Installation Instructions **EUROFLEX® Impact Protection Slabs and Sports Pavement Slabs (including synthetic turf slabs / slabs with surface graphics), Letter & Number Slabs, Paving Block Tile**

1 Storage of EUROFLEX® Products and Adhesive Cements

EUROFLEX® products should normally be stored in dry areas at constant temperature above 10 °C. If stored below 10 °C, store the slabs at the installation site temperature (> 10 °C) for at least 72 hours before installation.

Important note: Adhesive cements must be stored at all times in dry locations above 0 °C.

(!) To avoid colour variations due to differences in sunlight exposure, leave the UV protection film on the products as supplied until just prior to installation.

2 Installation Tools and Materials

1. Required Tools

- Steel straight edge (e.g. carpenters square 60 cm)
- Cutting knife, heavy duty, with replacement blades
- Tape measure or meter stick
- Felt-tip markers (water-soluble) or chalk, etc.
- Chalk line with refill chalk
- Application gun for dispensing adhesive cement
- Adhesive cement cartridges
- Sheet metal, plastic liner or cardboard sheet (approx. 2 L x 1.5 W of the slab dimensions)
- Hand saw, sabre saw or band saw (with blades for wood)
- Kneepads

2. Required Materials

- Masking tape or duct tape (for protection of existing equipment on site)
- Gloves

3 Preparation of Subsurface

1. Subsurface Design / Acceptance Criteria

EUROFLEX® slabs have excellent drainage properties. The subsurface below them must therefore provide sufficient drainage as well.

If the subsurface is water impermeable, a drainage system must be incorporated.

Paved surfaces (such as concrete or asphalt) must be level with a slope of at least 2 % and have adequate take-off drains. Any depressions greater than 3 mm in depth which can collect water must be levelled off by suitable materials.

Like other elastomeric materials, EUROFLEX® products absorb heat when exposed to direct sunlight. Their surface temperatures can be up to 30 °C higher than asphalt surfaces exposed to the same conditions.

EUROFLEX® products should be installed and stored in shady areas if possible to avoid overheating.

2. Preparation of the Subsurface

Proper construction and acceptance inspection of the subsurface before installation is extremely important.

The following instructions must be followed exactly by the contractor carrying out the subsurface preparation and by the EUROFLEX® slab installer in subsequent acceptance inspection.

Remove the existing soil to a depth of 20 cm plus the thickness of the slabs that will be installed. Place a geotextile layer on the soil surface for separation from the crushed rock layer to be installed above.
If no edge trim enclosure is present around the area to be covered, install edging; elastic EUROFLEX® edging is recommended for safer playing conditions as opposed to conventional wood or concrete edging elements.

4 Perpendicularity Check, Minimization of Dimensional Variations

For the subsurface use a layer of clay-free crushed rock with aggregate size 0 -10 mm (water-permeable).

If required install an adequately dimensioned drainage system (made e.g. of perforated PVC pipe), to prevent buoyant uplifting or displacement of the installed EUROFLEX® slabs.
Should questions arise regarding soil conditions and characteristics or expected soil behaviour, consult a soil mechanics engineer.

Pour the crushed rock in layers approx. 75 mm thick. Compact each layer with a vibration compactor to 98 % standard Proctor density.

Check the levelness of each layer and correct as necessary in application of the next layer.
Following application of the final layer, again check levelness, correct uneven spots with suitable material - e.g. fine stone chippings - and compact as described above.

Paved subsurfaces such as concrete or asphalt must be level to avoid water collection, must have a slope of at least 2 % and must lead into a take-off drain system. The surfaces must be free of cracks, clean and free of oil or other foreign materials.

Regardless of the type of subsurface used, it must not deviate from level by more than 5 mm under a 3 m lathe.

