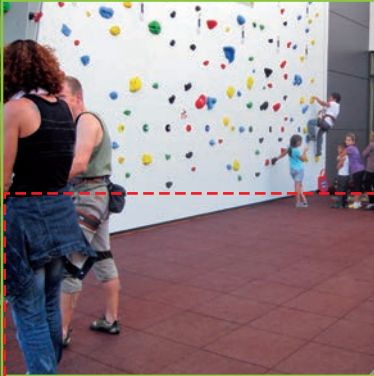


regugym®

Flooring for Climbing Halls

Fall-breaking,
reliable,
safe



The flooring programme for the climbing sport

BSW has joined forces with the operators of climbing halls to develop a programme consisting of several special flooring solutions that serve to reduce the injuries incurred in climbing sport. As specialist for safety and sports flooring, here BSW reverts to many years of experience and extensive know-how. **regugym® climb** flooring for climbing halls are a combination of shock-absorbing elastic components and robust surfaces for hall sports flooring or sports mats. They combine reliable prevention of accident consequences with a long service life, while also being very user-friendly. The proprietary elastic components made of the elastomers **Regupol®** and **Variofoam®** can be adjusted in their levels of softness to the specific requirements in each particular case.

Tested safety

BSW tests the safety properties of its flooring products in its own testing facility. Testing procedures are based on the HIC value (head injury criterion) defined in EN 1177. This value defines the maximum fall height up to which critical head injuries are averted for an uncushioned fall. The safety heights of the **regugym®** flooring for climbing halls are stated in the technical data of the individual floor versions.

Long service life

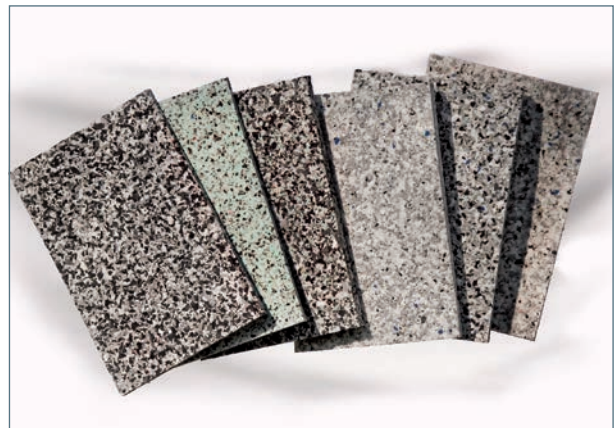
When used and cared for properly, the wear layer of the **regugym®** flooring for climbing halls retains its functionality over many years. The **Variofoam®** and **Regupol®** elastic components leave no deformation recesses even when put to intensive use, and provide appropriate cushioning in the long term for the controlled impact of climbing athletes when abseiling.

Versatility

BSW offers six different flooring types for climbing sport. Each type is rated for certain focal use. Furthermore, BSW also adapts the elastic and wear layers to individual requirements.



For top rope or lead climbing, in halls or outdoors: **regugym® climb** is specially designed for climbing sport. Here the full-surface flooring **regugym® climb** in Buchholz climbing centre.



Variofoam® is an essential component of the **regugym®** flooring for climbing halls. **Variofoam®** retains its elasticity even after many years of intensive use.

Complete flooring system

The range of **regugym®** flooring for climbing halls is made up of four complete flooring systems, with two for top rope and lead climbing and two for outdoor walls. They consist of multi-layer elastic structures with variable elasticity that provide a seamless covering for the floor. All flooring systems have already proved their worth in numerous climbing halls.

