

# TIER® MASONRY INSTALLATION SYSTEM



## 1. PRODUCT NAME

TIER® Masonry Installation System

## 2. PRODUCT DESCRIPTION

TIER® Masonry Installation System is a patented, versatile polymer fortified mortar specifically formulated for the installation of TIER® Panel, Veneer Systems and manufactured stone masonry veneers. A high performance mix provides maximum non-sag performance for vertical installations and also obtains maximum bond strength to the substrate and selected veneers. Reinforced with Kevlar® for added strength, TIER® Masonry Installation System offers exceptional workability and is backed by an available 25 Year System Warranty.

## Uses

- For vertical, horizontal and overhead installation of TIER® Panel, Veneer Systems and manufactured stone masonry veneers on exterior and interior installations.
- Ideal for both commercial and residential installations

## Advantages

- Incredible non-sag performance – faster easier installations
- Revolutionary patented formula provides maximum bond strength to veneers and substrate—exceeds ANSI A118.4 requirements
- Exceeds ASTM C270 requirements for masonry veneer installations.
- ASTM C482 is the applicable test method for shear bond strength relating to Masonry Veneers.
- Mixes only with water
- Reinforced with Kevlar
- Lightweight mortar — very smooth and easy to apply
- GREENGUARD certified for low VOC's
- Inhibits the growth of stain-causing mold and mildew with Microban® antimicrobial product protection.

## Suitable Substrates

- Cement mortar (Scratch & brown coat)
- Concrete
- Concrete block
- TIER® Building Board
- Masonry and brick

**Packaging** 33 lb (15 kg) bag 54no per Euro Pallet

**Colour** Grey

## Approximate Coverage

33 lb (15 kg) bag

## Trowel Size

Vertical Applications	ft <sup>2</sup>	m <sup>2</sup>
1/4" x 3/8" (6 mm x 9 mm) notched trowel	40 - 48	3.7 - 4.5
1/2" x 1/2" (12 mm x 12 mm) notched trowel	30 - 37	2.7 - 3.4
Adhered Masonry Veneer	23 - 29	2.2 - 2.6

## Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for one (1) year\* if stored off the ground in a dry area.

\* High humidity will reduce the shelf life of bagged product.

## Limitations

- Adhesives/mastics, mortars and grouts for panels, veneers, brick and stone are not replacements for waterproofing membranes. When a waterproofing membrane is required, use a TIER® Water Proofer .
- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- Not for use in submerged applications. For these applications, consult your TIER® representative.

**Note:** Surfaces must be structurally sound, stable and rigid enough to support TIER® Panel, Veneer Systems and manufactured stone masonry veneers and similar finishes. Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/360 for thin bed ceramic tile/brick installations or L/480 for thin bed stone installations where L=span length (except where local building codes specify more stringent deflection requirements)

## Cautions

Consult MSDS for more safety information.

- Some marbles and other stone have low flexural strength and might not be suitable for exterior installations, check with veneer manufacturer for suitability.

- During cold weather, protect finished work from damage until fully cured.
- Contains portland cement and silica sand. May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water.
- **DO NOT** take internally. Silica sand may cause cancer or serious lung problems. Avoid breathing dust. Wear a respirator in dusty areas.
- For white and light-colored stones, conduct test area to ensure no shadowing or staining is observed.
- Keep out of reach of children.

## 4. TECHNICAL DATA

### VOC/LEED Product Information

This product has been GREENGUARD Indoor Air Quality Certified® by the GREENGUARD Environmental Institute under the GREENGUARD Standard for Low Emitting Products in finished form.



Total VOC Content pounds/gallon (grams/liter) of product in unused form is 0.00 lb/gal (0.00 g/l).

### Applicable Standard

ANSI A118.4, ANSI A118.11

### Physical Properties

(Mixed with 5.0 litres of water)

Test	Test Method	Results
Shear Bond, 28 day	ANSI AS118.4 5.2.4	300–330 psi (2.1–2.3 MPa)
7 day Cure, Water Soak Test,	ANSI A118.4 5.2.3	190–250 psi (1.3–1.7 MPa)
Sag on Wall	EN 1308	0 mm No Sag

observed From NAP Report 154

### Working Properties

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions.

