



RECOMMENDED INSTALLATION GUIDELINES

WellBAC®

Comfort and Comfort Plus

FLOOD DAMAGED FLOORS
USING SITE-RELATED SOLUTIONS

Milliken

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(This document supersedes all previous versions)



SITE-RELATED SOLUTIONS (SRS)

WELLBAC® COMFORT OR COMFORT PLUS CARPET TILES & NRS ADHESIVE

RECOMMENDED INSTALLATION GUIDELINES

Notice

Dealer and installer must inspect carpet tiles prior to installation. Milliken WILL NOT be responsible for visible defects after the carpet tiles have been installed.

General

These installation guidelines are applicable to the Milliken cushion backed carpet tiles using Milliken Non-Reactive Standard (NRS) Adhesive. The installer should review these instructions before starting the installation.

Floor Preparation

- The floor should be prepared as per AS/NZS 2455.1:2007 Standard and these instructions. Please note if there is a discrepancy between the Australian | New Zealand Standards and these instructions, these instructions should be followed.
- The carpet tiles are to be installed in accordance with the AS/NZS 2455.1:2007 & AS/NZS 2455.2:2007 Standards.
- The old carpet including any underlayment must be completely removed from the flood damaged subfloors.
- After removing the old carpet and underlayment (if any), the whole slab must be cleaned using a high pressure water cleaning system without any soap or chemicals.
- The washed area must be dried for at least 24 hours using spitfire heaters with windows and doors open.
- The floor must be dry, smooth, sound, clean, and free from dust and/or all foreign matters such as grease, paint, wax, oil, dirt, old adhesives/floor prep etc. Cracks, holes and depressions must be filled with appropriate floor patching compound. Ensure the floor is thoroughly vacuumed (please refer to levelling compound manufacturers for detailed recommendations).
- In regards to the smoothness and planeness of the subfloor, the following conditions must be met as per the following instructions:
 - Plane (surface) - Of a condition such that when a straightedge 2 metres long is placed on the surface at any position, no part is more than 4mm above or below the straightedge.
 - Smoothness (surface) - Of a condition such that, when a straightedge 150mm long is placed on the surface at any position, no part of it is to be more than 1mm below the straightedge.
- Protruding objects must be removed and sealed.
- Floor temperature should be a minimum of 16°C and the modules should be conditioned at 16°C minimum for 24 hours prior to installing.

Adhesion Bond Test

- Milliken recommend that an adhesive bond test is undertaken, if there are any issues with the subfloor or unknown contaminants were previously on the subfloor, to ensure the compatibility of the adhesive to the subfloor.
- This test should be performed for a duration of at least a week to give the adhesive time to react with any contaminants in the subfloor with a minimum of 4 tiles being installed.
- After a week remove the carpet tiles and the adhesive should remain bonded to the subfloor.
- If the adhesive comes up with the carpet tiles there may be an issue with the subfloor and we recommend contacting the adhesive manufacturer.

Conditioning

Before commencing installation, the carpet tiles and all other materials being installed must be allowed to condition within or near the installation area for a period not less than 24 hours or until the products have achieved an ambient room temperature range of 16°C to 28°C.

Areas being installed must have the HVAC system running or have other temperature control methods in place for at least 48 hours prior to the installation commencing, so that the ambient temperature is 16°C or above and the ambient RH is between 40-60%. Heating devices such as electric radiant heat or electric heat blowers shall be used. If LPG gas blowers are used for raising ambient room temperature, an ambient relative humidity of no more than 60% shall be maintained.

The areas to be installed must have the HVAC or other temperature control devices operating during the installation and for a minimum 48 hours thereafter.

It is critical that the carpet tiles are only installed in a fully enclosed environment with all walls, floors, doors and windows installed. Milliken will not be responsible for carpet tiles that are installed where the outside ambient conditions could affect the installation.

NRS Adhesive:

A full spread of adhesive must be applied to the subfloor at all times. Please refer to Milliken's NRS Adhesive Specification Sheet for further information.

(Milliken is not responsible for product failure of any kind if the floor preparation, installation guidelines and the above standards are not adhered to, in which case the product warranty may be void.)

