

Regupol®

Shooting Ranges

Reliable
anti-ricochet
protection.



The System that Provides Reliable Protection from Ricochets

It is undeniable that top-class marksmen need top-class protection. For more than 30 years BSW's high-quality **Regupol®** Safety Elements and Flooring have been providing optimal protection from ricochet, rebounds and bullet fragmentations.

BSW's universal and complete solutions are available for all danger areas in shooting ranges, such as floors, walls, ceilings or bullet traps. Together with reliable partners BSW will work out the perfect solution for your shooting range – individually tailored to the respective conditions. Contact our friendly BSW customer consultants to find out whether **Regupol®** standard or customised products are most suitable for your particular shooting range.

Regupol® Safety Elements were especially developed for installation in shooting ranges for the police, hunters, armed forces, marksmen clubs, private shooting clubs and security services. The number of facilities equipped with **Regupol®** Safety Elements speaks in BSW's favour.

Whether for indoors or outdoors, whether on shooting ranges with one main shooting direction or in 180° shooting ranges – **Regupol®** Safety Elements have been meeting the quality requirements placed on these products for over 30 years. The range of **Regupol®** Safety Elements includes components for both indoor and outdoor applications: safety flooring, wall and ceiling covering, shooting blocks, fragmentation rubber sheets and custom-built components.



If cars are required for practise, **Regupol®** Safety Flooring bear vehicles without any difficulty.

The Benefits

- Reliable protection from ricochet and bullet fragments
- Offers protection even under unfavourable angles of impact
- Absorbs projectiles and calibres up to 7,000 joules
- Elastic material means no visible bullet holes
- High resistance to wear even under intensive use
- Longest service life in comparison with other currently used materials
- Different surface colours (flooring)
- Suitable for outdoor applications
- Sound-absorbent
- Slip-resistant
- Safety flooring
- Can be wet cleaned
- Ongoing quality monitoring during production and installation
- Weather and UV resistance
- Continuous customer support by BSW
- Special equipment available, depending on the nature of the shooting range and the type of ammunition used

References (Extracts)

GSG 9 shooting range in Sankt Augustin-Hangelar (Germany)
 GSG 9 outdoor range in Wahnheide (Germany)
 KSK shooting range in Calw (Germany)
 Police Training Academy (PAI) in Biberach, Eutin, Selm Bork, etc. (Germany)
 Police headquarters in Frankfurt am Main (Germany)
 Police headquarters in Düsseldorf (Germany)
 Police headquarters in Rosenheim (Germany)
 Customs school in Sigmaringen (Germany)
 Security service shooting ranges of the German states' central banks in Düsseldorf, Erfurt, Frankfurt am Main, Leipzig, etc.
 Shooting ranges for police, military and other security service in Abu Dhabi, Dubai, Estonia, Italy, Kuwait, the Netherlands, Norway, Saudi Arabia, Singapore, Taiwan, Turkey, etc.

The list contains only a small selection of shooting facilities equipped with **Regupol®** Safety Elements. Many special designs have been developed to meet demanding requirements for training of combat, crime and terrorism situations. Solutions for ballistic protection as in stairways, multi-storey staircases or interiors of passenger airlines are only a few examples.

Regupol® Safety Flooring FH

Our **Regupol® Safety Flooring FH** possesses the best possible anti-ricochet protection from projectiles up to 7,000 joules. Three layers of polyurethane on top of the tiles provide a hard-wearing 2-mm-thick seamless surface. **Regupol® Safety Flooring FH** is applied in situ in liquid form by skilled BSW staff, in order to guarantee top-class quality and an even, seamless surface. The base layer consists either of elastic tiles made of PUR-bonded rubber fibre material or if required of **Regupol®** rolls type 7619/II. Its resistance to all kinds of mechanical influences makes this a hard-wearing floor surface that will be around for decades. This surface is available in numerous different colours. See our colour chart on page 244.

