

GridGuard

Manual Version 1.10



GRID GUARD

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Introduction

Thank you for buying GridGuard LLC GridGuard Anti-Rodent Flooring. You are now the owner of an incredibly effective rat and mouse repellent. It is effective against any animal which comes into direct contact with the tiles. It will not work against animals with cloven feet or hair on the soles of their feet, such as rabbits. The GridGuard is safe, humane, low maintenance and works for years without any intervention. GridGuard can be safely installed by any individual by following the instructions that follow. The system is not armed anytime during the installation process, so there is no risk of shock.

Please read all the instructions through to the end before laying the tiles to make sure you understand them. Ensure you also read the Safety Instructions before fitting or using the flooring. If you are not sure about anything please contact your supplier or fitter, alternatively you can contact us on our website at www.thegridguard.com.

Parts you should receive:

A GridGuard tile is shown at right.

The tile has two unique tracks.
Voltage appears across the two tracks to create the energy field that deters the pests.



This is the edge piece.



Here is a corner edge.



This is the Energiser:



Important Safety Instructions

- It is important to orientate the GridGuard and Energiser so that they are easily accessible in case you wish to turn it off.
- The installer should ensure that it is not possible for the Energiser to be plugged in inappropriately during installation or maintenance of the system. It is also their responsibility to inform people who come into contact with the device that it should be deactivated prior to working in the area, as well as showing them how to do so.
- Do not power the Energiser until finishing the installation of the GridGuard.
- Children must be kept away from the GridGuard at all times. Do not fit the GridGuard where children, pets, or members of the public can come into contact with it.
- The GridGuard must not be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Do not power the Energiser if there is debris on the GridGuard. Keep it swept to prevent arcing.
- Do not install in areas where the presence of flammable vapor or explosive gases or excessive dust is possible.
- To avoid electric shock, deactivate the mat before cleaning up spilled liquid. Do not approach within 10m of the mat when energised if a spillage has occurred.
-  - Danger High Voltage. Inform all persons in the area of the GridGuard not to touch it when activated and inform them how to deactivate it in an emergency.
- Do not connect more than one Energiser to an area of GridGuard.
- Do not connect the GridGuard to earth.
- Fit warning notices at every access point to the device.
- A shock from the GridGuard is safe for humans and animals but could cause a person to fall, causing injury if from a height. Take all precautions to prevent this happening, including using a safe work platform.
- The GridGuard can be used indoors or outdoors. If the GridGuard is used outdoors with mains voltage, the Energiser and mains adaptor need to be kept indoors or in a weatherproof environment. If used with a 12 volt battery make sure the Energiser it is mounted level with the green light upwards as it is designed to drain when wet. The Energiser is IPV4 rated meaning it is resistant to water splashes from any direction.

How To Install The GridGuard

Please read the FAQ on our website here; <https://www.thegridguard.com/faq-rat-repellant>

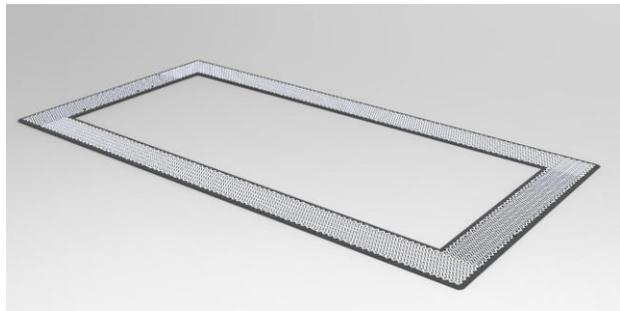
It covers many important points you need to know when using the product. We update the FAQ regularly so you have access to the latest information. Also we have a video,

<https://www.youtube.com/watch?v=fkhHWMaIGwk>

You can search for it on Youtube using "Grid Guard Installation"

The GridGuard can be used indoors or outdoors. The surface on which it is laid must be level or the flooring may be damaged. It must also be hard; concrete is ideal. Do not lay on carpet, earth or gravel. The base is anti-skid but performs best if screwed down to prevent slippage, particularly if it will be driven over.