Individual adjustment

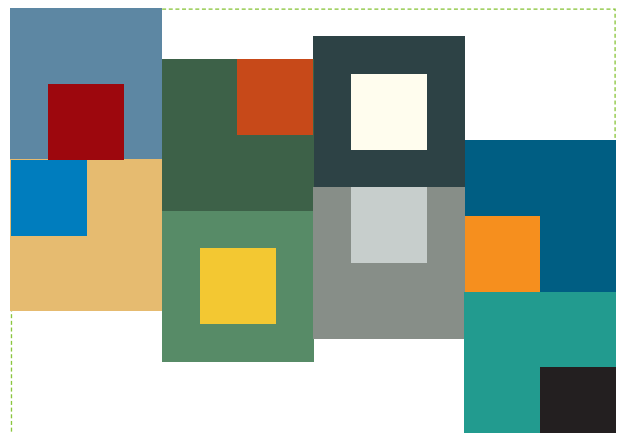
Together with the six complete flooring systems, other solutions can also be developed as flooring for specific buildings and uses. BSW produces the composite foam **Variofoam®**. This is the actual elastic layer and is available in numerous densities and thicknesses which in turn can be combined together in several layers. Numerous other flooring solutions are also available for outdoor use, going over and beyond the standard programme of the **regugym®** flooring for climbing halls.

Colour schemes

The wear layers of **regugym® climb 40 PU** and **45/30 PU** consist of polyurethane and are given a colour finish. 17 basic colours are available together with a choice of 15 line colours. Different sections of the floor can be distinguished by using different colours.



Sponsor advertising can be applied using templates. Multi-coloured floor sections are also possible, e.g. to indicate climbing routes or as lines to mark out the falling line. Here **regugym® climb 45/30** in the DAV climbing wall in Neu-Ulm.



regugym® climb 45/30 PU

regugym® climb 45/30 PU is the flooring for climbing halls for all surfaces within the safety zone. Its elasticity and force reduction properties meet the highest demands. At the same time, its low deformation recess tendency and non-slip surface give the belayer sufficient hold for reliably belaying the climber. The resistant wear layer has a very long service life and can take high loads, considerably reducing the consequences of falling to the floor from critical heights up to the third interim belaying level (about 5.10 m high). The risk of fatal inner injuries is also considerably reduced when falling from greater heights.

Composition

- Wear layer: approx. 2 mm polyurethane, seamless, with colour finish
- 1st elastic layer: 30 mm **Variofoam®** composite foam with higher density for breaking falls and increase horizontal pressure distribution
- 2nd elastic layer: 45 mm **Variofoam®** composite foam with lesser density for breaking falls

Total thickness

approx. 77 mm

Critical fall height

approx. 2.80 m as per EN 1177 (HIC 1000)

Force reduction

approx. 73 %

Maximum caterpillar track load (rubber)

approx. 1.5 kg/cm²

Maximum support slab load

approx. 1.5 kg/cm², possibly use pressure distribution slab

Maximum rubber wheels load

approx. 2.5 kg/cm²

Thermal conductivity

$\lambda \approx 0.060$ W/mK

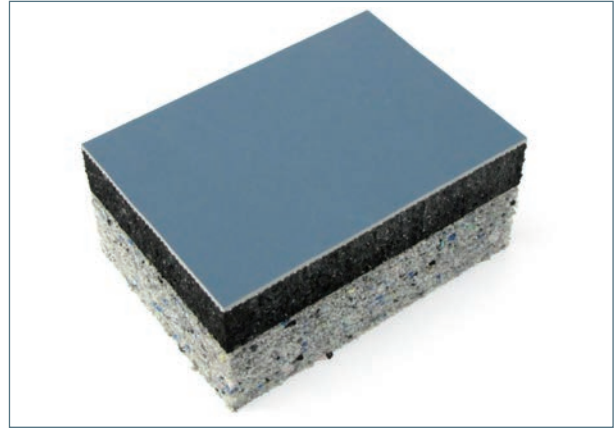
Not suitable for underfloor heating.

Heat transfer resistance

$R \approx 1.28$ (m² K)/W

Reaction to fire

C_{fi}-s1 as per DIN EN 13501-1, classification report No. 2011-B-0119/01, hardly inflammable



regugym® climb 45/30 PU in the DAV climbing wall in Neu-Ulm.

Please also note the instructions on page H2.06 for driving on the floor with lifting platforms and man lifts.

regugym® climb 40 PU

regugym® climb 40 PU is the flooring for all climbing halls with underfloor heating. It offers a good compromise between thermal conductivity and shock absorption. The elasticity and force reduction values are significantly better than those of a normal point-elastic sports hall flooring product. And so this product also reduces the severity of injuries when falling to the floor. It has a long-life, resistant wear layer that can take high loads. The low deformation recess tendency permits safe standing and walking. The reduced structural height makes it ideal to increase the safety in existing halls with underfloor heating.

