



Installation Guide for TAKIRON MT Sheet

(For Indoor Installation)

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Preparation before installation

1. Review all product specifications, installation guide, maintenance guide, material safety data sheet, and product warranties before starting installation. Check the material to ensure that it is the correct TAKIRON product, color, and quantity before starting the installation. It is the installer’s responsibility to inspect the new material for defects before installation. Claims for material installed with obvious visible defects will not be honored once the material is installed.
2. Substrate Preparation
 - Make sure to repair any irregularity using high-quality Portland-based outdoor patch products. Surface of the substrate should be flat and smooth. Any powdering, laitance and/or cracks on the surface should be repaired. Any paint, wax, grease, molds, fungus and/or oil must be removed.
 - Do not use plaster or gypsum patch for repairing flooring substrates.
 - To ensure a successful TAKIRON MT Sheet installation, interior concrete substrate must be structurally sound to receive resilient flooring and must meet these 5 (five) minimum requirements:
 - 1) A minimum compressive strength of 29,4 N/mm² (Material age at 28 days after cast)
 - 2) A minimum density of 1,850kg / cubic meter
 - 3) A concrete mix water/cement ratio of less than 0.5
 - 4) A maximum slump of 10 cm
 - 5) Flatness Deviation – DIN 18202:2005-10 / Table 3, Group 4

DIN 18202:2005-10

Table 4 - Permitted alignment deviations for supports

Permitted position deviations for distances between measuring points, in m,					
	<u>0.1m</u>	<u>0.1-1m</u>	<u>1-4m</u>	<u>4-10m</u>	<u>10-15m and over</u>
Permitted alignment deviation, in mm	<u>Up to 1mm</u>	<u>Up tp 3mm</u>	<u>Up to 9mm</u>	<u>Up to12mm</u>	<u>Up to15mm</u>

Note: With regard to “flatness deviations”, please refer to DIN 18202:2005-10 – Tolerances in building construction / Structures. The recommended value is “Group 4 in Permitted flatness deviations”.

- Moisture content in the concrete-substrate must be less than 4-6%. Test all concrete slabs for moisture and alkali regardless of age or grade level. Complete the moisture emission and pH tests on the concrete substrate at least 7 days prior to starting the installation. Start the installation only when the test results meet TAKIRON’s requirements.

Note: Recommended test method is as follows:

Place 1m x 1m polyethylene film on the substrate and seal its edge portion with craft tapes. Remove the film after 24 hours. If there is the sign of humidity (concrete-surface is changed to dark color), dry the concrete-substrate to the recommended moisture level (4-6%).

- Lightweight concrete (less than 1,850kg/cubic meter) may not be a suitable substrate for TAKIRON MT products.
- Store all products in a dry, temperature-controlled interior area at 15C to 30C. Temperature extremes should be avoided.
- Acclimate all materials to jobsite conditions. Deliver the materials to the jobsite 48 hours prior to installation. For the 48 hours prior to installation, during installation, and for the 48 hours after installation, the temperature of the material and space in which it is to be installed (including the substrate) must be 15C to 30C.
- Close all working areas to traffic for 12 hours before installation and for at least 12 hours after installation. This will minimize the chance of damage to the new flooring material.

- The building's heating and air conditioning system needs to be in full operation for at least 7 days prior to installation.
- Expansion Joints: Do not install TAKIRON MT Sheet over expansion joints, structural joints, insulation joints and other moving joints. Use an expansion joint covering system.

Selection of adhesives/ sub-materials

1. Use the recommended adhesive and/or sub-materials such as the special welding rod. If the recommended adhesives/sub-materials are not used, installation failure should be installers' or conductor's responsibility.
2. Use HENKEL-Thomsit K188/K188E Acrylic Adhesive or UZIN KE2000S Acrylic Adhesive for installation for TAKIRON MT. Apply recommended adhesive using the proper trowel to ensure the correct adhesive spread. Replace the trowel before the trowel notches are 2/3 worn.
<For Porous Substrate, Room Temperature: 20 C>
Proper Trowel: A2 or A3
Adhesive Spread rate: HENKEL K188/K188E: A2 / Approx. 300g/m2, A3 / Approx. 330g/m2
UZIN KE2000S: A2 / 300-350g/m2
Adhesive Set up time: HENKEL K188/K188E: approx. 15-30 minutes/Semi Wet Method
UZIN KE2000S: approx. 20-30 minutes/Semi Wet Method
Adhesive Working time: HENKEL K188/K188E: approx. 60 minutes
UZIN KE2000S: 40-60 minutes
Adhesive Full Cure time: HENKEL K188/K188E: approx. 72 hours
UZIN KE2000S: approx. 72hours

Note: Adhesive set-up/working/curing time varies due to temperature changes, and/or relative humidity. Apply adhesive testing before actual installation.

For the installation in wet areas such as kitchens/restrooms, please use 2-part Epoxy or urethane adhesive.