Storage & Handling of carpet tiles

- Proper storage and handling practices must be followed at all times.
- Carpet tiles must not be double stacked or top loaded at any time.
- Store in a dry location.
- Install the carpet tiles within 2 weeks of receipt.

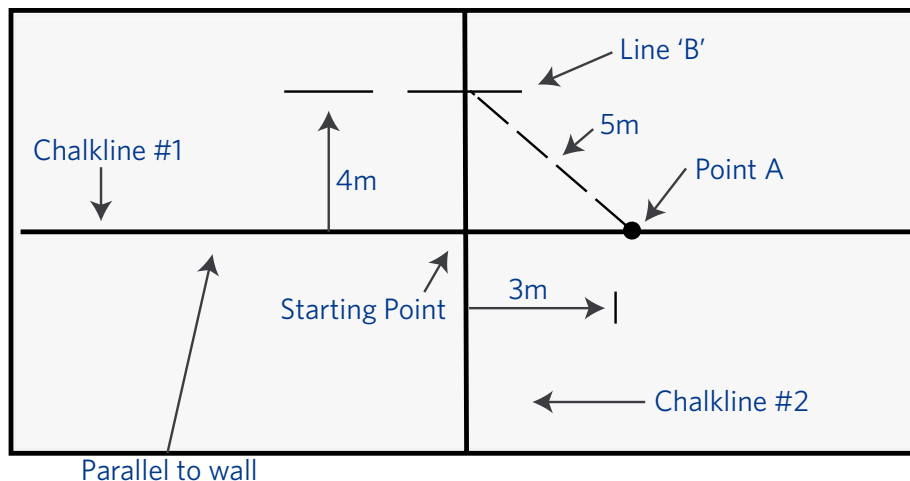
INSTALLATION INSTRUCTIONS

Installation:

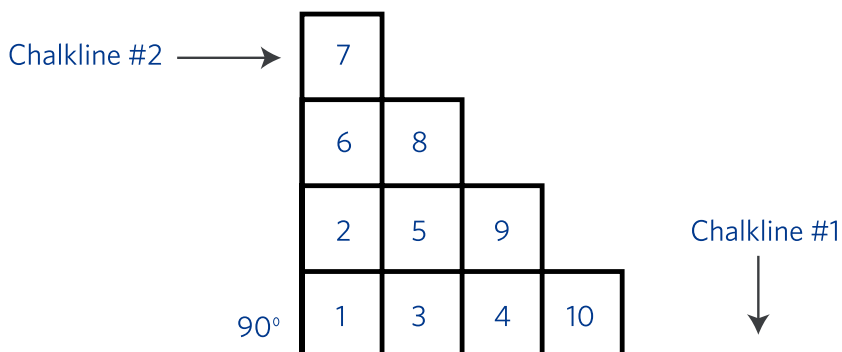
- A full spread of adhesive is to be applied to the subfloor at all times following the adhesive manufacturer's guidelines in regards to the applicator type, application rates, when primers are to be used, RH & pH requirements, etc.
- Allow compound to dry, at which stage the adhesive will become clear and tacky. This tack remains indefinitely providing the compound remains free from dust. A releasable compound is ready when it does not transfer to a finger or module placed on it.
- The location of the starting point in any modular installation is assigned by the installer to maximise perimeter and cut module size. It can be anywhere within the room but is usually located as close to the true centre of the room as possible. When the installer has isolated the point which gives the best perimeter and cut modules he should strike two working chalklines as follows:
 - Line one is snapped parallel to one major wall (usually an outside wall) running through the starting point.
 - Line two is constructed from the starting point at 90° to line one using a 3-4-5, 6-8-10, 9-12-15, 12-16-20, 15-20-25 or 30-40-50 triangle depending on room size. Always use the largest triangle possible to minimise error. A small error, especially in large areas, can result in serious installation difficulty. (See diagram below for a step-by-step procedure for constructing chalkline #2).

