STAGE 1: The Securing of TI-PROBOARD

1. Wet saw or Circular saw with masonry blade. There is some fiberglass content to TI-Proboard. Please take the necessary safety precautions described by the manufacturer of the tool you will use for cutting the boards.
2. Measuring tape
3. Square
4. Chalk line
5. Rubber mallet
6. TI-Fasteners- Screws
7. TI-Proboard

ITEMS NEEDED

1. Attach TI-Proboard directly to the exposed joist structure. The boards will be attached perpendicular to the joists.

16' on center
Take extra care to square the first board to either edge of the deck. The first board must be square. If the dimensions of your deck do not allow you to use whole boards, and you have to rip boards to fit them to the deck you should start at the outside edge and work your way towards the house. Ripped boards should be placed against the house. (See step 6) When ripping boards, cut as close to a rib as possible.
The edge of each board has either a tongue or a groove. The first board should have the grooved edge placed at the outside. Each successive board will be clipped into the previous board, and tapped together using a rubber mallet. This allows for a uniformed seal across the length joint between the two boards. As the boards are clipped together, 3/8” will be lost per clip across the installation.
Each board will have a series of two screws placed at each joist the board lays across. Each board should be attached using a screw behind the grooved edge of the board. This will lock the groove onto the tongue of the following board. There should also be a screw placed at every joist at approximately 6 inches from either edge of the board. Screws should be placed between the ribs. No predrilling is necessary. Miami/Dade screws are the approved screws to be used with Ti-Proboard.
If the size of your deck will require two boards to be butted end to end, you must butt the boards over a joist. Each board should share an equal amount of space on the joist. Each butting edge should be secured with screws into the joist. The seams that are created by the butting of two boards should be staggered across the deck. Do not allow a continuous seam to be created across the deck.
STAGE 1: The Securing of TI-PROBOARD

Steps 3, 4 and 5 should be repeated until the desired area is covered by TI-Proboard. The last board should be secured at the edge by screws even if the board already has the required number of screws from Step 4. It is a good idea to check the boards to make sure they are square as the deck is being covered. Also walk across the surface to make sure each board is clipped securely to the next board. At this point you will still feel flex in the surface of the deck. This is because all of the supporting components have not been added. You will continue to have a degree of flex until the tile has been secured to the surface and allowed to set. However the exposed TI-Proboard surface is structural and can be worked on. If heavy objects or ladders need to be placed on the surface it is a good idea to lay a sheet of plywood across the TI-Proboard and underneath any objects being placed on the surface. This will prevent any damage to the TI-Proboard, and will allow the object to rest on an even surface.
All of the materials to be used with Proboard can be found on the materials recommendations section. Failure to use the recommended materials could result in the failure of the deck, and will result in the nullification of the warranty. Failure to follow the directions recommended by the setting material companies could result in the failure of the deck, and will result in the nullification of the warranty. Do not mix materials from different manufacturers unless specified. This could lead to the failure of the setting materials, and will nullify the warranty.
STAGE 2: Setting of mortar and water proof membrane

Brush clean the surface of the TI-Proboard before the installation of the mortar. Mix the mortar according to the manufacturer's recommendations. Fill in the ribs of the TI-Proboard with the mortar. The TI-Proboard has a built in mechanical locking dove tail system. This will lock the mortar into place after it has dried. Once the mortar has dried it is very difficult to remove. Using a straight edge fill the ribs fully. Depending on the mortar being used the floor can be leveled above the TI-Proboard ribs.
Once the mortar has been allowed to dry for the recommended time, using a trowel or a floor scraper smooth the surface of any "niblets" of mortar. The surface must be free of any "niblets" in order for the tile to set correctly.

Sweep the surface of the deck make sure to remove any loose material and dust. Once the deck surface is smooth and clean he installation of the water proof membrane can begin if needed.
Water proof membrane if needed should be applied to the mortar and TI-Proboard according to the manufacturer's recommendations. A water proof membrane can be applied even if the deck is not over a dry space. The membrane will help prevent and isolate any damage that might occur because of water. Once the waterproof membrane has been applied and has cured you are ready to move onto Stage 3. You will now notice less flex in the surface of the deck. There is less flex in the surface because the mortar has been added. At any of the following steps should work need to be stopped the surface must be covered to prevent any moisture from reaching the surface. Please try to plan around any weather once stage 2 steps have begun. Once the application of the mortar has begun any interruptions in the work to surface could lead to the failure of the system. For any environmental issues that may occur please refer to the setting material companies.
"You are now ready to apply the tile to the surface of the deck. It is a good idea to lay out the tile on your deck without the adhesive, and using the spacers. This will allow you to get idea of the cuts you will need to make, and double check the amount of tile needed for the area you intend to tile. Doing a "dry run" also allows you to pre-cut the tile. Pre-cutting the tile will allow the process to move more smoothly. Always use 12" x 12" or larger porcelain tile. Check with the store or the manufacturer to ensure the tile you buy is recommended for outdoor use, and will resist the particular environmental conditions in your area. Using an incorrect tile could result in the failure of your deck, and will nullify your warranty."
STAGE 3: Installation of tile, edging strips and grout.

Mix the thin-set according to manufacturers' recommendations. The notch size of the trowel for your project will be specified by the thin set manufacturer.
You will first need to install the edging strips in the area you are working on. Most edging strips, including Ti-Edging, need to be secured by pressing the strips along the edges into the thin-set. Enough thin-set should be troweled out to allow it to push up and through the punch out holes. Make sure to align the edging strip correctly along the entire length. With Ti-Edging the tile will be set directly against the strip. You will not set an outside edge groutline. You may at this point trowel out the thin-set for the tile starting at the edge and working in. Set your tile according to the design you want. The TCNA recommends a minimum of 95% thinset coverage on exterior tileinstallations. The waterproofing is shown at this stage as an option if needed.
If the area of the installation exceeds 8ft in any dimension there will need to be a soft joint. The soft joint will take the place of one of your grout lines. It will need to be at least 3/8" in width. Install the soft using DAP 3.0 or comparable product. The caulk needs to meet ASTM C920.
After you have completed laying the tile across the surface you must wait the appropriate amount of time for the tile to set properly. The manufacturer of the setting material will have instruction for the amount of time needed.
**STAGE 3**: Installation of tile, edging strips and grout.

After the tile has been allowed to dry for the specified time you can now grout. The grouting is one of the most important and detailed steps in the installation of your deck. Make sure to use the proper grout for the conditions. The grout must be allowed to cure for the full length of time specified by the manufacturer. Mix the grout and follow all of the manufacturer's specifications. Different types of grout will require different tools for the installation. So the "tools needed "recommendations could vary slightly. Once the grout has been set and cleaned your installation is complete. Enjoy your deck.
When installing Ti-Proboard on stairs additional installation instructions must be followed. Ti-Proboard can only be installed on the tread of stairs, and cannot be installed on the riser. The minimum joist spacing should be no more than 12" on centers for the supporting joist structure. Additional braces are required between the stair joist to support the Ti-Proboard and the addition fasteners needed to secure the boards properly. Regardless of the width of the stairs fasteners should be placed at the front, middle and back the boards on each joist. If cutting the board parallel to the ribs this cut edge should be place at the back of the step. If possible 1 continuous board should be used for each stair. If a boards must be cut a double stair joist must be used so that each butting edge has an entire joist to be fasten on. The tile should be supported continuously by the Ti-Proboard and not be allowed to extend over the edge of the Ti-Proboard. All local and state building codes should be followed for the installation of the stairs.
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