

Installation Guidelines

Important Notes

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1. Important Notes

1.1 These guidelines have been compiled to present a basic overview of procedures when installing Gradus carpets. It has been written as a guide to aid installers, and must be read in conjunction with all relevant standards, best practice documents and codes of practice i.e.

BS 5325:2021-TC – British Standard Code of practice for installation of textile floor coverings.

BS 8102:2022-TC – British Standard Code of practice for protection of below ground structures against water from the ground.

Contract Flooring Association - Guide to Contract Flooring

- 1.2 In accordance with the above standards, the Flooring Contractor has a responsibility to liaise with their customer/end-user to ensure that all of the conditions required for the successful installation of the carpet can be met and accommodated, and that a full risk assessment is carried out prior to the installation taking place.
- 1.3 The installer should be competent to carry out the task as detailed in the National Occupational Standards Installation of Floor coverings (Textile) (Construction Skills) NOS – CITB or carried out a suitable training course at recognized flooring training schools or product manufacturers and provided with all the means to do so.
- 1.4 All carpet must be inspected for any defects or blemishes prior to fitting. Failure to report these prior to installation may affect claims or the supply of replacement materials.
- 1.5 Any variation in site practices to those stated in this guide may have the effect of rendering any product warranties invalid and Gradus Carpets cannot accept responsibility for faults occurring as a result of methods of installation varying from those outlined in this guide. Please read in conjunction with Gradus Carpets Terms and Conditions.

All textile floorcoverings, especially cut pile products, can be susceptible to temporary pressure marking, an effect caused by packing, handling, storage and transportation. This temporary effect occurs with all grades of carpet and will dissipate with time and use as the tufts recover and the carpet regains its original appearance.

Matching different dye lots (batches) should not be used together in the same area. If they are, a colour match cannot be guaranteed and it is the responsibility of the installer to point this out to the customer. Gradus Carpets cannot accept colour match claims after the carpet has been installed.

Should you require any additional advice prior to installation please contact Technical Support on 03332 412901.

2. Handling, Storage and Transportation

2.1 To prevent damage and contamination, all carpet must be handled, stored and transported correctly. It should be kept wrapped until it arrives on site and is ready for pre-conditioning prior to installation.

2.2 On site storage should enable the carpet to be kept safe, clean and free from damage. The temperature should be consistent with those prescribed in BS5325:2021-TC (optimum temperature 18-27°C).

3. Sub Floor

3.1 Before laying carpet, the sub-floor should be checked to ensure that it is in good condition and prepared to receive the carpet. It should conform to the requirements detailed in BS5325:2021, be clean, free from contamination, smooth and free from indentations and ridges which could have an effect on the appearance and wear of the carpet.

3.2 When installing carpets onto concrete or screeded sub-floors, it is extremely important to ensure that the sub-floor is dry and the relative humidity is below 75%. This can be checked using a properly calibrated surface hygrometer or other suitable applicable specialist test equipment in accordance with present British Standards.

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4. Conditioning

4.1 All carpet, adhesives etc. should be conditioned in the area in which they are to be used for a minimum period of 24 hours before they are installed. This is critically important particularly in health care environments where ambient temperatures may be raised above those normally found in other locations. It is particularly critical during winter months when outside temperatures are generally low.

4.2 Site conditions should be achieved and maintained at the optimum temperature 18-27°C (Sub-floor no lower than 10°C) and sub-floor moisture content must be below 75%RH as stated in BS5235:2021 or a suitable moisture mitigation system utilised (e.g. surface applied DPM)

5. Installation System

5.1 Gradus Carpet has a range of cut pile and loop pile tufted carpets that are available with different types of carpet backings and are designed to meet specific end-use applications and customer requirements. The following table details the different types of carpet backing with the appropriate installation system:

BACKING	INSTALLATION SYSTEM		
	DIRECT STICK	DOUBLE STICK	TACKIFIER
BROADLOOM			
IMPERVIOUS			
BITUMEN <i>(carpet tiles only)</i>			

	Recommended by Gradus
	Not recommended by Gradus

*Gradus do not recommend the use of secondary backed carpet with double stick underlay systems.