Start installation by laying a chalk line parallel to and a full slab width away from one side of the surface to be covered. Lay a second chalk line exactly perpendicular (at an angle of 90 °) to the first. Check that the lines are perpendicular by the 3/4/5 rule: Starting at the intersection point of the lines, measure off exactly 3 m down the first line and mark this point, then measure off exactly 4 m down the second line and mark this point. Measure the distance between the two points marked. If the lines are perpendicular, the distance between the points will be exactly 5 m.
The dimensional tolerance of EUROFLEX® slabs as manufactured is approx. +/- 0.8 % in length and width and thickness. Dimensional variations can be caused by storage in stacks (elastic compression of the slabs due to the stack weight) and changes in thermal expansion and ambient temperature.

The following procedures are recommended to minimize dimensional variations:
- Be certain that all slabs to be laid have the same temperature over the entire term of installation.
- Spread the slabs out on the ground for 24 hours before final installation to permit them to regain their original dimensions.
- Install all slabs in a single session to ensure installation under similar conditions.

For ideal installation conditions, the ambient temperature at the site should have been over 4 °C for at least 24 hours prior to installation. If the ambient temperature at the site is below 4 °C, store the slabs to be installed in a dry area at a temperature of at least 10 °C for at least 72 hours prior to installation.
Do not install EUROFLEX® slabs if ambient temperatures below 4 °C are expected at the installation site for an extended period of time.

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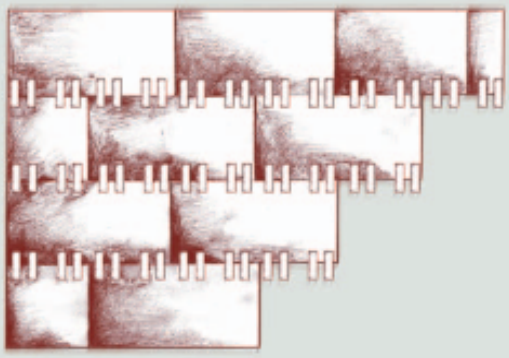
5 Installation of EUROFLEX® Slabs

1. Single-Layer Installation

Install the first row of EUROFLEX® slabs by placing them precisely along the chalk line (During installation of the Sports Pavement Slabs with synthetic turf, please make certain that the blades of grass or 'tufting' for each tile are aligned in the same direction. Doing so will provide a uniform optical appearance across the entire surface.).

Start the second row (and every second row thereafter) with a half slab. Connect the slabs of the second row to the first by the integrated connector pins. The masonry-style configuration (Figure 1) provides stability of the installed slabs.Cut the last slab in each row to the required size using a heavy-duty carpet knife (Figure 2) or a sabre saw (Figure 3).

Correct: "T"-joints



Incorrect: cross joints

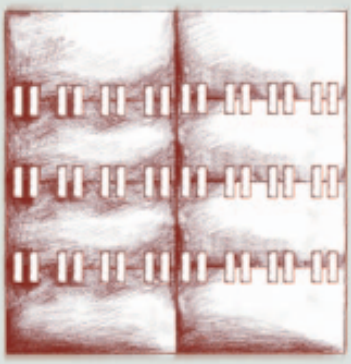


Figure 1

Figure 2

Figure 3

If the surface to be covered is nonrectangular, cut slabs as required and install as shown in Figure 4.

Figure 4

When installing EUROFLEX® slabs on granular subsurfaces, use a sheet metal, plastic or cardboard underlay as an installation aid to keep particles out of the joints between the slabs (Figure 5).

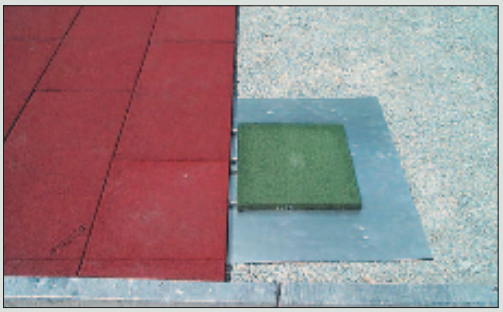


Figure 5

Use the second chalk line to check the perpendicularity of installation.