## 5. INSTALLATION

### Surface Preparation

Pot Life	Wet Density
4 Hours	11.9 lbs per gallon (1.43 gm/cm <sup>3</sup> )

All surfaces should be between 40°F (4°C) and 90°F (32°C) and structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds. Expansion joints shall be provided through the TIER® Panel and Veneer Systems from all construction or expansion joints in the substrate. Follow ANSI specification A108.01–3.7 “Requirements For Movement Joints: Preparations by Other Trades” or TCNA detail EJ-171 “Movement Joints—Vertical & Horizontal”. Do not cover expansion joints with mortar.

Installer must verify that deflection under all live, dead and impact loads of substrates does not exceed industry standards of L/480 for TIER® Panel or Veneer System units or stone installations where L=span length.

### Mixing—33lb (15 kg) bag

Place 5.0 litres of clean water in a bucket and slowly add the entire bag of TIER® Masonry Veneer Mortar. Mix with slow speed mixer for one minute or until a creamy smooth consistency is reached. Allow to slake for 5 minutes, remix and use. Job site conditions might vary. Add slightly more water if necessary for proper consistency. If waterproofing is required, install TIER® Water Proofer per instructions to the substrate prior to installation of the Masonry Veneer Mortar.

### Note

Use proper sized notched trowel to ensure full bedding of the product. Spread only enough mortar that can be covered with product within 15–20 minutes. Adjust as necessary. Check mortar for complete coverage by periodically removing a panel or stone and inspecting the transfer onto the back of the product. The size and weight of the veneer will vary. Conduct a small test area for non-sag performance.

### Application

For TIER® Veneer System (Stone Veneer) installations, and TIER® Panel System (Stone Panel) key TIER® Masonry Veneer Mortar onto the substrate thoroughly to cover entire workable area using the flat side of the notched trowel, ensuring 100% coverage of the substrate. Then, comb on additional mortar with the notched side, use 1/4" x 3/8" (6 mm x 9 mm) or 1/2" x 1/2" (12 mm x 12 mm) loop or notch trowel. Always work with small areas which can be covered with product within 15-20 minutes.

Back butter all Stone veneer and Stone Panel products, 8" x 8" (200 mm x 200 mm) or larger to provide full bedding or 100% coverage of the mortar on the product.

Press the mortar covered back of the stone product against the substrate at the desired final position. Slide the unit roughly 1" (25 mm) diagonally from the desired final position and back into the desired position while maintaining even pressure. This should be done in such a manner as to squeeze the mortar to fill the entire space between the stone and the substrate, allowing excess mortar to extrude on all visible sides around the stone or panel. Clean excess extruded mortar with trowel and spread onto the next stone to be installed.

When installing the Panel Systems, make sure the bed and joints are cleaned thoroughly before the next panel is applied.

### Care and Maintenance

Once your product is installed clean and seal using the TIER® Care & Maintenance Products as sealed stone may be easier to keep clean and maintain than unsealed stone. Contact your TIER® representative to discuss whether your project should be sealed.

Before sealing make sure all areas are completely clean. In mild cases Dilute one part TIER® Cleaner in 10 parts warm water. Apply with a cloth or mop. Wipe off thoroughly with a clean damp cloth. In more severe cases dilute one part TIER® Cleaner in 3 parts warm water. Apply liberally, spreading over surface of the stone. If necessary agitate with a scrubbing brush. Leave to react for 5-10 minutes, keeping wet with additional solution. Agitate surface again, mop up and rinse thoroughly with clean water. In extremely severe cases Use undiluted and agitate with scrubbing brush or mechanical scrubber if necessary. Neutralise treated surface with clean water after use.

When your completely satisfied that the surface to be treated is completely clean, dry and free from dirt, grime, cement and grout. Apply generously and evenly using a paint brush or sponge. On highly absorbent surfaces apply several coats wet-in-wet. After 15 minutes, remove any excess sealer with an absorbent cloth. Do not allow residues to dry on the surface.

## Grouting/Pointing

Before pointing begins we recommend the surface to be cleaned and sealed, as any grout on the surface will be removed with ease. Point installation after a minimum of 12–24 hours curing time at 70°F (21°C). Point with a Masonry Pointing Mortar according to product instructions.

Do not point the TIER Panel System, as is designed when installed as a dry stone wall effect.