Installation Guidelines

Broadloom and Impervious Carpets: Direct Stick/Adhesion

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Step 1

If the carpet is stored away from the area/s to be fitted, allow a minimum period of 24 hours to condition in the location where it will be installed and for it to relax after unrolling.

Step 2

The carpet should be laid out and cut oversize by approximately 50mm to allow for subsequent trimming in. The positioning of any seams should be marked out on the sub-floor using a chalk line.

Step 3

In multi width installations, the carpet should be cut and laid as consecutive pieces from the roll ensuring that the pile direction of each consecutive piece is laid in the same direction.

Step 4

In corridors, all carpet should be laid with the pile direction running down the length to minimise the number of seams and ensure that the carpets performance and in-use appearance is not impaired. If there is not a natural break where two corridors meet and it requires the carpet to turn, then this should be achieved by forming a rug effect or break between where the two carpets meet.

Step 5

Trimming the carpet's supplied edges for seaming abutting widths – The supplied edges of cut & loop pile carpet rolls must be trimmed prior to seaming to form a tight abutting seam and to prevent edge fray. This should be done by cutting between a selected tuft row along the full length of the carpet's edge. This may be identified by "pinning" or a small slit through to the back and marking a line using a straight edge, then cutting from the top using the identified line. Alternatively removing a row of tufts by "pulling" out of the carpet backing can be achieved revealing the backing which can then be cut through. In all cases cutting of the backing should be done at a slight angle in towards the pile. Whichever method is used it this must be done on both edges forming the seam (See note 1 below).

Step 6

Refer to adhesive manufacturer's advice on sub-floor suitability, preparation and spreading of adhesive. For all vertical installation use seek adhesive suppliers advice as to suitable adhesives.

Step 7

The carpet should be turned back approximately half its length or width as appropriate and the adhesive spread on the sub-floor using a notched trowel of the correct depth and condition. The carpet is then laid into the wet adhesive. The carpet should then be rolled or glided to ensure adhesive transfer. The procedure is then repeated for the second half of the carpet.

Step 8

The perimeter edges of the carpet should be trimmed to ensure a neat finish and care taken to ensure that the edge is tucked in tightly and in loop pile carpet roll installations, ensure no tufts or loops that have been cut are protruding such that edge fray can occur. The use of seam sealant on the cut edge tuft base can help to prevent fray back.

After approximately 1 hour, the carpet should be re-glided or rolled to ensure full adhesion to the sub-floor.

Adhesive Manufacturer	Pvc Impervious	Aquabac Impervious	Broadloom
F.Ball & Co Ltd	F45, F46, F58+, F60, F66	F3	F3, F40
Bostik Ltd	Stix A800, H900+	Stix A520 Tex Power	Stix A520
Uzin Ltd	KE2000s, KE66, KE49 HT, KE2428 New	KE2428, KE2000S	Uzin UZ54
Tremco Illbruck Ltd	SF105, SF108	SF110	SF110
Mapei UK Ltd	Ultrabond Eco VS90, Ultrabond Eco V4 Evolution	Ultrabond Eco VS90, Ultrabond Eco TX3	Ultrabond Eco VS90, Ultrabond Eco TX3
Ardex UK Ltd	AF 325, AF 2365	AF 325	AF 325

Step 9

All seams MUST be sealed by applying seam sealant to the cut edge of the carpet using a proprietary seaming adhesive (e.g. F. Ball Styccobond F.30) to prevent tuft loss or unravelling of loops (See note 2 below). Seaming adhesives should be applied according to the manufacturer's instructions. The carpet should not be trafficked during the installation process or until the adhesive has fully cured.

Ensure when the seam is formed that the two widths are closely abutted and the seaming adhesive does not wick up onto the pile surface. Check along the completed seam and ensure that there are no protruding tufts or cut loops and where necessary nap back level with the surrounding pile.

Step 10

Doorways and Exposed edges – At doorways and where edges abut other floor finishes, a proprietary trim should be used to protect the carpet edge and prevent fraying. Suitable trim types are available from the Gradus ranges of door and edge protection systems.

Step 11

Installing carpet on stairs – A suitable stair edging should always be used on stairs. Suitable types are available from the Gradus range of stair edgings.