Customers usually find a single tile depth perimeter effective against rodents. If you experience further problems, then a double or triple depth perimeter will give more protection. As the center of a perimeter is not covered with tiles it offers less protection than a fully covered area. If you start with a perimeter of tiles and this is not sufficient, then the coverage area can easily be increased by adding more tiles. The more of the ground under and around the area that you want to protect that is covered with tiles, the better the protection.



It is safe to walk on the floor when it is activated if you are wearing shoes or boots as they will insulate you from the shock. If you are barefoot or touch the grid with your hands, It is unpleasant but is not harmful to adults, children or small mammals and is tailored for rodents, being 40 times less powerful than that delivered by an electric fence used for farm animals.

It is important to orientate the mat and Energiser so that they are easily accessible in case you wish to turn it off.

Remember that if you were to touch a conductive item such as a hammer or other metal object which is on the mat while it is activated, you will get a harmless but unpleasant shock.

If an electric fence is installed in an area where members of the public have access, the law states that visible warnings must be in place. There are currently no laws for electrified flooring but we strongly recommend exhibiting warnings where it is in use. 'Electrified Floor' signs should be clearly displayed at every approach to the electrified flooring.

The Energiser is able to deliver a strong deterring shock in ideal conditions. In damp and humid

conditions this may be reduced. When laying the tiles, they connect electrically in all directions at multiple points on every tile. This means that even if one or more tiles were to be damaged or removed this will not affect the function of the rest of the mat; electricity will flow around the damaged area. Each tile has eight electrical connections; up to six can be lost and the tile will still function. We expect the GridGuard tiles to last for years of normal use but if they are exposed to heavy wear from large vehicles or heavy equipment it is important to test periodically.

If a rodent or any non-cloven animal not wearing shoes stands on the GridGuard when it is activated it will receive a non-lethal, highly unpleasant shock and will leave the area. When laying indoors ensure there is an unelectrified gap around the edge of the flooring to allow rodents to leave the area by walking around the outside. If flooring reaches all the edges of a contained area, such as a garage, they will have difficulty leaving and are more likely to remain contained within the area.

The flooring can be swept, vacuumed and pressure washed. Do not paint, cover or allow debris to accumulate on the surface as this will affect the function of the mat. If the metal is not exposed it will not deliver a shock when stepped on. The GridGuard is not suitable for areas where a high volume of debris is continuously deposited on the floor as this will prevent the mat from working. The surface needs to be kept clear at all times in order to maintain function.

The bases of the tiles are made from PVC which becomes more brittle as the temperature approaches freezing point.—Warming the tiles in the sun a few minutes before trying to connect them together greatly facilitates installation and will reduce the risk of damage to the tile. By warming the tile, the PVC becomes more pliable and the tiles are easier to connect. At a minimum, the installation should be done at a room temperature of at least 70 degrees F.

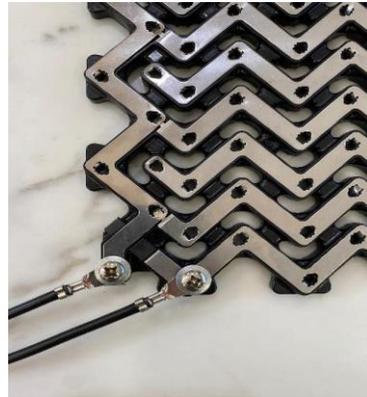
You Will Need

- GridGuard Flooring Tiles
- GridGuard Energiser
- Connecting bolts
- A flat, level floor surface.
- Pliers, small adjustable wrench or spanner set to attach power leads to tile
- Flat-head screwdriver to ease connection of the tiles
- Hacksaw or jigsaw if setup includes internal corners
- Plumber's PVC pipe adhesive to attach edging in situations with heavy traffic.

How To Lay The Flooring

- 1) Start by placing a tile near a socket in the area you want to cover. This first tile will be the power tile. It is best positioned in an area where there will be less foot traffic and where it is unlikely to be driven over. It is also ideal to position it in an area where rats would need to cross the GridGuard to reach it, in order to reduce the risk of them chewing the wiring.

