



## **Granuflex safety tiles laying instructions**

### **General instructions**

After selecting the type of tile to be laid, we recommend making a laying plan. This ensures the most economic pattern possible is made in order to minimize cut-off waste.

Owing to the way rubber expands and contracts, you should allow for a size variation of +/- 1,5 %. The thickness tolerance is +/- 8 %.

In order to make your laying plan you need to determine the exact size of the tiles.

The surface of the Granuflex® tiles must not come into prolonged contact with sharp sand etc.

Storage in a permanently humid environment can result in changes in tile size as well as variations in colour and the formation of mould.

The tiles should be stored in a dry place with sufficient air circulation. If they are to be stored for more than two months, the packaging material should be removed.

### **Laying instructions**

The tiles should be laid on a hard, non-dentable surface. Installing the tiles on a surface such as sand will invalidate our warranty.

Concrete or (old) paving stones may be used. Lay these deep enough so that the surrounding paving will be level with the rubber tiles once they have been laid.

You should ensure proper drainage under the rubber tiles; for example by laying the floor on a gradient.

We recommend installing the playground equipment before laying the tiles.

The tiles can be cut to size with a sharp knife or with a jigsaw fitted with a coarse blade. You can use a hole saw to create holes through which to pass the playground equipment poles.

### **Affixing the tiles**

We recommend affixing the tiles to the ground and to each other using Granuflex® rubber adhesive, certainly in areas which are subject to vandalism.

The rubber tiles and the surface they are to be glued to must be dry. The outdoor temperature must be at least 5 degrees Celsius.

First of all you should adhere the tiles to the surface by applying a spot of adhesive to each of the corners and four other places distributed across the tile.



After all the tiles have been stuck to the surface you can then push the nozzle of the adhesive applicator into the joints and apply a 3cm line of adhesive in the corners and along the middle edges of the tiles.

Depending on the air humidity, the floor should be left to dry for 24 hours before being walked on. A tube of Granuflex® adhesive is sufficient for the installation of approx. 15 m<sup>2</sup> of tiles.

### **Correct implementation of the European Standards**

Safety floors must comply with EN 1176 and EN 1177. The impact absorption rating of Granuflex® rubber tiles has been tested by ISA Sport and certified by TUV Nederland.

A basic, summarized explanation is given below.

We can assume that most serious playground accidents involve head injuries. Consequently, priority is given to the drawing up of requirements safety floors must meet in order to minimize the risk of head injury.

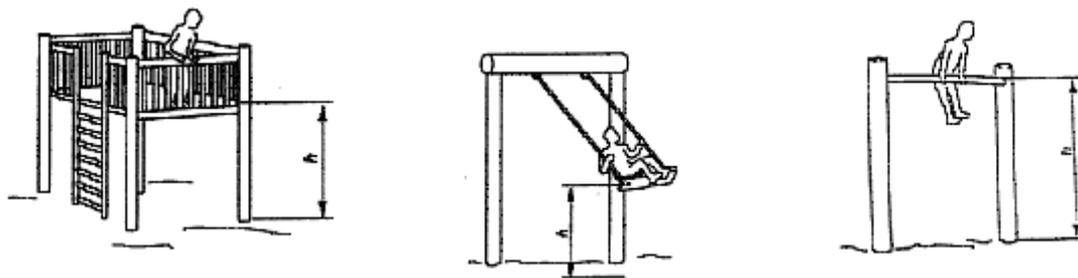
Granuflex® supplies tiles of various thicknesses so that an appropriate tile may be selected for each item of playground equipment. The tile's drop height rating must be equal to the free fall height of the piece of playground equipment (see below). We can advise you about which tile is most suited to a particular piece of playground equipment.

After deciding upon the correct rubber tile it is very important to determine the minimum size the impact-absorbing floor needs to be in order to cover the fall zone. The playground equipment supplier is also obliged to specify the piece of equipment's drop height and how large the fall zone needs to be.



### Free fall height

A few examples illustrated in the drawings below show what each piece of playground equipment's free fall height is:



### Fall zone

Where there is a free fall height of 1.5 metres, a 1.5 metre fall zone must extend around the piece of equipment.

Where the drop height is greater than 1.5 metres the fall zone must be calculated as follows:

Fall zone = the drop height plus 0.75m divided by 1.5.

Different rules apply to certain pieces of equipment (e.g. swings, slides and see-saws); therefore always consult the information provided by the playground equipment supplier.

### Maintenance of Granuflex® rubber tiles

Loose material such as sand, twigs, leaves etc. should be regularly swept from the tiles. The floor can be cleaned with non-aggressive, grease-free cleaning products.



### Technical inspections and maintenance

In order to guarantee the safety of the impact-absorbing floor, it must be inspected and maintained regularly. Granuflex® rubber tiles are manufactured in such a way that a long lifetime with little maintenance is guaranteed; however the guidelines in EN 1177 are clear and therefore also apply to our tiles.

Type of inspection : Visual inspection (visual and functional check).  
Interval : weekly.  
Specialist personnel : Not required.  
Objective : determining possible dangerous situations caused by vandalism, soiling etc.

Type of inspection : Visual inspection for wear and tear.  
Interval : 3-monthly.  
Specialist personnel : Required.  
Objective : In addition to the visual check, an inspection of the floor's construction and a check of its suppleness. Putting right anything that might cause someone to trip over.

Type of inspection : Main inspection  
Interval : at least once a year.  
Specialist personnel : Required.  
Objective : In addition to the visual inspection and the wear-and-tear inspection, an inspection needs to be carried out into any effects of vandalism or weather on the floor. A check must be carried out that the impact absorption properties have not been adversely affected by repairs or other causes.

In areas where the floor is used heavily or where there is a lot of vandalism, the intervals between inspections must be reduced. All inspections must be properly documented.