Step 12

A final check should be made to ensure that no adhesive has transferred onto the pile and if found, this should be removed immediately using the adhesive manufacturer's prescribed method and procedures. Do not traffic the installation until the adhesive has fully set and seams are fully cured. Do not place furniture on the carpet until the adhesive has fully set – please refer to the adhesive manufacturers drying time for details. The carpet should be cleared of all offcuts, debris, etc. and vacuum the carpet in accordance with Gradus' Cleaning & Maintenance Guidelines, ready for a final inspection to be made.

NOTES:

1. For a visual description of the required cutting technique please click on this link:
<https://www.youtube.com/watch?v=UZq5K9zsMsQ&t=8s>



2. For a visual description of the application of seam sealant visit F Ball.com and view a video demonstration for the application of their F30 product.
<https://f-ball.com/en/videos/carpet&textileflooringadhesives>.

Step 1

If the carpet is stored away from the area/s to be fitted, allow a minimum period of 24 hours to condition in the location where it will be installed and for it to relax after unrolling.

Step 2

An arrow is printed on the back of the carpet tile to assist with installation. Different laying patterns can be used with Gradus carpet tile ranges.

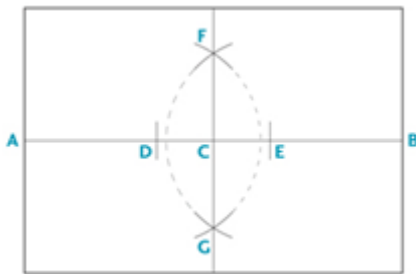
NOTE: For information on the specific laying patterns for the carpet tile you are installing, please refer to the product information on the sample folder, online at Gerflor.co.uk or Gradus.com, or contact our Technical Services Team on 03332 412901

Step 3

Before setting out for the installation, it is essential to ensure that the sub floor is clean, dry, level, smooth and free from contaminants. To obtain a high standard of installation it is necessary to plan your setting out carefully.

The correct starting point for setting out is the centre of the area to be tiled. It should be noted however, that the final starting point for the installation might be offset from the centre line to ensure the correct size and balance of the side cuts. There are several ways of determining the centre of an area depending on the shape of the room.

Regular Areas



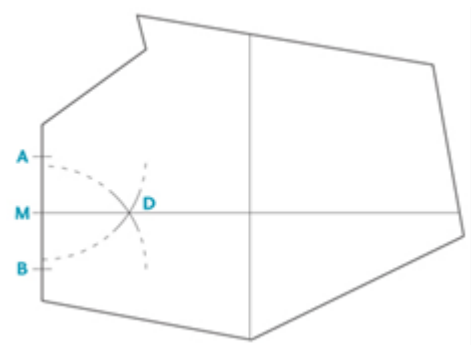
1. Measure the two shortest walls at opposite ends of the room and mark the centre points A and B.
2. Strike a chalk line between these two points making a line AB. Measure the length of this line mark the centre C.
3. Mark two points on this line D and E one metre from C.
4. Scribe arcs from D and E to cut at F and G.
5. Join F and G with a chalk line and extend the line to the walls. This line should pass through point C. The two line AB and FG will form a right angle at C. This can be checked by using the 3,4,5 rule.
6. The centre of the area to be tiled has now been determined and two datum lines made.

Carpet Tiles: Tackifier Adhesion

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Irregular Areas

This method is similar to that for regular areas.



If the area to be tiled is irregular, take any convenient wall and determine the midpoint M.

1. Mark two points A and B on this line one metre from M.
2. Scribe arcs from A and B to cut at point D.
3. Strike a chalk line from M through D and continue to the opposite side of the room.
4. Measure the length of this line and mark the centre point C.
5. Following the procedure for regular rooms, determine and draw a right-angled cross line. This can be checked using the 3,4,5 rule.

Having determined the centre point of the area to be tiled and drawn the two datum lines at right angles to each other, it is advisable to have a dry run to ensure that the proposed layout will balance and that there will be no awkward size filling pieces to be cut. If necessary, the datum lines can be adjusted to ensure a balanced installation.

Step 4

Gradus recommend that tiles be installed over a tackifier adhesive in accordance to the adhesive manufacturers recommendation, with coverage rates strictly followed and adhesive not over extended. The tackifier adhesive should be allowed to dry to a clear tacky film before laying the tiles.