- 2) Connect the Energiser cables to the power tile. It doesn't matter which way round you attach them. Use the screws shown. Usually, it is best to connect to a corner tile of your installation, closest to where you will power the Energiser.

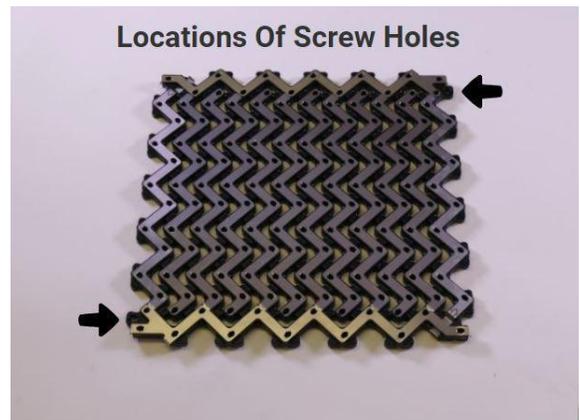


- 3) Screw the metal lugs (rings on the ends of the wires) with the screws above. Align the metal lugs so that they do not short the terminals; position them in line with the zigzag. Do not plug in the Energiser until you have finished laying the flooring. The wires should be attached on separate tracks, so that the voltage will appear across the two tracks.
- 4) Lay the tiles out over the area you want protecting. Lay parallel to the wall with a space around the edge for the rat to leave. If you are laying the flooring across a doorway or other threshold, place the tiles against the wall so the rat can't walk round it.

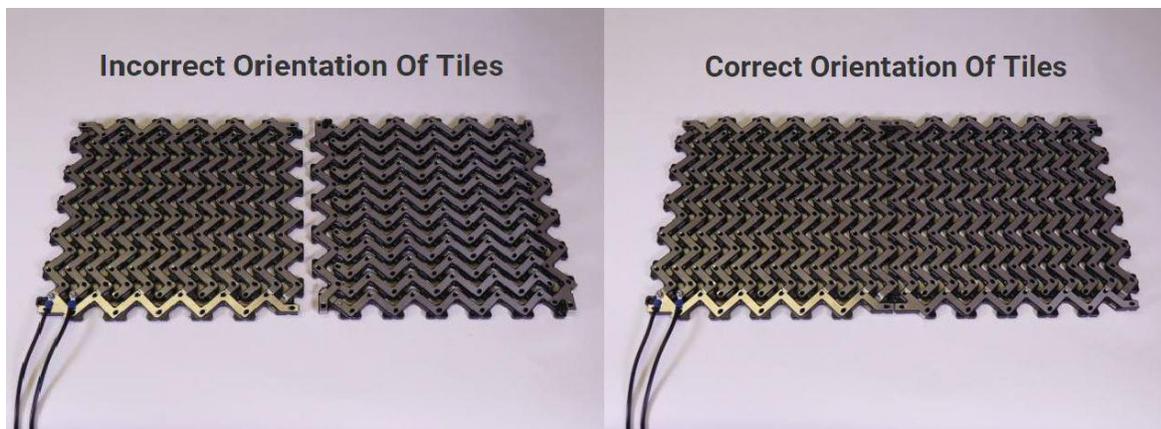


You can cut the edging down to fit around woodwork if you wish but make sure that the depth is minimal so rats can't get past.