Regupol® E43 Elastic Tiles

PUR-bonded high-quality rubber fibres with a triple PUR layer and a wear-resistant surface coating

Standard Dimensions

1,000 x 500 mm per tile

Dimensional tolerances: Length/Width $\pm 1\%$

Thickness ± 2 mm

Thickness

Black base mat 43 mm, PUR layer 2 mm; other thicknesses on request

Weight per m²

Approx. 40 kg/m²

Regupol® 7619/II Elastic Layer

Instead of **Regupol® Elastic Tiles**, rolls made of **Regupol®** can also be applied as sub-base. **Regupol®** rolls are available in different thicknesses.

Surface

Seamless sealed

Colour Wear Layer

Black base mat, PUR coated surface available in many different colours, see colour chart on page 244.

Cleaning

Easy to clean, wet cleaning is also possible

Installation

Glued onto levelled, dried screed or mastic asphalt; other bases on request

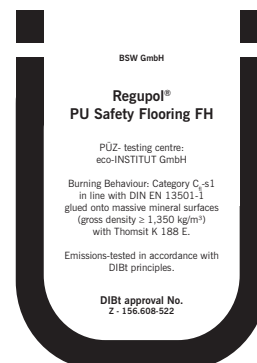
Test Result Rebound and Ricochet Behaviour

Projectiles fired from angles of between 10° and 90°: none of the projectiles fired resulted in rebounds or ricochet and therefore presented no danger to the marksmen. The projectiles or projectile fragments were all successfully absorbed by the **Regupol® Safety Flooring**. Certified by the German Proof House in Ulm.

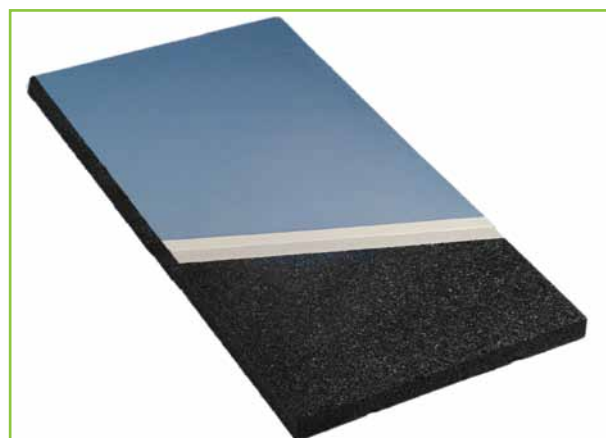
Test Result Reaction to Fire
C_{fl}-s1 in line with DIN EN 13501-1 difficult to ignite. Fulfils the requirements of German National Technical Approval.

Test Result Electrostatic Behaviour

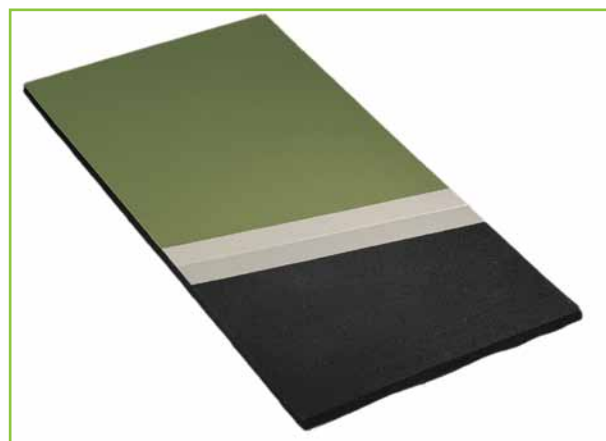
In line with DIN 54346. Certified by TFI (Textile and Flooring Institute GmbH).



*The German Ü mark for construction products is administered by German DIBt (German Institute for Construction Technology) and defines additional specifications if European CE marking does not cover all necessary issues for German authorities. Ü stands for "Übereinstimmung" (compliance). Mostly the tests take place in so-called PÜZ testing centres. PÜZ is the German abbreviation for testing laboratories, inspection bodies and certification bodies.



Sub-base: **Regupol® Elastic Tile E43**



Sub-base: **Regupol® 7619/II Elastic Layer**

Regupol® Elastic Tiles E43 / E70

Regupol® Elastic Tiles can be used to protect walls, floors and ceilings. They prevent dangerous ricochet and rebounds in the inner area of galleries. **Regupol® Elastic Tiles** possess outstanding weather and wear resistance. Completed by their impact on sound insulation they are virtually predestined for both indoor and outdoor range applications.

