element to all sports facilities and playgrounds/leisure parks.

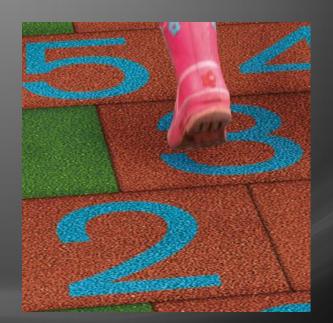


Material slabs: rubber granulate with polyurethane binding agent Colours: red, green, black, grey Material numbers/letters:

Mix approx.

80% EPDM + 20% black rubber

Colours: red, grey, blue







# EUROFLEX® EXAMPLES /REFERENCES



















# EUROFLEX® EXAMPLES /REFERENCES























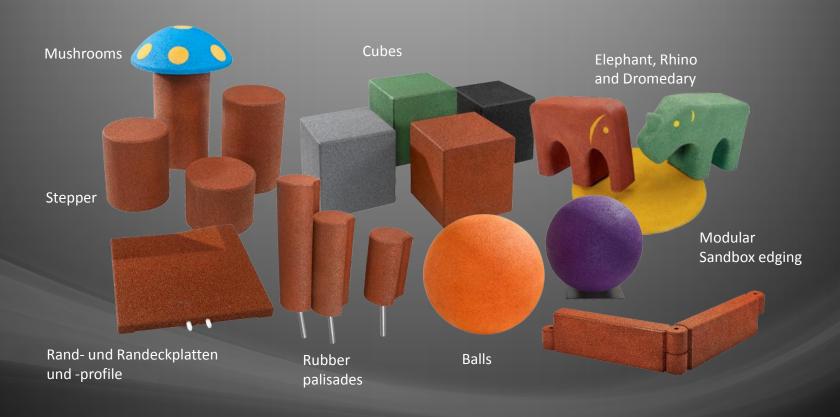




# EUROFLEX® SUPPLEMENTS & ACCESSORIES



As a supplement to our high-quality impact protection slabs we have extendet our product range by a large number of accessories. These parts are especially developed in accordance to our slabs and offer the same outstanding quality level. Here are some examples:







# EUROFLEX® EXPLORE THE POSSIBILITIES



You want something very special? No problem! With EUROFLEX® there are no limits on your creativity. Create your application to your own taste. Principally all forms are possible.





EUROFLEX®



# UNPLEASANT SURPRISES

when installing low quality products







### HIGH QUALITY SURFACE & LOW QUALITY BOTTOM



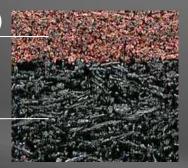
**ADVANTAGE:** Low costs because of low material prices

#### **POSSIBLE LONG-TERM DAMAGES:**

- above average shrinkage
- corners will bending-up
- ribs and rips occur on the surface
- reduction in bounce by material hardening (reduced safety effect)

High quality dense surface (mainly shredded granules)

Low quality loose bottom









### **INFERIOR SLABS** WITH POORLY FINISHED OR NO PINS



Slabs will slipping after a short period of use. This increases the danger of accidents!







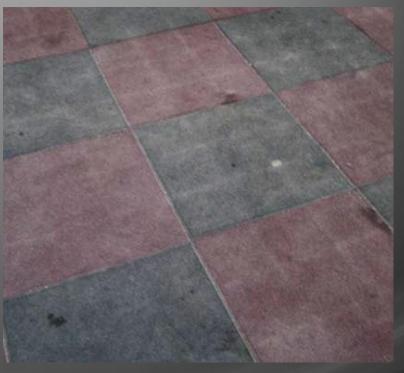


### **INFERIOR SLABS** AND COLOUR FADING



On the pictures you see the courtyard of a school which was covered with cheap impact protection slabs. 6 month after installation the slabs were bleached out of colours exposed to the action of light.











# IMPACT PROTECTION SLABS COMPARED WITH SEAMLESS SURFACES

(seamless surfaces = INSITU)







### **INSITU** LOOKS GREAT AFTER INSTALLATION



Really nice designs can be carried out.









### **BUT** THERE ARE A LOT OF THINGS TO BE CONSIDERED



- time-consuming and difficult installation
- date of installation depends on good weather conditions
- subfloor must be well prepared before installation
- suitable materials must be found and used







### **AND AFTER A TIME OF USAGE DAMAGES ARE POSSIBLE**



Loose granule-parts scattered all over the safety area











### **AND AFTER A TIME OF USAGE DAMAGES ARE POSSIBLE**



Rips are created between areas of different colours

Extremely high wear after years of usage









### REPAIR WORK IS DIFFICULT AND LOOKS VERY BAD







### NOT 50 WITH ELIPOPLEX® IMPACT PROTECTION SLABS



- easy and fast to install
- easy and fast to reinstall
- installation can be done on all weather conditions
- subfloor is easy to prepare
- materials are delivered ready to install
- looks great even after years of usage













# EUROFLEX®

### **CONSTANTLY AT YOUR DISPOSAL**





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# THANK YOU! FOR YOUR ATTENTION