Tiles should not be laid into wet tackifier as this will result in a permanent bond.

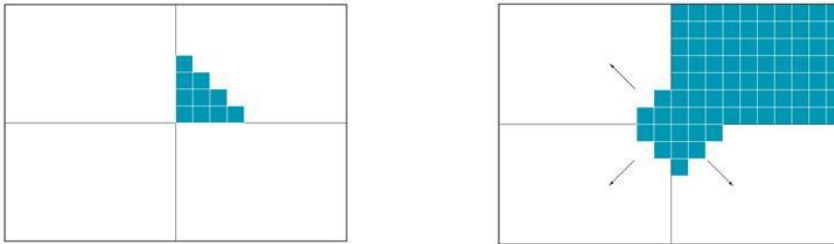
Adhesive Manufacturer	Bitumen Tile
F.Ball & Co Ltd	F41
Bostik Ltd	Fix A320
Uzin Ltd	Uzin U2100, Uzin Unifix
Tremco Illbruck Ltd	SF200
Mapei UK Ltd	Ultrabond Eco Tack TX+
Ardex UK Ltd	AF 835

Carpet Tiles: Tackifier Adhesion

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Step 5

The starting point for the installation should be as near to the centre of the room as possible. Starting at the intersection of the two datum lines, the tiles are built up in a pyramid fashion using the step technique. It is important to ensure that the tiles are butted up tightly together, taking particular care to prevent the trapping of pile between adjacent tiles.



Having completed the first quadrant, the remaining quadrants can be completed. Growth should take place, not along the datum lines but along an imaginary diagonal line.

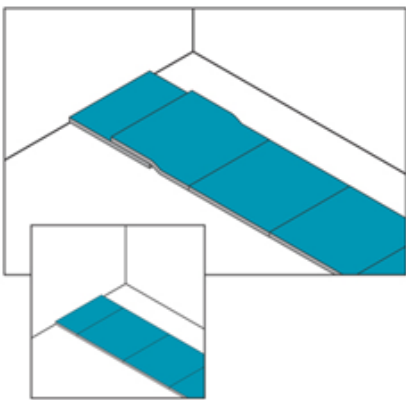
NOTE: When installing carpet tiles of a plank design there is much more versatility in patterns and design (see our latest Flooring Collection Brochure for details). Normally working along the longest length datum will enable the pattern to be built up. Where herringbone type patterns are to be incorporated then an initial datum to 90° will also be required to be created in the same manner as for square tiles.

Step 6

When cutting tiles at the perimeter, there are several methods, which can be used to obtain an exact fit of the perimeter tiles.

Method A

When the last full tile has been fitted take another tile, turn it upside down and slide it under the last full tile, ensuring that it is tight against the wall and with the pile running the right way.



Using the final tile as a guide cut the upside down tile with a sharp knife. Turn the cut tile over and lay it tight against the wall.

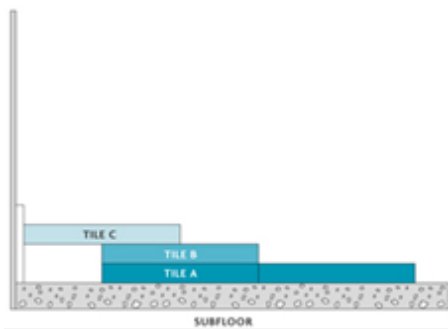
Carpet Tiles: Tackifier Adhesion

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Method B

When the last full tile, A, has been fitted, a second tile, B, is placed directly on top. A third tile, C, is now placed face up on top of tile B, but butting up tightly against the wall.

A small incision is now made with a sharp knife on each side of tile B where tile C overlaps.



Having removed tiles B and C, tile B is turned over and using a straight edge, the tile is cut from the back. The cut tile will fit exactly between tile A and the wall.

Step 7

When installing carpet tiles on stairs the tiles are cut to fit each individual stair tread and riser and adhered with a permanent adhesive. A suitable stair edging, available from the Gradus range of stair edgings, should always be used on stairs.

Notes

To comply with Gradus carpet warranties, appropriate stair edgings must be fitted on all stairs.

For further information contact Technical Support on 01625 428922 or email contractuk@gerflor.com or imail@gradus.com
Refer to the sample book to check the appropriate tile laying direction