



General Installation Guidelines Matrix 70

Storage & transport

Boxes should be stored and transported on a flat surface in neat stacks, always store the cartons flat and never put them upright/on-end. Do not store the boxes in very cold (less than 2°C) or very warm (more than 27°C) or damp places.

Prior to installation

Visual inspection

Please ensure the product is inspected and checked for damage, defect or variation prior to installation in adequate light conditions. Check that the colours correspond to those ordered, the quantities are correct and there is no visible damage to the boxes. Check the Matrix 70 panels during installation for any visible defects. Do not install any panels that display any imperfections. We recommend that you always use materials from a single production batch for each installation, as we cannot guarantee a shade match between different batches. Be aware that some designs have a natural variation within them. We also recommend that the product is mixed or shuffled between different boxes.

For defects that are visible prior to installation, Moduleo® will never assume responsibility for the uplift & relay costs. Installation implies acceptance.

Suitability

- Matrix 70 can be laid on concrete, cementitious screed, anhydrite (calcium sulphate), timber and ceramic tiles, which have been suitably prepared (see Floor Preparation).
- Matrix 70 is suitable for all types of raised access flooring according to EN12825. As this standard is developed with installation of carpet tiles in mind, the level of flatness described may not be enough to obtain the best achievable esthetics of Matrix 70 without using a permanent adhesive. Increasing the flatness of the raised access floor beyond the requirements of the standard will further increase the esthetic appearance. We recommend a pre-installation-meeting with all involved parties to agree on the tolerances.

- Matrix 70 can be used with traditional waterbased underfloor heating and cooling systems. See separate section on underfloor heating. The subfloor surface temperature must never exceed 27°C.
- Matrix 70 is only suitable for indoor installation.
- Seasonal temperature conditions: Matrix 70 is mainly designed for temperature controlled office spaces. Under all conditions, keep the temperature of the air and the floorcovering between 15°C and 27°C. Avoid rapid temperature increases of more than 5°C per 12 hours.
- In areas that are likely to be subject to extreme temperature fluctuations and/or very heavy traffic & heavy loads, Matrix 70 has to be fully adhered with Xtrafloor® HT adhesive or recommended dispersion or 2-component Epoxy/PU adhesive. (see later)

Composition, construction and quality of the subfloor

Knowledge of the composition and construction of the subfloor or base provides valuable information that allows you to correctly check the acceptable humidity, flatness, compressive and tensile strength of the subfloor. In addition, it tells you what type of floor preparation, levelling/smoothing compound, and possible moisture barrier you may need during the installation process. When there is ambiguity or doubt about the quality or composition of your subfloor, check your local installation standards and/or seek advice from your floor preparation, levelling compound manufacturer/supplier.



National regulations & standards

Site and installation conditions must always comply with the relevant national regulations and installation standards.

In case the national standard or regulation conflicts with the manufacturer's recommendation, the most stringent of the two prevails.

Subfloor preparation

Irregularities in the subfloor

Good preparation is essential for trouble-free installation. It is vital for an excellent Matrix 70 finish. The appearance of Matrix 70 will only be as good as the quality of the base over which it is installed. Any irregularities in the subfloor will show through the finished floor and must be suitably prepared before installation.

The subfloor must be hard, structurally sound, flat, smooth, clean and dry, as well as being free from defects and fit for purpose. When required, scrape off and remove old adhesives and loose laying levelling compound. Make sure the subfloor is free from chemical substances and other contamination.

For aesthetic reasons, it is recommended that the unevenness of the subfloor is not greater than 2mm measured over a width of 200cm.

A suitable plywood/levelling compound should be selected to ensure that no irregularities show through to the surface of the finished floor. However, the selection of suitable materials, including plywood, smoothing/ levelling compounds and any ancillary products, is dependent upon the occupational use of the area and must be agreed by the supplier of the preparative materials and the flooring contractor. All floor preparation materials used must be used in accordance with the manufacturer's recommendations and in accordance with the national standards for resilient floorcoverings.

Matrix 70 is suitable for all types of raised access flooring according to EN12825. As this standard is developed with installation of carpet tiles in mind, the level of flatness described may not be enough to obtain the best achievable aesthetics of Matrix 70 without using a permanent adhesive. Increasing the flatness of the raised access floor beyond the requirements of the standard will further increase the aesthetic appearance.