Regupol® Elastic Tiles E43 are qualitatively identical to our **Regupol® Safety Flooring FH**. **Regupol® Elastic Tiles E43** prevent rebounds of penetrated projectiles so they are perfectly suited as anti-ricochet protection.

Standard Dimensions

1,000 x 500 mm per tile

Dimensional tolerances: Length/Width $\pm 1\%$

Thickness ± 2 mm

Thickness

43 mm

70 mm

Weight per m²

approx. 35 kg/m²

approx. 56 kg/m²

Colours

Red Brown, Green, Black

Installation

Nailed or screwed into wall studs or wooden slats.

Test Result Reaction to Fire

E in line with DIN EN 13501-1 normal combustibility

Sound Insulation

Test report by "Institut für Schall- und Wärmeschutz" (Institute for Sound and Thermal Insulation) in Essen, Germany; in accordance with DIN 52212



The highly compacted material structure of our **Regupol® Elastic Tiles E43**.



The GSG 9 shooting range in Hanglar (Germany) is completely covered with **Regupol® Elastic Tiles E43**.

Regupol® Elastic Tiles RG 520

Regupol® Elastic Tiles RG 520 have been especially developed to collect slow projectiles, such as in front of bullet traps. Thanks to their unique material density projectiles penetrate only with a low kinetic energy into the tiles and ricochet is reliably prevented.

Standard Dimensions

1,000 x 500 mm per unit

Dimensional tolerances: length/width $\pm 1\%$

Thickness ± 2 mm

Thickness

43, 60, 100 mm

Weight per m²

approx. 22.5 kg/m² (at 43 mm thickness)

approx. 31.5 kg/m² (at 60 mm thickness)

approx. 52 kg/m² (at 100 mm thickness)

Colours

Red Brown, Green, Black

Installation

Nailed or screwed into wall studs or wooden slats.

Test Result Reaction to Fire

E in line with DIN EN 13501-1 normal combustibility



The material structure of our **Regupol® Elastic Tiles RG** is distinctly more open compared to our **Regupol® Elastic Tiles**.

At our website www.berleburger.com you can download all our Proof Test Reports and other corresponding documents.

Regupol® Shooting Blocks

Regupol® Shooting Blocks are perfectly suited for use in bullet traps. They can be applied in various layers or even staggered in any height and depth. **Regupol® Shooting Blocks** offer a wide range of application possibilities. Each bullet trap can be designed to suit individual requirements. Alternatively, specially designed constructions based on **Regupol® Elastic Tiles** can also be installed.

Standard Dimensions

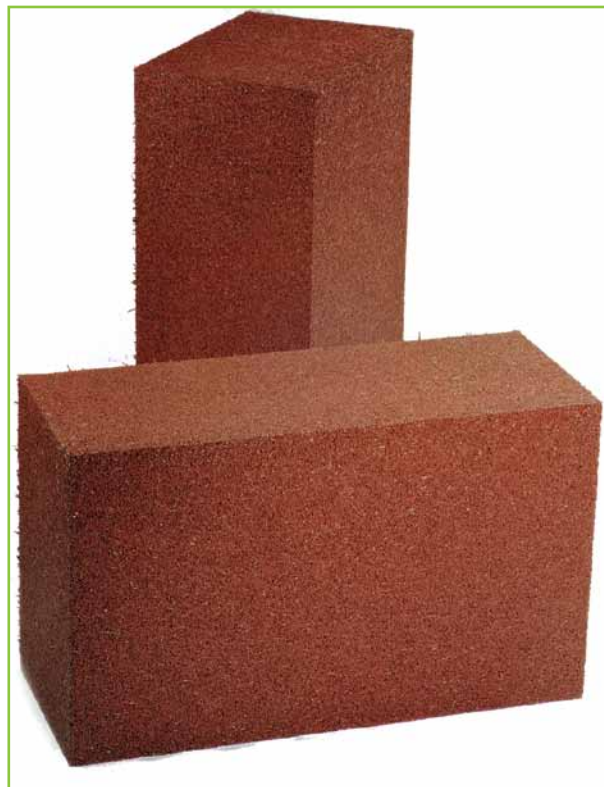
500 x 300 x 200 mm per unit

Weight per m²

25 kg

Colour

Red Brown



Regupol® Fragmentation Rubber Sheet

Regupol® Fragmentation Rubber Sheets serve as the primary bullet impact area and may be built as part of a backstop immediately behind the targets. **Regupol® Fragmentation Rubber Sheets** are supplied in rolls and can be cut to almost any required size. They are available in three different thicknesses.