Composition

Wear layer: approx. 2 mm polyurethane, seamless, with colour finish, fabric mesh

Elastic layer: 40 mm **Regupol®** elastomer sheeting made of PUR-bonded rubber fibres

Total thickness

approx. 42 mm

Critical fall height

approx. 1.30 m as per EN 1177 (HIC 1000)

Force reduction

approx. 61.2 %

Maximum caterpillar track load (rubber)

approx. 2.0 kg/cm²

Maximum support slab load

approx. 2.0 kg/cm², possibly use pressure distribution slab

Maximum rubber wheels load

approx. 3.5 kg/cm²

Thermal conductivity

$\lambda \approx 0.15$ W/mK, of limited suitability for underfloor heating, delayed heat conductivity

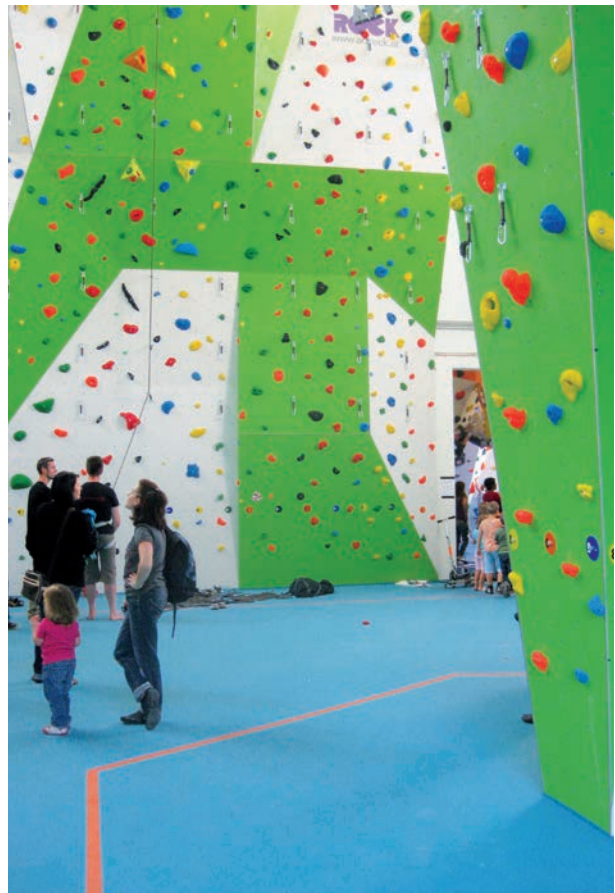
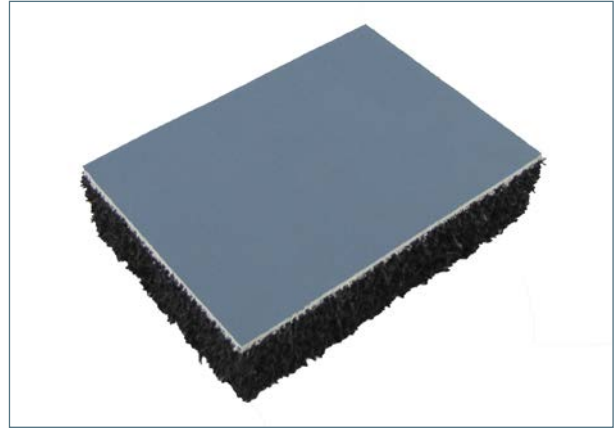
Heat transfer resistance

$R \approx 0.28$ (m² K)/W

Reaction to fire

B_{fl}-s1 as per DIN EN 13501-1, classification report No. 230004475-2, hardly inflammable

Please also note the instructions on page H2.06 for driving on the floor with lifting platforms and man lifts.



Wörgl climbing hall



Regupol® Safety Tile FX 110

The **Regupol® Safety Tile FX 110** has been used for decades wherever reliable shock absorption and impact protection is needed. Developed mainly for children's playgrounds, it warrants reliable protection pursuant to EN 1177 for critical fall heights of up to three metres. Its dual structure of PUR-bonded rubber fibres is a clear quality feature, offering a safe stand on the compacted wear layer and high elasticity thanks to the base layer with numerous air chambers. The tile is easily installed and glued on concrete or asphalt surfaces. It is used at outside climbing walls.