We recommend a pre-installation-meeting with all involved parties to agree on the tolerances, as the type of design and the finishing does have an effect on the aesthetic. In most cases designs with colour variation, heavier structure and pronounced bevels will be more forgiving on irregular subfloors than designs with uniform colours, little structure and no bevels.

The moisture content of the subfloor

- The moisture content of the subfloor must be in accordance with local or national standards for the installation of the relevant floor coverings.
- Unheated cementitious screeds less than 2.0CM% - 75% RH
- Underfloor heated cementitious screeds less than 1.8CM% - 75% RH
- Unheated anhydrite (calcium sulphate) screeds less than 0.5CM%

- Underfloor heated anhydrite (calcium sulphate) less than 0.3CM%

Direct-to-earth concrete and stone subfloors must have an effective Damp Proof Membrane (DPM) in accordance with the national standards for the installation of resilient floorcoverings. Follow manufacturer's detailed instructions for the installation of a surface applied DPM and the use of levelling compound. An overview of manufacturers and suppliers can be provided by Moduleo®.



Important

Floor installation should not begin until the installer has assessed and approved the subfloor and installation conditions.

Acclimatisation

Matrix 70 must acclimatise in the room of installation, or an equivalent area for at least 24 hours prior to installation, or until such time as the product has achieved an ambient temperature: this is a minimum temperature of 18°C and a maximum of 27°C.

- Store the planks or tiles in straight piles away from heating, cooling or windows with direct intense sunlight. This is to achieve a gradual acclimatisation.

Temperature condition before installation

Matrix 70 should be installed with a room temperature of between 18°C and 27°C and a subfloor temperature of above 15°C.

Starting installation

Temperature conditions during and after installation

A constant temperature, fluctuating no more than 5°C per day, not below the required 18°C room temperature and 15°C subfloor temperature, should be maintained 24 hours before and during installation.

Underfloor heating

Matrix 70 can be used with traditional water-based underfloor heating systems (according to standard EN 1264 part 1 to 5). Wired electrical systems are not recommended unless the system is encased in a minimum of 9mm of suitable levelling compound. Direct contact with electrical wired heating systems must be avoided. The surface temperature must never exceed 27°C. If in doubt seek further advice.

The underfloor heating installation must be switched off at least 24 hours prior to, and during the installation of Matrix 70.

72 hours after installation the underfloor heating must be gradually increased by increments of 5°C per day until it reaches the standard operating temperature conditions, with a maximum operating temperature of 27°C. For the suitability of the system please check the manufacturer's instructions.

Note (the following is only applicable to installation on Xtrafloor looselay self-adhesive underlays): Some infrared heating panels may be suitable, however care should be taken as some of these systems can provide very sudden heat gain which is not recommended. In any circumstance the surface temperature must not exceed 27°C. If in doubt seek further advice.

Underfloor cooling

Matrix 70 can also be installed over floor cooling systems. However, the supply temperature of the cooling water must not be reduced below the dew point temperature. Always keep the temperature of the subfloor at least 3 degrees above the dewpoint. Temperatures below the dew point will produce condensation and can therefore damage the adhesive and the floor covering.

Required Expansion Gap

Matrix 70 is mainly designed for temperature controlled office spaces. Under all conditions, keep the temperature of the air and the floorcovering between 15°C and 27°C. Avoid rapid temperature increases of more than 5°C per 12 hours. In these static ambient conditions it suffices to install the Matrix 70 tension free against the wall.

In areas that are likely to be subject to extreme temperature fluctuations and/or very heavy traffic & heavy loads, Matrix 70 has to be fully adhered with Xtrafloor® HT adhesive or 2-component Epoxy/PU adhesive. (see later) In these cases expansion gaps are also not required.

For installation on top of self-adhesive looselay underlays, please refer to the section “recommended underlay”.

Installation methods

Matrix 70 can generally be installed with the following methods:

- Semi-looselaid on Xtrafloor® tackifier (preferred option)
- Fully adhered to the subfloor with a permanent adhesive
- Adhered to a looselaid underlay

For alternative installation methods, not included in this overview, always seek technical advice from Moduleo®.

Semi-looselaid on a tackifier/release adhesive (unlimited m²)

The Matrix 70 planks or tiles are laid without tension and continuously butted to one other and against the walls/plinths. The whole area must be adhered with Xtrafloor® tackifier.

Spread the right amount of adhesive evenly over the subfloor and let it tack-off (open time) until it reaches its initial bonding strength. For more information consult the specifications of the adhesive being used.