Width

1,250 mm per sheet

Thickness

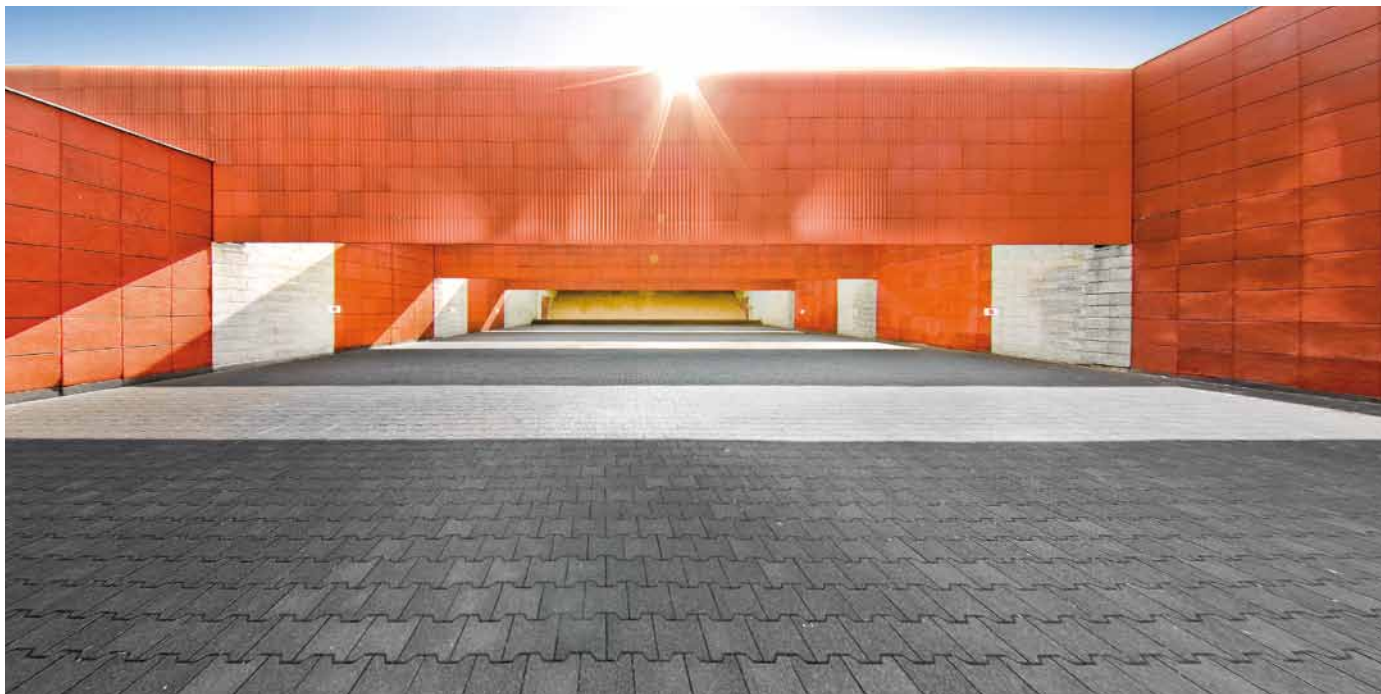
10, 12, 15 mm

Colour

Black



The GSG 9 shooting range in Wahnerheide (Germany) is equipped with **Regupol® Elastic Tiles** and **Regupol® Interlocking Pavers** (see page 190).



Whether for indoor or outdoor applications **Regupol® Safety Flooring** and **Elastic Tiles** are reliable components in shooting ranges for police, military, security forces and demanding marksmen.

Regupol® Interlocking Pavers

Regupol® Interlocking Pavers are made of PUR-bonded rubber fibres and granules. They are ideal suited for outdoor applications.