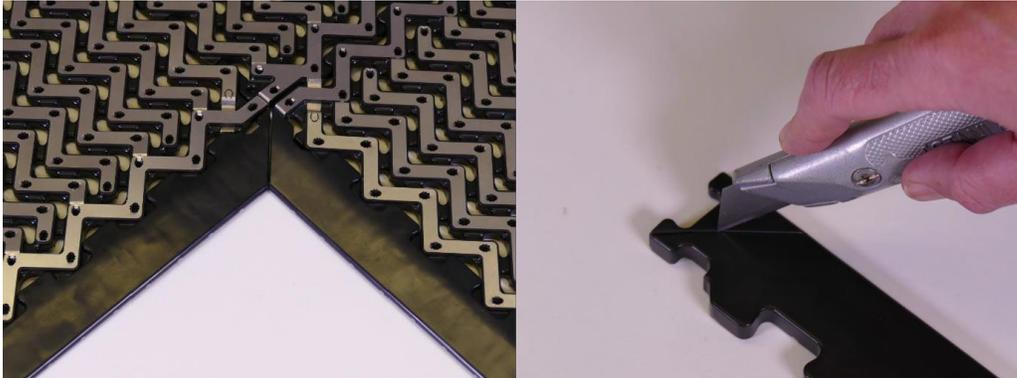
There are two attachment points on each tile to screw or bolt the tiles down. It is particularly important to do this if the tiles are driven over or have significant footfall to prevent the GridGuard from moving. It is also important if covering a threshold, as in the image above.



- 5) Fit the tiles together like a jigsaw with the zig-zags running in the same direction. If you try to lay a tile the wrong way they will not fit together. This is so that the electrical connections are correct. Hold the tiles horizontal, trying not to angle them as you connect them together. This allows the contacts to align. Placing the tip of a flat-headed between the contacts as the tiles are pushed together eases connection and prevents over-riding of the terminals.
- 6) The metal strip at the end of 2 tiles will meet in the gap between the tiles. It is very important to make sure both metal pieces fit in the gap. Heating the tiles in the sun helps make them more malleable to fit. Make sure one of the metal strips is not lying on the top of the surface of the tile.

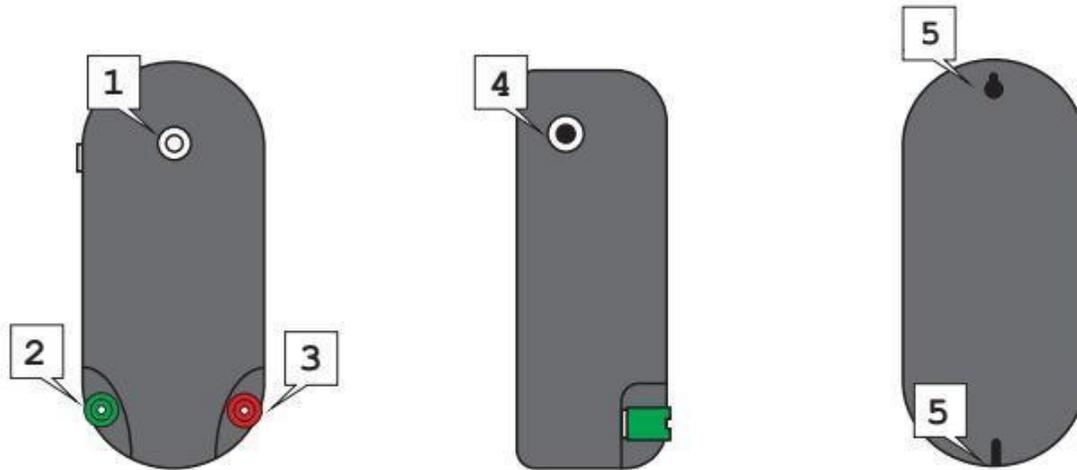


- 7) Add the edging strips and corners. For an inside corner use a builder's knife to cut along the score of two of the edge pieces.



- 8) Mount the Energiser off the ground using the mounting holes shown in the picture below. Ideally run the cables off the ground in order to minimize the risk of damage by rats or mechanical forces. If there is a risk of rodent damage to the wire then run them through pvc pipe or other resilient conduit. If used with mains voltage the Energiser and adaptor need to be kept dry. Mount it indoors or in a weatherproof environment. If used with a 12 volt battery make sure it is mounted level with the green light upwards as it is designed to drain when wet. Do not earth the Energiser or the GridGuard.