Advantages of using tackifier/release adhesive:

Using a tackifier/release adhesive will reduce the Matrix 70 sensitivity to movement on suspended subfloors and give greater resistance to wheeled furniture or rolling loads.

Easy to install and to remove

Fast installation (also in occupied environments)

Saves time and cost

Instant accessibility

Flexible: still easy access to the subfloor

Easy to repair

Removable and reusable, no damage to the subfloor

Note:

The backing of the floor covering may remain tacky upon removal. Care should be taken to protect the floorcovering from contamination of dust and debris prior to reinstallation. If required, an extra layer of tackifier/release adhesive (same brand and type) can be applied on top of the existing one.

Fully adhered with recommended Xtrafloor® or 2-component epoxy/pu adhesive (unlimited m²)

The Matrix 70 planks or tiles are laid without tension and continuously butted to one other and against the walls/plinths.

The whole area must be adhered with the recommended adhesive, following the

manufacturers recommendations. Using an adhesive fixing will reduce the Matrix 70 sensitivity to movement on suspended subfloors, areas where fluctuations in temperature and humidity occur and give greater resistance to wheeled furniture or rolling loads.

Advantages of using a permanent adhesive

Dispersion Adhesive: Suitable for every surface, heavy use and spaces with some temperature fluctuations. Ideal for a combination with other (less critical) areas which are installed on a tackifier/release adhesive.

2-Component Adhesive: Suitable for areas of periodic wetting (entrance ways) and areas with high temperature fluctuations, e.g. non temperature controlled conservatories, in front of large glass windows.

Recommended adhesives

We strongly recommend to use the appropriate Xtrafloor® adhesives. Other adhesives may be approved by their manufacturer for your country, but do not fall under the Moduleo® guarantee. Adhesive recommendations may differ by country or continent due to the composition of the adhesive, local climatic conditions and national installation regulations/standards.

For any exceptional conditions which require specific adhesive selection, please contact the Technical Service team of Moduleo®.

Recommended underlay

Although Matrix 70 is traditionally tackified or adhered directly to the subfloor, consideration can be made to install it on an underlay as well. Xtrafloor® has underlay for both looselay and/or improved acoustic performance. Always use an underlay that has been tested and approved by Moduleo® to be used with the floorcovering. Moduleo® rejects all responsibility in cases of non-approved combinations.

Xtrafloor® Flex Pro: Heavy Duty Use

- Improved sound insulation ($\Delta L_w=15$ dB with 5 mm Moduleo®)
- Release foil and pressure sensitive adhesive film for quick and easy installation.
- Suitable for underfloor heating and cooling
- Provides excellent dimensional stability
- Suitable for Roller Castor Chairs & rolling loads up to 250kg

Xtrafloor® Flex Pro can smooth out small irregularities of a maximum 5mm wide. This allows for installation over existing floor coverings, such as linoleum, compact PVC floors and wooden floorboards or ceramic tiles (without stepping across the joints), with limited or no telegraphing of the subfloor irregularities.

Xtrafloor® Flex Pro needs to be installed on floors with a minimum surface temperature of 18°C during installation. It is of utmost importance to monitor and record these conditions during the whole period of installation. Keep the records as proof of installation conditions.

Matrix 70 installed on Xtrafloor® Flex Pro is a “floating” floor. In stable temperature conditions, a tension free installation suffices (=1 to 2 mm expansion gap at the perimeter of the room/area). For smart solutions to cover the expansion gap, see ‘finishing your floor’.



Installation of looselaid underlay

Lay the sheets butted, edge-to-edge, at a 90° angle to the laying direction of the new floorcovering. Xtrafloor® underlays are to be laid printed side up (where applicable). There is no need to fix one sheet to another. Now begin laying your new floor according to the fitting instructions. Do not use adhesive without prior discussion with the technical services of Moduleo®.

Warranty: the use of the appropriate Xtrafloor® underlay is covered within our warranty. Other underlays are not recommended or warranted.

Installation on Xtrafloor® Flexlok adhesive tabs

The Matrix 70 planks or tiles are laid without tension and continuously butted to one other and against the walls/plinths. Place at least one tab under each corner so that the planks or tiles are fixed to one another on the reverse side. You will create a floating floor that is interconnected.