Any slabs which will border on the edge limitation enclosing the surface must be cut to size very accurately to ensure a close fit (Figure 6).

Figure 6

Glue only slabs of the first and the last row and all slabs on the outer perimeter to each other and to the edge limitation enclosing the surface to secure them against uplifting or unauthorized removal.

Read the use instructions for the adhesive cement carefully prior to installation. Use only adhesive cements which are supplied or recommended by Gummiwerk KRAIBURG RELASTEC.

Suitable disposable gloves should be worn during glue application to avoid skin irritation.

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2. Installation of Sandwich System

The slabs in the lower layer of a Sandwich system do not have to be connected to each other with connector pins. Also, cutting to size of slabs on the perimeter of the surface does not require as close a fit as is the case in the top layer. Fill out any gaps between the slabs in the lower layer and the edge limitation with a suitable fine granular material (Figure 7).

Figure 7

Install the slabs in the top layer with a slight offset to those of the lower layer (Figure 8).

Figure 8

Apart from the differences noted above, install the top layer as described for single-layer installation (Section 5.1). Please note: While manufactured under controlled conditions, EUROFLEX slabs may vary slightly in colour due to the recycled raw materials used in manufacturing.

6 Maintenance of the Installed EUROFLEX® Surface

Regular cleaning of your installed EUROFLEX® surface will promote a long useful life as well as attractive appearance.

EUROFLEX® surfaces can be kept clean by sweeping with a soft-bristled broom or vacuuming with a industrial vacuum cleaner. High-pressure water spraying can also be used to clean EUROFLEX surfaces and provides more efficient dirt removal from the surface pores of the slabs.

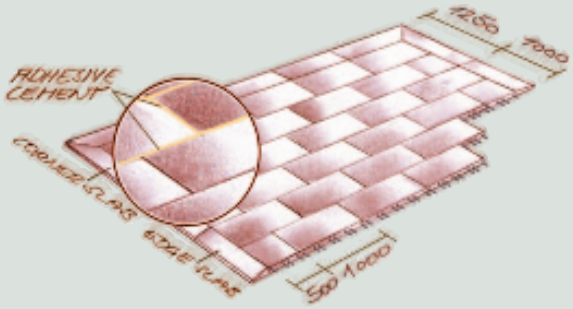
EUROFLEX® slabs are not adversely affected by cleaning with most common household or industrial cleaners when diluted in accordance with manufacturer's recommendations. Light surface stains can be removed with such cleaners using a scrubber or a cleaning rag.

Depending on the frequency of use, EUROFLEX® surfaces will occasionally need deep cleaning procedures to remove dirt, stains, mold and mildew, etc. These procedures utilize a steam cleaner or power washing with or without the use of cleaning agents.

Please note:

Our EUROFLEX warranty is not applicable if the product has not been maintained in accordance to our maintenance instructions above.

Impact Protection Slabs
Slab dimensions: 1000 x 500 x 40 mm



7 Glueing Instructions

Required quantity of glue: 1 cartridge (310 ml) for every 3 - 4 m of joint length glued.

Type of glue: elastic 1-component polyurethane adhesive cement.
e.g. Ottocoll P 83 and Ottocoll M 500
(Otto-Chemie, Fridolfing/Germany, Tel. +49-(0)8684-908-0)

Other purchasing sources: specialist retailers or your nearest KRAIBURG representative.

1. Preparation: The surfaces must be clean, dry and free of grease. Check adhesion to and compatibility with plastic and painted surfaces before installation.

2. Glueing: Apply adhesive cement from application pistol onto the substrate. The required layer thickness is dependent on the materials being joined. Within 10 minutes, put the upper material in place and apply contact pressure. Due to the pasty consistency of the cement, we recommend maintaining contact pressure until curing is complete. The required curing time is dependent on the layer thickness and the humidity of the ambient air.