



Rubber Grass Mats Installation & Technical Specification Guide

Rubber grass mats are designed for use in areas where grass or turf requires protection from heavy wear or strong erosion. GCL Products rubber grass mats should be installed in accordance with our installation guide to comply with the current standards outlined in BS EN 1176.

Our rubber grass mats are an ideal choice for lawns, play areas, golf courses, stables and other areas which may be susceptible to ground churn or heavy footfall. Also possessing anti-slip properties, these mats could also be used in an environment where slippery floors may be an issue.

Manufactured from high density recycled rubber, our grass mats are as eco-friendly as they are effective. Available in either 16mm or 23mm thicknesses and also with a specific fire retardant variety, there's a rubber grass mat for most applications.

With a maximum critical fall height (CFH) of up to 3.4m, tested by RAPRA in accordance with BS EN 1177, GCL Products rubber grass mats are perfect for playground impact areas with apparatus up to 3m in height.

Grass mats are easy to install with minimal groundwork preparation needed and grass being allowed to grow through the cells, providing a natural looking and safe solution.

When compared to PVC grass mats, our rubber alternative proves to be more durable over time as PVC can become brittle and may require replacement much sooner than rubber. During periods of cold weather, PVC can harden and reduces the softness of the surface, potentially causing grazes and cuts.

BS EN 1176 Childrens Playground Equipment & Surfacing

BS EN 1176 is the document which sets out the specification for safety requirements surrounding children's playground equipment and the safety mechanisms protecting the children using the equipment from harm.

It details important specifications such as minimum space around equipment, maximum fall heights and properties of materials used in play equipment and the surrounding environment.

The document also sets out in detail what types of surfacing can be used in play areas, the depth of fill for loose-fill materials and also ground testing procedures to ensure there are no hard areas in impact zones.

Rubber grass mats installed in areas for child's play should be installed in compliance with this regulatory document.

Useful Resources

- **BS EN 1176-1:2008**
(bsigroup.com)
- **BS 7188**
(bsigroup.com)
- **BS EN 1177:2008**
(bsigroup.com)

- **Simple** to install
- **Value** for money versus PVC
- **Environmentally** friendly
- **Improved** drainage
- **Safe** with critical fall height of up to 3.4m

GCL Rubber Grass Mats are a safe, effective solution to **fall protection, grass protection** and can assist with drainage issues.

3.4m Critical Fall Height provides important fall protection properties, safe for UK playgrounds.

Suitable for:

- Playgrounds
- Swimming pools
- Home & garden
- Stables
- Golf courses
- Sports fields

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Technical Data & Measurements

Notes on Safe Installation of Grass Mats for Playgrounds

- Surfacing should have no sharp edges or protrusions
- Surfacing should have no entrapments
- Hard surfaces should only be used outside the impact area
- Tested impact absorbing surfaces should be used where falls over 600mm or where forced movement is possible
- Under 600mm CFH and no forced movement, tested IAS (impact attenuating surface) is not required, but some form of protective surface should be provided
- Grass may be used up to a fall height of 1.5m providing certain criteria are met such as depth testing showing few stones or hard objects and areas of wear are strengthened

	GM16	GM23	FRGM23
Mat Dimensions (mm):	1000 x 1500	1000 x 1500	1000 x 1500
Mat Depth:	16mm	23mm	23mm
Weight per Mat:	9.0 kg	13.3 kg	13.3kg
Max Critical Fall Height:	N/A	3.4m	3.4m
Fire Retardant:	No	No	Yes
Material:	HD Rubber	HD Rubber	HD Rubber
Colour:	Black	Black	Black
Fixing Method:	Peg & Tie	Peg & Tie	Peg & Tie
BS 7188 Compliant:	Yes	Yes	Yes
BS EN 1177:2008 Compliant:	No	Yes	Yes
BS 7044 Compliant:	No	No	Yes

The required distance to be covered by safety surfacing from a piece of play apparatus can be calculated by using the table below:

Potential Fall Height	Surface Distance	Potential Fall Height	Surface Distance
1.5m	1.50m	2.3m	2.03m
1.6m	1.56m	2.4m	2.10m
1.7m	1.63m	2.5m	2.16m
1.8m	1.70m	2.6m	2.23m
1.9m	1.76m	2.7m	2.30m
2.0m	1.83m	2.8m	2.37m
2.1m	1.90m	2.9m	2.43m
2.2m	1.96m	3.0m	2.50m

Our business mission is to become the UK's leading supplier of groundwork, civil and landscaping products. Over the last few years, our company has grown to become one of the UK's most reputable suppliers to these demanding specialist markets.

The extensive range of products we stock is tailored to cater for the needs of our clients, which we complement with unrivalled customer service and friendly, knowledgeable staff. We strive to build long term working relationships with each of our customers to provide the best value for money without compromising on quality or service.