### TIER® Masonry Installation System Danger



#### DANGER

Contains Portland cement

**Causes Serious eye damage**

**Causes skin irritation**

**May cause respiratory irritation**

**May cause an allergic skin reaction**

**Keep out of reach of children.**

Avoid breathing dust.

Wear protective gloves, protective clothing eye protection/face protection.

Use only outdoors or in a well ventilated area.

IF IN EYES, rinse cautiously with water for several minutes, remove contact lenses, continue rinsing and immediately call for medical assistance.

IF ON SKIN, wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs seek medical attention. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, call for medical assistance. Dispose of contents/container in accordance with local regulations.

This product should be stored in unopened bags clear of the ground. If stored correctly and used within 12 months of the date shown on this bag, the chromate reducing agent in this product will ensure, when mixed no more than 0.0002 % (2 ppm) soluble chromium (VI) of the total dry weight of the cement. Use of this product after the end of the declared storage period may increase the risk of an allergic reaction.

## 7. LIMITED WARRANTY



### Limited Warranty

Subject to the conditions and limitations stated below, the “Manufacturer” warrants that the products listed on this document will be free from manufacturing defects and will not break down or deteriorate under normal usage for a period of twenty-five (25) years from the date of purchase when installed in accordance with the written specifications of the “Manufacturer” and industry standard guidelines.

For this limited “system” warranty to apply, the applications that comprise the installation must be performed with the products listed in this document of relevance for each application.

**Note:** This 25 Year warranty will only apply to external Masonry veneers applied using the TIER® Masonry Installation System onto building structures of solid brick, stone & concrete construction. With regards to exterior facades of ceramic tile, stone, adhered masonry veneer, or thin brick installed over external or internal substrates within buildings of any function incorporating steel or wood framed structural features will only qualify for the Manufacturers 15 year warranty .

### DISCLAIMER

THIS LIMITED WARRANTY IS GIVEN IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES BASED ON SAMPLES OR ORAL STATEMENTS, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS DOCUMENT. IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED.

### EXCLUSIVE REMEDY

The sole and exclusive remedy for a breach of this limited warranty is replacement of only the specific portion of the installation that is proven to be defective\*\*. The MANUFACTURER will pay for replacement of its own products and any finishing products directly damaged from being in contact with them but The MANUFACTURER will not pay more, calculated on a square metre basis, for the replacement than the original purchase price of the portion being replaced.

Kevlar is a registered trademark of Dupont Products Company.  
GREENGUARD Indoor Air Quality is a registered trademark of the GREENGUARD Environmental Institute. Microban is a registered trademark of Microban Products Company.

The MANUFACTURER will not pay for replacement of any portion of the installation that is not proven to be defective. In the event that the sole and exclusive remedy described above fails of its essential purpose, the liability of the MANUFACTURER is limited to the monetary value, on a square-meter basis, of the original purchase price of only the portion of materials being agreed as in need of replacement.

**\*\*NOTE:** Efflorescence is a normal condition of Portland cement mortars and is not a defective condition.

## EXCLUSIONS

The MANUFACTURER is not responsible for workmanship not in accordance with the instructions of The MANUFACTURERS and industry standard guidelines. Any damages or cracking due to structural movement, excessive deflection, subsidence or the actions of ancillary works resulting in a failure in the substrate is also not covered.

The MANUFACTURER IS NOT LIABLE FOR ANY INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES, INCLUDING LOSSES DUE TO DELAYS, INCURRED BY THE PURCHASER OR ANY OTHER PARTY. IT DOES NOT INCLUDE ANY ADDITIONAL COSTS FOR LABOUR, TRAVELLING, INCONVENIENCE, LOST TIME, ASSOCIATED RE-DECORATION AND EXCLUDES ALL OTHER INDIRECT OR CONSEQUENTIAL LOSSES WHICH MAY BE CLAIMED BY ANY OTHER PARTY WITH REGARD TO THE AFFECTED AREA AND ITS' ASSOCIATED REPAIR. THIS GUARANTEE DOES NOT AFFECT CONSUMERS' STATUTORY RIGHTS.

## 8. MAINTENANCE

TIER® Masonry Installation System require no maintenance but installation performance and durability may depend on properly storing the products off the ground in a dry area.

## 9. TECHNICAL SERVICES

Technical and safety literature

To acquire technical and safety literature, please visit our website at [www.tiersystems.com](http://www.tiersystems.com)