Construct Chalkline #2 as follows:

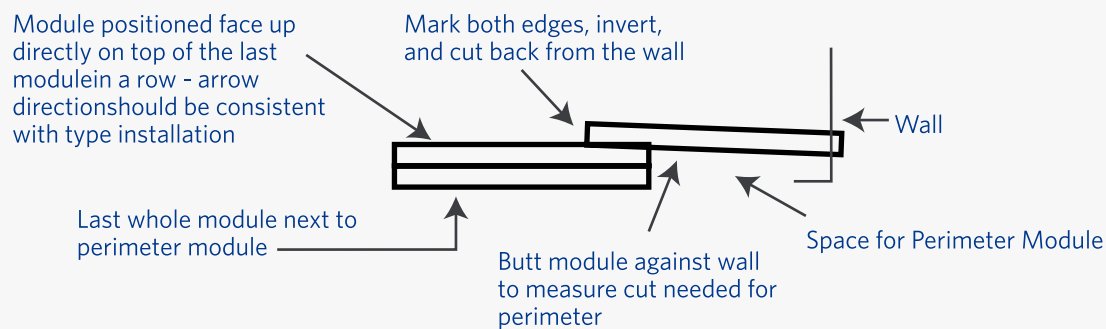
1. Measure EXACTLY 3 metres from the starting point along chalkline #1.
2. Measure EXACTLY 4 metres from the starting point perpendicular to line #1 approximately 10-12 cm long as indicated by Line "B".
3. Measure EXACTLY 5 metres diagonally from point 'A' to line 'B' as indicated.
4. That point on Line 'B' exactly 5 metres from point 'A' when connected with the starting point gives a line exactly 90° to chalkline #1. This line should be extended to entire length of the area as indicated.



- On particularly large or complex jobs, the use of a transit to establish the above lines can prove very helpful.
- The installer should work in a 'pyramid' or 'stairstep' manner from the starting point along both chalklines as shown in the following diagram:



- The pyramid technique gives three alignment check points on each tile placed. Careful attention should be paid to edge and corner alignment. Modules out of alignment by more than 2mm should not be installed. Some 'Wandering' of edges due to unevenness in the floor is unavoidable. This will be gradual and tend to come and go and, as such, is not cause for alarm. If the edges become misaligned and this misalignment continues to increase, this indicates an out of square condition. The problem should be immediately determined and corrected.
- Always SLIDE each module into position from the side to prevent trapped yarn.
- Modules should be installed firmly but not compressed. Too little pressure may allow modules to shift or gap on the floor with use. Progressively check tightness during installation by measuring 11 full modules (10 joints). When measuring 11 modules the measurement should not be less than 5,505mm or the modules may peak or buckle.
- CHECK MEASURING is essential for all products but is particularly important to ensure the correct tightness of tufted products.
- Arrows are printed on the back of each module indicating pile direction. This allows the customer to choose the method of installation preferred - Linear, Quarter Turn or Random Lay.
- The Parallel Cutting Technique, marked from the face and cut from the back, expedites installation in recessed areas.



- Plywood or masonite should be positioned on modules when heavy furniture or supplies are moved throughout the installation.
- The recommended casters for desk chairs should have a tread width of 20mm to 25mm, and a wheel diameter of 50mm to 65mm tapered. Hard polyolefin composition is recommended.

For more detailed information, contact Milliken Modular Carpets Technical Services.

Installation Instructions for Stairs

Milliken carpet tiles are suitable for use on stairs only if fitted with nosings. For more detailed instructions, please refer to the nosing manufacturers installation instructions for use with carpet tiles.

- Measure and cut carpet tiles for riser to size and then install to finish level with stair tread.
- Suitable Contact Adhesives must be applied to both the riser and the tile backing, allowing the tile to tack up prior to placement of carpet tile.
- The stair tread nosing must be fully adhered on the tread of the step, do not adhere the inside front of the nosing to the riser.



- Measure and cut carpet tiles for tread to size and then install to finish level with stair nosing and butting to riser.

* Please refer to the stair tread & nosing manufacturer's installation guidelines for detailed information on stair installation with carpet tiles.

Maintenance Recommendation

Milliken modular carpets are constructed with a higher pile density than most conventional carpets, thus providing the highest possible long term wear capabilities. However, this also means that the maintenance recommendations detailed in the Milliken Care and Maintenance Guide should be adhered to for optimum appearance retention.