Composition

Wear layer made of highly compacted rubber fibres, dyed through.

Base layer of rubber fibres, variable thickness according to necessary fall height

Dimensions

1,000 x 500 x 110 mm, other thicknesses possible, e.g.

Regupol® Safety Tile FX 50 with fall height of 1.5 m

Critical fall height

approx. 3.00 m as per EN 1177 (HIC 1000)

Force reduction

approx. 80 %

Maximum vehicle load

Not suitable for driving on

Colours

Base layers black, wear layers reddish-brown, green, black, other colours on request.

Other features

Permeable to water, drainage channels on underside, dowel holes at edges, dummy joint on the top side with 500 mm

Detailed information can be found under www.berleburger.com and in our "Sports Flooring Outdoor" catalogue under **playfix®** (P1) and **Impact Protection** (P2).

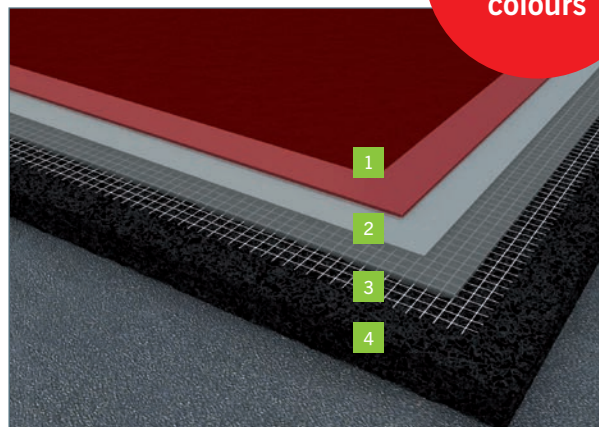


Regupol® Safety Tiles at an outside wall of Wörgl climbing hall

playfix® indoor

Now
in 33
colours

Indoor play areas are becoming increasingly popular. However, conventional safety flooring is designed for outdoor surfaces, and their porous surface structure is not suitable for indoor cleaning methods. With **playfix® indoor** BSW has developed a floor covering that fulfils all impact protection requirements up to 2.10 metres, and also has a hygienic, easy-to-clean wear layer. **playfix® indoor** consists of a resilient elastic layer, which is sealed and coated with a PUR pore sealer and a self leveling PUR wear coat. As the surface was developed on the basis of our flooring range for special flooring, it is extremely robust and durable, besides being slip-resistant and available in a wide range of colours. It is easy to add logos, lettering, lines and symbols using our magnificently durable PUR paint. BSW is the only manufacturer that offers this type of indoor safety flooring.



1 PUR colour finish • 2 PUR coating • 3 Fabric mesh • 4 Elastic layer made of **Variofoam®** 2000

Material

Wear layer hardened coloured polyurethane applied in liquid state, elastic layer **Variofoam®** 2000, PUR-bound composite foam

Composition

Multi-layer construction consisting of elastic layer, fabric mesh, coating and colour finish, sealed and seamless wear layer

Flammability ratings

Classification of flammability: C_f-s1
according to DIN EN 13501-1:2010
Classification report no. 2011-BO119/01

Fall protection properties

Critical fall height: 2.10 m
According to TÜV certificate no. Z2 13 04 10254 007
at a total thickness of approximately 62 mm
(other thicknesses possible)

Colours

17 standard colours and 16 design colours (please refer to chapter "D3 Design Centre PUR Colours")

Areas of application

For all indoor play areas and all other indoor areas requiring fall protection flooring according to EN 1176 / 1177, or having an increased risk of injury due to falls.