Advantages

- Easy to install and to remove
- Fast installation (also in occupied environments)
- Saves time and cost
- Flexible: maintains easy access to the subfloor
- Easy to repair
- Floorpanels are removable and reusable, no damage to the subfloor

Installation step by step

Recommended tools

- Tape measure
- Pencil
- Chalk line/laser line to ensure the installation starts/remains straight
- (Acc) tackifier or adhesive and appropriate applicator: paint-roller for tackifier and trowel for adhesive (not required with a self-adhesive underlay)
- Xtrafloor® Flexlok tabs where required
- Damp cloth to remove adhesive residue (not required with a self-adhesive underlay)
- Set Square
- Utility knife
- Roller minimum 50kg or a hand-roller for small areas, not accessible with the big roller (only required when installed on an adhesive)



General

Define the installation method based on the section “Installation methods” above.

Step 1: Determine the installation direction of the Moduleo® flooring. Calculate how the partition of the planks or tiles will be across the width of the room/area and mark a 100% straight line on the floor with help of a chalk line/laser line, normally in parallel with the longest straight wall.

For an adhered installation, continue from step 2. For installation on a Xtrafloor® loose layed underlay, see the section “installation of loose layed underlay” above. For installation on Xtrafloor® Flexlok adhesive tabs, see the section “installation methods” above.

Step 2: Highlight a second line so creating a section (for example, 5 rows wide) to be glued with the correct type of Xtrafloor® adhesive (unless when using Xtrafloor® tackifier, where a full room can be applied in one operation). Prior to using the Xtrafloor® adhesive read the instructions.

Step 3: Spread the right amount of adhesive evenly over the subfloor and let it tack-off (open time) until it reaches its initial bonding strength. For more information consult the specifications of the adhesive being used.

Step 4: Lay the planks or tiles, observing the direction of the arrows of the backing, into the tacked-off adhesive. For the second/next row, take a new panel and decide how big the first piece must be (or use one of the left-overs from previous rows). For an attractive and natural appearance, we do not advise to use the piece left over from row 1 as the first piece in the following row, install at random intervals. Otherwise this creates a so called “staircase effect”.

Cut the planks or tiles, free of tension, against the wall or skirting.

Do not spread adhesive on a section greater than can be processed within the working time (unless when using tackifier, where a full room can be applied in one operation).

Step 5: To ensure full contact with adhesive/tackifier, immediately press every plank or tile with a rubbing block or hand roller.

Step 6: Wipe excess adhesive with a damp cloth.

Step 7: When using a full contact adhesive: Immediately roll each section with a (minimum) 50kg flooring roller. Roll several times, in different direction, during the adhesive working time.

Repeat steps 2 to 7 until the entire installation is completed.

Finishing your floor

Xtrafloor® offers a range of smart flooring solutions to your finishing needs. The offer combines unique functionality with style: a hardwearing solution that ensures smooth transitions at all times.

How to finish your floor at a wall

Xtrafloor® paintable skirtings: style by choice

- Unique water-resistant material
- Colour coordinate your pre-primed skirting boards with the walls
- Use our renovation skirting to cover existing skirting boards



Xtrafloor® end profile

- Sleek aluminium profile on a strong aluminium base for a minimalistic design that lends a smart and modern look



How to cover expansion gaps (if applicable)

Xtrafloor® T-profile

- Sleek aluminium profile on a strong aluminium base for a minimalistic design that lends a smart and modern look
- Durable and easy solution to cover the gap between 2 adjacent floors at the same level



How to connect your floor with higher or lower level floor surfaces

Xtrafloor® Adapter profile

- Sleek aluminium profile on a strong aluminium base for a minimalistic design that lends a smart and modern look
- Connect the floor with lower floor surfaces, with a height difference up to 6mm
- Also suitable to make the transition between 2 different types of floorcovering (e.g. Carpet)



For specific installation instructions on Xtrafloor® see www.moduleo.com

Maintaining your floor

Appropriate maintenance procedures will help to preserve the appearance and will extend the life of a Matrix 70 floor. The frequency of maintenance will depend on the amount and type of traffic, degree of soiling, the floor colour and type.

Below we will give a short summary of the 5 key points to effective maintenance.

For full maintenance instructions and recommended products we refer you to www.moduleo.com.

1. Preventative measures

- Keeping dirt off the floor is easier and less expensive than removing it.
- Proper entrance walk-off material is able to remove large amounts of dry soil as well as absorb water or oil-based moisture.



- Prevention also means making the right choice of floorcovering and design/colour for the right area, e.g. avoid too dark or too light colours for high traffic areas near the entrance of a commercial building.
- Protect against scratching from furniture feet by using wide, free-moving, castors, glides, rollers or pads, e.g. www.scratchnomore.nl.