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Installation & Maintenance Instructions

Equipment Required for Installation

- Rubber Grass Mats
- GrassMesh450 (Optional)
 - U-Pins 3mm diameter x 150mm long
- Cable Ties
- Plastic Fixing Pegs

1. Measure and mark out the site where the rubber grass mats will be installed, cut the grass short, remove all clippings and debris.
2. Level out uneven areas using a good quality sandy topsoil. Firm the surface and seed or turf the area.
3. **OPTIONAL Structural GrassMesh450 Layer**
 - a. On sites where the grass surface is prone to becoming wet and soft, the installation of an additional layer of lightweight plastic GrassMesh450 can be used to provide additional structural support to the rubber grass mats. GrassMesh450 should be secured with U-Pins around the perimeter at 50cm intervals.
4. Lay out the rubber grass mats on the proposed area and cut the mats to fit around any play equipment or obstacles as required.
5. Proceed around the area from one perimeter edge butting the rubber grass mats firmly against each

other. Using cable ties at 150mm intervals, fasten all edges tightly together. Trim off the ends of the fixed cable ties ensuring that the cut end of the ties are not creating a hazard by being exposed above the surface of the rubber grass mats.

6. Whilst fixing the cable ties to the edges of the rubber grass mats, secure down using the plastic fixing pegs at intervals of 500mm.
7. **OPTIONAL Edge blending where a discreet grass to rubber interface is required**
 - a. Using a spade or half-moon edging tool, cut a slit into the ground along the perimeter edge of the rubber grass mats and to a depth of approximately 75mm.
 - b. Roll back the edge of the rubber grass mats. Using a spade and starting approximately 150mm from the slit and working away from the rolled back mat, cut a wedged shaped slice of turf (retaining wedge where needed) leaving a wedge shaped exposed soil channel. Continue this operation around the perimeter of the rubber grass mats where edge blending is required.
 - c. Roll the edge of the rubber grass mats back down into the exposed wedge shaped channel. Pin the edge to the ground through the small holes in the mat with plastic fixing pegs at intervals of 500mm.

- d. Refill the exposed ramped edge to its original ground level with topsoil, then trim a layer of soil from the retained turf to give it an appropriate thickness (approx 50mm), then re-bed the turf over the filled rubber grass mats and firm it into place to provide a discreet edge.
8. The grass will grow through and cover the apertures of the rubber grass mats within 4-6 weeks. Grass can be mown as normal.

Maintenance

GCL Products rubber grass mats are incredibly low maintenance and only require regular visual checks to ensure that the retaining pegs and ties are sound and that there are no cuts or tears to the cell structure.

Any defective mats should be replaced as soon as possible to ensure the integrity of the installation.

If there are pegs or ties damaged or missing, these can simply be replaced where needed and are available from GCL Products.



The information contained herein is, to the best of our knowledge, accurate in all material respects. However, since the circumstances and conditions in which such information and the products mentioned herein can be used may vary and are beyond our control, no representation or warranty, express or implied, of any nature whatsoever is or will be made and no responsibility or liability is or will be accepted by us, any of our affiliates or our or their respective directors, officers, employees or agents in relation to the accuracy or completeness or use of the information contained herein or any such products and any such liability is expressly disclaimed.

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Other Products Available

We can also supply:

- Gravel Driveway Grids
- Grass Protection Mesh
- BiAxial Geogrids
- Rubber Grass Mats
- Interlocking Rubber Play Tiles
- Rubber Floor Tiles
- Rubber Paving Bricks
- Woven Membrane
- Spun Bonded Membrane
- Soil Retention Cells
- Lawn Edging
- GeoBorder Paving Edging
- Rubber Street Bollards
- Cable Protection Tiles

GrassMesh

We offer a range of GrassMesh products which are ideally suited to the reinforcement and protection of turf and soil layers.

All three meshes within the GrassMesh range are made from 100% HDPE and can be supplied in three weights: 270gsm, 450gsm and 640gsm.

GrassMesh can be used in conjunction with rubber grass mats to ensure maximum stabilisation in wet and/or soft grassed areas.

The GrassMesh range is quick and easy to install and offers a lightweight, durable cost effective grass protection solution for all applications. quick and easy to install and offers a lightweight, durable cost effective grass protection solution for all applications.

For more details on the GrassMesh Range, please contact one of our sales team who can discuss your requirements and confirm the correct mesh for your particular application.

U-Pins

Manufactured from 3mm diameter galvanised steel wire, these Steel U Pins are ideal for fixing artificial grass, geotextile membranes or weed control fabrics and light duty grass protection meshes or landscape membranes to the ground for all types of landscaping projects. 150mm in length.

Also available in 6mm diameter 180mm length for heavy duty applications.

Plastic Fixing Pegs

These black plastic fixing pegs are manufactured from durable Polypropylene and are perfect for rubber grass mat installations. 150mm in length.

Pack sizes available: 20, 100, 1000qty

Plastic Ties

Our black plastic cable ties are ideal for joining the rubber grass mats, with 2.5mm thick plastic and 200mm long they are the perfect size for joining the mats for most applications.

Pack sizes available: 100qty



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