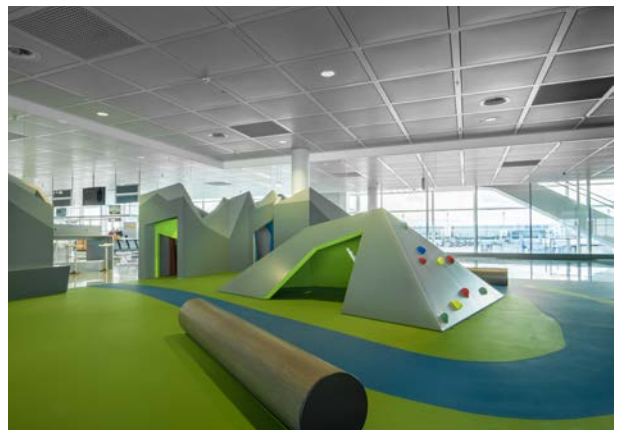
- Preschool and child care centres
- Shopping centres
- Indoor playgrounds and play arcades
- Play areas in airport terminals
- Facilities in the hospitality segment
- Clinics / hospitals

Installation

The installation is generally carried out by BSW technicians.



playfix® indoor in the town hall Gallery Leverkusen (Germany) in space-design



playfix® indoor at the Olga-Hospital in Stuttgart, Germany (above), at the Riem Arcaden Munich, Germany (left) and at Munich Airport (right).

Please note!

regugym® climb has been developed for the special needs of climbing sport, with a special focus on force reduction, elasticity and minimum deformation recess tendencies.

However, the specific application for this product, at climbing walls, also sees the use of devices or machines that can cause considerable damage to the flooring. It is exposed to particularly high loads when lifting platforms and man lifts are driven over the surface. **regugym® climb** can withstand such loads to a certain extent.

The point loads generated by such vehicles or other heavy objects should not exceed the values (kg/cm²) stated in the production descriptions for each specific flooring system. Please ask the machine manufacturer for the exact data referring to your platform/man lift. Even if this compression force remains below the tolerable limits, steering movements when the vehicle is at a standstill can still cause considerable excessive loads.

For lifting platforms/man lifts, please note:

Avoid any rotation movements on the spot for both chain-driven and wheel-driven vehicles.

We cannot assume any liability for damage caused in this way.

The wide range of lifting gear available on the market can also generate other loads that exceed the resistance levels of the flooring system. For example, platforms that manage without added supports are fitted with counterweights that can generate huge flexion movements. Under certain circumstances, the elastic structure of **regugym® climb** will not be able to cope with these loads. In addition, pressure distributing underlays must be used in the working zone. Please contact us before using this kind of platform.

If the pressure load of the support slab is higher than the maximum value in our specification, this can be reduced easily using pressure distribution slabs. Support slabs and possibly pressure distribution slabs should be fitted with a soft underlay (e.g. needle felt or similar).

For every super-elastic flooring, please note:

Avoid constantly high point loads.

In other words, please do not park the platform on **regugym® climb** in between uses.

If working platforms/man lifts are used inside and outside, please always make sure that any foreign bodies (stones etc.) are removed from the tyre profiles, the chains and the rubber. These can cause scratches and damage that is not covered by the warranty. If possible, chains and wheels should consist of soft rubber and are usually available as an option from most manufacturers. Black chains/wheels can leave wear marks on the surface that are difficult to remove.

If damage should still be caused despite all due care and attention, please let us know straightaway so that we can work together to find a solution to rule out this problem in future and rectify the damage.

Cleaning recommendations can be downloaded at www.berleburger.com.

References (excerpt)

regugym® climb

Object

- DAV Climbing Center Offenburg
- Climbing Center Thalkirchen
- DAV Climbing Center Wupperwände, Wuppertal
- Climbing Hall Wörgl, Austria
- DAV Climbing Center Hamburg and Niederelbe
- DAV-Kletterwelt Neu-Ulm, Sparkassendome
- Nordwandhalle, Hamburg
- felsenfest Climbing Hall Saalfelden, Austria
- Gemeente Eindhoven Fontys Sporthogeschool, Netherlands
- DAV Climbing Center Landshut
- Sporthotel Anif, Austria
- Club Kitzsteinhorn, Zell am See, Austria
- K5 DAV Climbing Center Sektion Rottweil
- Climbing Hall Blau-Weiss-Buchholz e. V.
- DAV Climbing Center Berlin
- Climbing Hall Universität Göttingen
- Climbing Hall Universität Hanover
- DAV Climbing Center Frankfurt
- DAV Alpin- and Climbing Center Berchtesgaden, Bergsteigerhaus Ganz
- DAV Climbing Center Marburg
- UP Climbing Center Oldenburg
- DAV Climbing Center Allgäu, Rieden am Forggensee
- Climbing Hall Rosenheim, Stephanskirchen
- Climbing and Tennis Hall Ehrwald, Zugspitzarena, Austria
- DAV Climbing Center Aschaffenburg
- DAV Climbing Center Reutlingen
- DAV Climbing Center Siegerland
- SBB-Climbing Center Sächsischer Bergsteigerbund, Dresden
- Cube Climbing Center DAV Wetzlar
- hiclimb DAV Climbing Center, Hildesheim
- DAV Kletter & Boulderzentrum Freimann
- KletterBar GmbH Climbing Center Offenbach