- NOTE: felt protection pads can pick up dirt and grit and subsequently cause scratching or further damage to the floorcovering.



- Use furniture caps or other protection under heavy items or appliances to prevent indentation.
- Mechanical damage of the floorcovering, caused by heavy overloading or sliding of furniture/items and permanent stains caused by rubber/latex are not covered by the product warranty.

2. Vacuuming

Regular vacuuming is the most important part of a successful maintenance program to remove all grit, debris and other solid particles. Vacuuming is far more effective for this type of soiling than wet mopping, which normally moves soiling from one place to another, rather than removing it.



3. Spill and spot cleaning

Spills and spots are inevitable, but they don't have to be permanent. Remove a spill quickly and there is less chance of permanent staining. First try to blot the spill with a dry cloth/kitchen towel, then use water. Only use detergents/cleaning products when the above is not sufficient to remove the spill/stain. Use neutral pH detergents, e.g. from the product range of www.james.eu.



For heavier cleaning, e.g. to remove oil/grease/surface dirt in kitchen area/entrance ways, wet mopping with detergent may be required, e.g. products from www.james.eu. In this instance always use the so called "two bucket" method, which is one bucket with water and detergent and one bucket with clean water for rinsing.



4. Periodic cleaning

- Inspect and assess the appearance of the floor. Seasonality may also alter the maintenance requirements.
- Vacuum to remove all grit, debris and other solid particles.
- For light cleaning, a damp mop may be sufficient. Do not use cleaning products when not required.



- A common error is to use excess detergent, which then leaves a film on the surface. In this instance, clean the floor a few times without any detergent to remove the excess soap/detergent, this would bring you back to a standard condition. Care should be taken to dilute detergents in accordance with the manufacturers' recommendations.
- For larger (commercial) areas, a professional cleaning machine with rotating brushes and vacuum extraction can be used.



5. Deep cleaning

- Periodic cleaning is far more beneficial to the floorcovering than infrequent heavy or deep cleaning. However, seasonality can influence the amount of cleaning required.
- Remove surface dust and grit by vacuuming.



Once dust and debris free, with a spray, apply a solution of neutral pH cleaner to the section to be cleaned (or dependent upon the level of soiling, a light alkaline cleaner), carefully diluted to the manufacturer's instructions. Leave for enough time to react with and lift the soiling. Some agitation with a soft brush may be required.



Pick up the solution with a clean "microfiber" mop, using a continuous and steady side-to-side motion. When the mop head becomes loaded, it will leave residues and start to streak the floor. At this point the dirty mop head should be removed, wrung out, placed into a suitable bag and a clean mop head fitted. The cycle should then be repeated until the whole floor is completed, is

clean and streak-free. Do not move dirty water from one place to another, extraction cleaning may be required.



- The dirty mop heads should then be machine washed and dried ready for reuse.
- Heavy soiling and soiling in the grain, may require a "scrubber dryer" with immediate wet vacuum extraction prior to mopping. Numatic International have a range of appropriate machines for this application. Further advice can be obtained directly from the manufacturer, their distributors or specialist floor care companies.



Important part from the warranty:

- Almost all flooring will vary in colour over time when exposed to UV light. Avoid this by using curtains or blinds when the sun is very bright. PVC also has a tendency to yellow in the dark. The combined effect can cause covered areas (under furniture, under permanently closed doors, etc.) to differ in colour compared to non-covered areas. This is a characteristic of all PVC floorcoverings and is excluded in our warranty conditions.
- Avoid rubber or latex backed mats as they may leave stains. Rubber and latex castors or protection caps under furniture must not be used (we advise the use of castors type 'W' in accordance with EN 12529).
- In case of loose lay installation, damage of the vinyl flooring caused by heavy overload, rolling loads or sliding activities is excluded in our warranty conditions.
- Do not allow cigarettes, matches and other very hot items to contact the floor as this causes permanent damage.
- Important: Cleaning or maintenance may only take place if the floor is correctly installed and there are no visible imperfections.
- Contact your representative / supplier for the complete warranty conditions.
- This document was issued on (see at the end of this document) and supercedes all previous versions, at the same time it is superceded as soon as a new version is published. For the latest version please always check www.moduleo.com. The original English version is always leading.
- In case of conflict between these installation instructions and the local technical standards/legislation, the most stringent of the two prevails.

IVC Group - 07/12/2023