Please refer to Milliken's Care and Maintenance guide for information on cleaning maintenance.

Cut Pile Products:

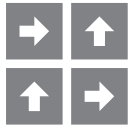
- During the manufacture of Milliken's cut pile carpet there is always a small amount of short fibre which is not removed from the pile. (This is common to all cut-pile carpets).
- During storage and transportation, we have found that in most cases the tiles on the bottom of pallet can suffer from a certain amount of flattening under the 500kg pressure.
- To ensure that the short fibres are removed and the effects of flattening are reduced, it is necessary that after installation this carpet is given a pile lift and vacuum.
- This will ensure customer satisfaction, both initially and long term.

Recommended Installation Method(s)

Tile Installation:



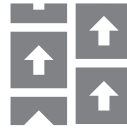
Monolithic



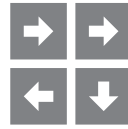
Quarter Turn



Brick
(Horizontal)



Ashlar
(Vertical)



Random

NB: Please consult with key stakeholders (eg architect, building owner) before confirming installation method.

COLLECTION	METHOD
Artistic Liberties	Monolithic
Arctic Survey	Ashlar (Vertical)
Beyond Chroma	Monolithic, Brick (Horizontal)
Circular Relationships	Monolithic: Dunes, Fossil Point, Loop Track, Tussock, Rock Grain Brick (Horizontal): Rock Grain Ashlar (Vertical): Wave Break
City Nights	Monolithic
Colour Compositions	Ashlar (Vertical), Herringbone
Colour Connect	Skor: Monolithic, Brick (Horizontal) Linx: Monolithic
Comfortable Concrete	Monolithic, Brick (Horizontal)
Clerkenwell	Monolithic
Consequence 2.0	Monolithic, Brick (Horizontal)
Creo	Monolithic
Danxia	Monolithic, Quarter Turn, Random, Brick (Horizontal)
Distinct Forms	Monolithic, Brick (Horizontal), Quarter Turn
Exceed	Speed, Buzz, Action: Quarter Turn, Monolithic Energy: Brick (Horizontal)
Floristics	Monolithic
Fractals	Ashlar (Vertical) Herringbone
Free Flow	Tile: Monolithic, Brick (Horizontal) Plank: Ashlar (Vertical), Herringbone
Immix	Monolithic
Inspired Series	Monolithic
Karona 3 (Cushion Backed)	Quarter Turn, Monolithic
Laylines	Monolithic, Brick (Horizontal)
Lightbox	Ashlar (Vertical)

COLLECTION	METHOD
Live Circuit	Ashlar (Vertical), Herringbone
Major Frequency: One	Ashlar (Vertical), All plank methods
Metro Park - Wood	Ashlar (Vertical), Random
Metro Park - Stone	Monolithic
Mixed Formations - Wood	Ashlar (Vertical), Herringbone Gunnison: Monolithic
Mixed Formation - Stone	Monolithic
Momentum	Figment, Mythology: Monolithic, Brick (Horizontal)
Naturally Drawn	Brick (Horizontal)
Nordic Stories	Monolithic
Patina Vibes	Brick (Horizontal)
Poise	Monolithic, Brick (Horizontal)
Ripple	Ashlar (Vertical) All plank methods
Sandhills	Monolithic, Brick (Horizontal), All plank installations
Styled Opulence	Monolithic
Topography 2.0	Monolithic
Unearthed	Monolithic
Water Yuludarla	Brick (Horizontal)
Whale Song	Ashlar (Vertical), Brick (Horizontal)
OBEX Grid	Monolithic
OBEX Tile	Monolithic

Plank Installation Ideas:



Ashlar Half
Drop



Ashlar
Random



Herringbone



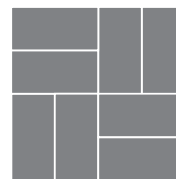
Ashlar (Vertical)



Boxed



Basketweave
(25cm x 1m)



Basketweave
(50cm x 1m)

Milliken Customer Service: Australia: +61 (02) 8838 2500 New Zealand: 0800 668372
millikenzcs@milliken.com www.millikenfloors.com.au © 2023 Milliken & Company

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