regugym® climb in the PafRock climbing centre, Pfaffenhofen.



regugym® climb in the Nordwandhalle climbing hall, Hamburg.

Information Downloads

All documents and information you need for making your decision, tendering procedures and also for the installation, use and care of BSW products are available at www.berleburger.com. In a matter of seconds you can download technical data sheets, certificates and installation instructions, all in the required file formats.

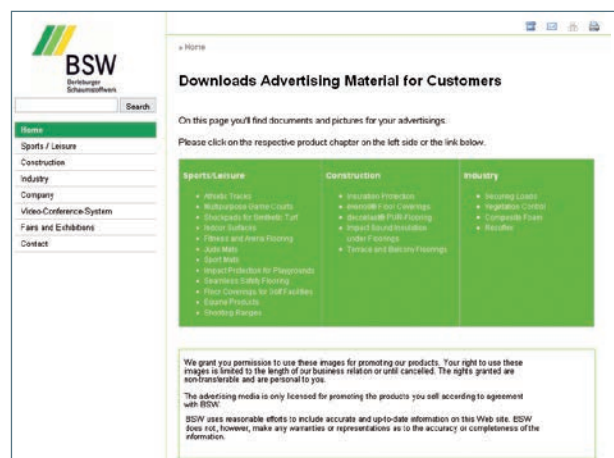
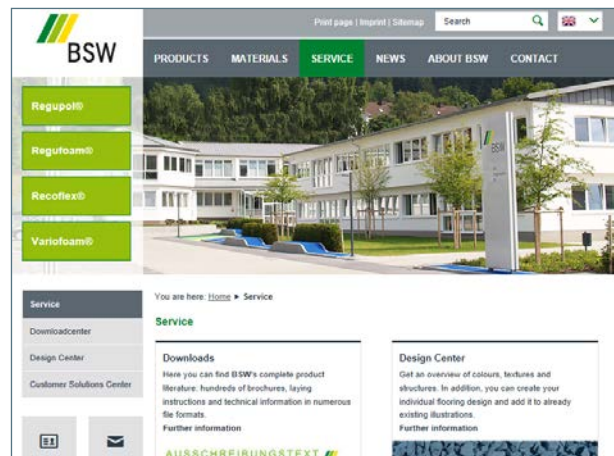
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More detailed information and documents can be found at our website www.berleburger.com: press releases, high-resolution press photos, our latest trade fair activities, a hotline to our friendly customer consultants, background information, calculation and configuration software, the websites of our subsidiaries and the BSW home page in many different languages.

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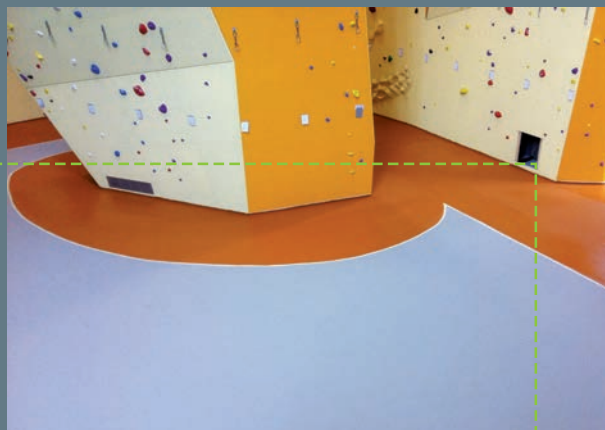
Please do not hesitate to contact our marketing department or our friendly BSW customer consultants, should you have any questions or need assistance.



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