- 9) Plug the power adaptor into the wall and the lead on the adaptor into the power input jack on the Energiser Box. Do not do this until you have finished installing the GridGuard, have informed everybody in the area not to touch it when activated, informed them how to deactivate it and swept it clear to prevent arcing. Switching the power outlet on will activate the Grid. The Energiser Box has a green light which flashes on when a 7000v pulse is delivered, once every second. This tells you the box is working.



Key	
1.	Pulse/battery indicator
2.	Ground connection terminal
3.	RatMat connection terminal
4.	Power input jack
5.	Mounting holes

- 10) Unscrew the red and green nuts on the Energiser, remove the washers and place the lugs (round metal connectors with holes) on the screws. Replace the washers and nuts and do up tight by hand.
- 11) Attach the two power lead lugs to the GridGuard if you have not done so already.
- 12) Congratulations! You're ready to go!

OPERATION: If you experience ARCing, which can be heard as a SNAP or POP, you may want to reduce the voltage of the Grid from 7000 to around 3000 V. You can attach the RESISTOR included in the power kit to the 2 leads of the Energiser. The RESISTOR is a short fat black wire with 2 lugs. It does not matter which way you attach. The RESISTOR is shown below.



EXAMPLE: FINISHED FULL GRID SYSTEM



Troubleshooting

If the green light does not flash on the Energiser please ensure that the connection instructions have been followed correctly. If this does not remedy the situation test the electrical socket by plugging in another appliance to ensure it is functioning correctly. You can hear when the Energiser is on as there will be an audible 'tick' emanating from the Energiser.

Arcing may occur on the surface of the mat if debris is present. This can be detected as you may see a brief flash and hear a 'crack'. It does not cause a problem from a functional or safety point of view but should be minimized by keeping the mat clear through vacuuming. The flooring should be inspected regularly to ensure it remains clean.

If the flooring is used in an area with heavy vehicular or human traffic regular testing with an electric fence tester may be performed to ensure continued functioning of the mat. You should expect to see a voltage of 7-10kV. You should also likely hear some Arcing/snap/pop sound as the voltage appears on the tiles. Loss of power to an area of flooring is possible if connections become loose, in the event this occurs it may be remedied by rotating a tile or replacing it. Check that contacts have not been bent out of alignment; if they are not contacting, gently bend them in order that they meet.

Health And Safety

The shock from the GridGuard is safe for humans and animals. It is far less powerful than the electric fences used to control large animals in public areas on farms but the shock is unpleasant and should be avoided. However, do not fit the flooring where children, pets, or members of the public can come into contact with it.

If the flooring becomes wet from a leaking pipe or other spillage remember that you may be at risk of an electric shock from the liquid, however this is unlikely to happen. In tests, water in contact with the mat did not transfer a shock 10cm from the flooring. You are safe to approach the mat wearing shoes or boots. Avoid contacting the liquid and deactivate the mat before cleaning it up.

It is essential that the area is correctly surveyed and the system designed and installed correctly in order to ensure that the GridGuard remains safe and effective in use. Always follow the instructions and relevant safety legislation and guidelines.

You must only use GridGuard LLC components with GridGuard and these components must not be used with any other products unless expressly recommended by GridGuard LLC.

Do not connect more than one Energiser to an area of GridGuard or connect the GridGuard to earth.

Do not install in areas where the presence of explosive gases, vapors, liquids or excessive dust is possible.

Install the device at least a meter away from electrical equipment in order to minimize the risk of interference and at least 3 m horizontal distance from power lines supplying less than 1000 V and 15 m horizontal distance from power lines supplying over 1000 V.

The shock is safe for humans but could cause a person to fall, causing injury if from a height. Take all precautions to prevent this happening, including using a safe work platform. Installation must be performed by individuals who are trained and competent in doing so.

Fit warning notices at every access point to the device. The installer should ensure that it is not possible for the Energiser to be plugged in inappropriately during installation or maintenance of the system. It is also their responsibility to inform people who come into contact with the device that it should be deactivated prior to working in the area, as well as showing them how to do so.

For support please visit our website at www.thegridguard.com.



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