The recommended 2-part reactive adhesive: HENKEL Thomsit R710 2-part Urethane Adhesive
UZIN KR 421 2-part Epoxy Adhesive

- <For Porous Substrate, Room Temperature: 20C>
Proper Trowel: A1 (UZIN KR 421), A2 (HENKEL R710), for smooth surface
Adhesive Spread rate: HENKEL Thomsit R710 2-part Urethane Adhesive: 300g/m2
UZIN KR 421 2-part Urethane Adhesive: 300-350g/m2
Adhesive Set up time: HENKEL R710: none
UZIN KR 421: 20-30 minutes
Adhesive working time: HENKEL R710: maximum 45 minutes
UZIN KR 421: maximum 60 minutes
Adhesive full cure time: HENKEL R710: approx 7 days
UZIN KR 421: approx 5 days

Note: Adhesive set-up/working/curing time varies due to temperature changes and/or relative humidity. Apply adhesive testing before actual installation.

Installation

1. Cutting TAKIRON MT Sheet
Establish your starting line. Measure width and depth of the installation area and cut TAKIRON MT Sheet to the measured size.
2. Trial Laying
Place TAKIRON MT Sheet along the starting line. TAKIRON MT should be installed in a vertical direction.
3. Applying Recommended Adhesive
Fold TAKIRON MT Sheet along the centerline of its length direction. Use only recommended trowel and apply uniformly. (Fig.1)
*Spread ratio: Please refer to "Selection of adhesives/ sub-materials"



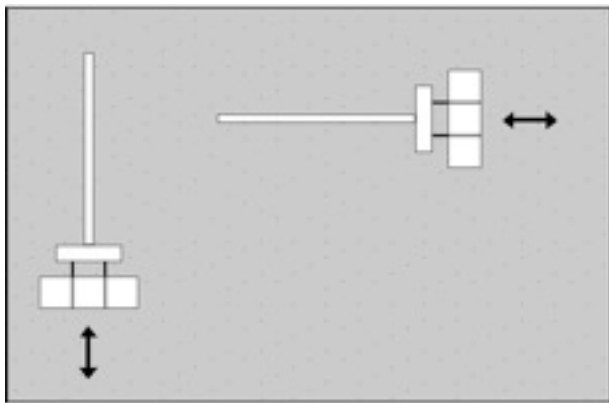
(Fig.1)

4. Set up time of Recommended Adhesive

Place TAKIRON MT Sheet after the set up time of the recommended adhesive. Make sure to place TAKIRON MT during allowable working time of the recommended adhesive. (Please refer to Article 2 of "Selection of Adhesives/Sub-materials")

5. Placing and Rolling

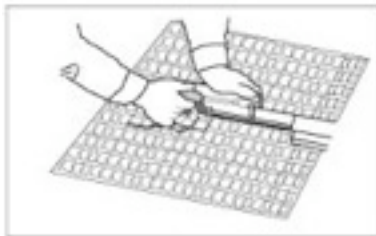
Place TAKIRON MT Sheet along the centerline of its length direction. Press from center part to edge part with a 50kg roller. Rolling must be applied in both directions. Roll the material two (2) more times in both directions every 30 minutes. (Fig.2)



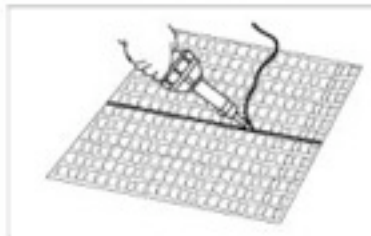
(Fig.2)

6. Heat-Welding

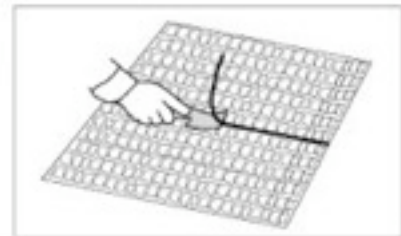
- Groove along the joint line with a grooving tool after the adhesive has completely set. Grooving depth must be 2/3 of the thickness of TAKIRON MT Sheet. (Fig.3)
- Weld the seam line using a hot air gun so the height of the bead is slightly higher than the level of the floor sheet surface. (Fig.4)
- Allow the welding rod to cool down to room temperature. Trim the excessive part of welding rod with a spatula knife after the welding rod has completely set. (Fig.5)



(Fig.3)



(Fig.4)



(Fig.5)

Note: Temperature setting of a hot air gun is various in consequence of the room temperature, relative humidity and/or power voltage in each region. To seek the suitable temperature setting, implement a welding test using remaining materials before actual welding operation.

After installation

DO NOT move heavy furniture or place heavy materials on the floor until the adhesive has completely set (1 or 2 days are recommended). To protect the floor until the adhesive has set, please make sure to use protective plywood-sheets to avoid wheel lines and/or dents.

Points of caution during use

- Avoid exposure of the floor surface to water and sand. Such contaminants can create damages to TAKIRON MT Sheet.
- Use proper matting systems to capture shoe-born contaminants that could be tracked onto the floor surface. Such contaminants can lead to slip-and –fall hazards and permanent staining.
- Packing tape or other tapes left on the floor as debris may cause changes in color and quality of the product. The adhesive material used on the back of the tape may cause such damage.
- Avoid walking in high heels, spiked shoes, ice skates and similar shoes since this may damage flooring materials.
- Avoid using jacks and forklifts for pallets, since this may damage or destroy the flooring materials.
- Use of cleansing or maintenance methods, other than those recommended, may cause damage to the floor sheet. Such damage is not the responsibility of TAKIRON.

*** For maintenance details, see TAKIRON MT Sheet Maintenance Guide.**