The compact pavers are easy to interconnect and can easily be combined with common Behaton concrete pavers due to their shape and measurements. **Regupol® Interlocking Pavers** are perfectly suitable for all outdoor areas, especially for access paths, shooting ranges, etc. The compact pavers are extremely resilient and durable even under tough conditions, including vehicular traffic. The **Regupol® Interlocking Pavers** are available as “starters” and “half pavers”.

Standard Dimensions

200 x 160 mm per unit

Thickness

43 mm

Weight per m²

38 kg/m²

Colours

Red Brown, Green, Black

Installation

On top of a well compacted and levelled crushed stone base.

Sand is used for the joints between the pavers.

Alternatively: glued onto concrete or asphalt sub-base.

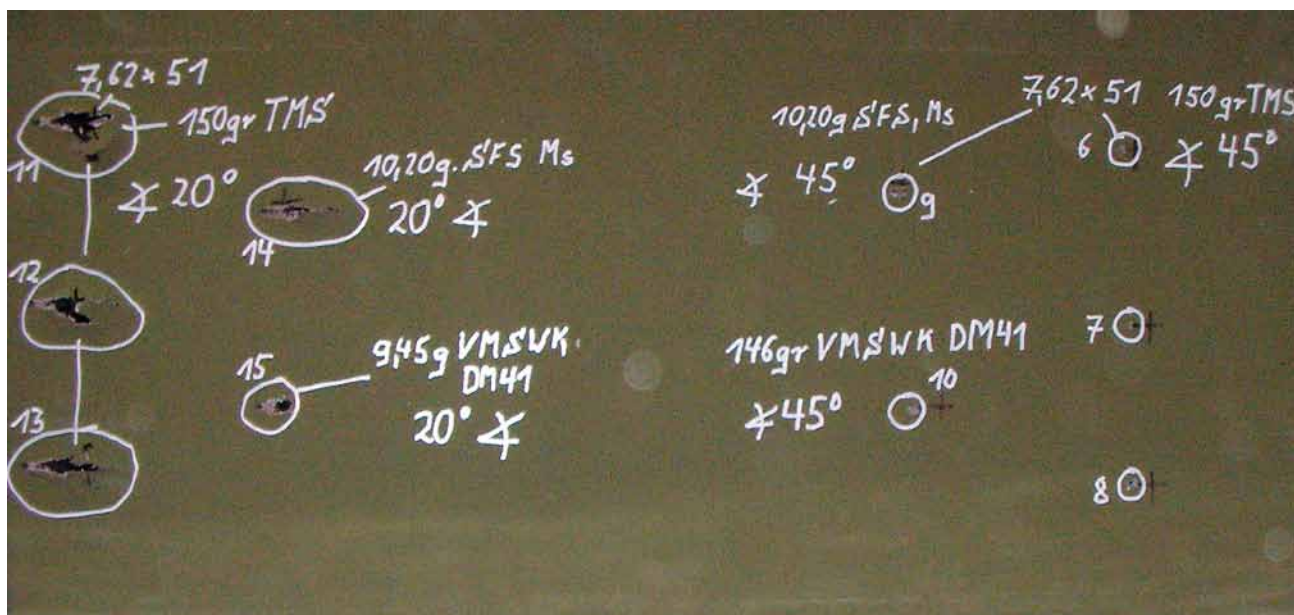




Whether for indoor or outdoor applications **Regupol® Safety Flooring** and **Elastic Tiles** are components in numerous shooting ranges for police, military, security forces and demanding marksmen. Federal police shooting range in Berlin (centre), MSZU- Miller shooting range in Ulm (Germany).



The indoor shooting range at the Police Headquarters in Frankfurt (Germany) is covered with **Regupol® Elastic Tiles**. The SEK/MEK indoor shooting range in Nuremberg (Germany) is also fitted with **Regupol® Safety Flooring**.



Theory and practice:
Extensive proof tests are a prerequisite for safety in shooting areas (above).
Regupol® Elastic Tiles have been reliable components in shooting ranges for decades as shown in the picture below – numerous bullet holes in the wall coverings at a GSG9 indoor range – for more than 25 years.



Regupol® Safety Flooring at a pistol shooting range (above) and at Düsseldorf's police headquarters.

Notes

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