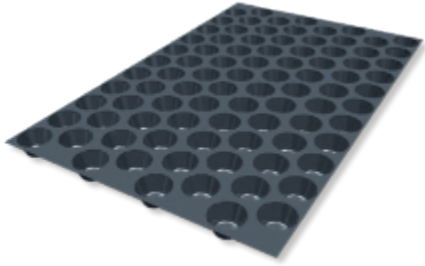




# Tile and Drain Mat

DS-290-0524

**Globally Proven  
Construction Solutions**



## 1. PRODUCT NAME

Tile and Drain Mat

## 2. MANUFACTURER

LATICRETE International, Inc.  
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Bethany, CT 06524-3423 USA

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Website: [laticrete.com](http://laticrete.com)

## 3. PRODUCT DESCRIPTION

Plaza and Deck provides a thin, lightweight, weather and frost resistant installation for ceramic tile, pavers, brick or stone. This system is designed for use over roof waterproofing membranes. An integral subsurface drainage component provides for elimination of infiltrated water. Plaza and Deck System eliminates the dead load problems (50 lbs/ft<sup>2</sup> /245 kg/m<sup>2</sup>) and high haulage/placement costs associated with conventional gravel drain beds.

### Uses

- Recommended for new construction and renovations, such as:
  - Plazas
  - Balconies
  - Walkways
  - Exposed Decks
  - Terraces
  - Courtyards

### Advantages

- Thin and lightweight, reduces dead load by 50%
- Frost and Weather Resistant

- Protects the tile installation from water damage and frost heaving
- Provides integral subsurface drainage for extra heavy traffic conditions
- Single source responsibility
- “Extra Heavy Service” rating per TCNA performance levels (RE: ASTM C627 Robinson Floor Test).
- For new projects and renovations
- Reduces potential for efflorescence

### Suitable Substrates

- Decks
- Concrete
- Exterior Glue Plywood decks that have been waterproofed with a primary roof waterproofing membrane

### Packaging

40 ft<sup>2</sup> (3.7 m<sup>2</sup>) Sheet  
200 ft<sup>2</sup> (18.5 m<sup>2</sup>) Roll - 4 ft x 50 ft (1.2 m x 15.2 m)

## Approximate Coverage

Application	Product	Mix Ratio	Coverage
Leveling Bed Pitch Layer (Plastic Consistency)	3701 Fortified Mortar Bed	60 lb (27.3 kg) bag to 0.7– 0.8 gal (2.6– 3.0 l) of water	24 ft <sup>2</sup> at 1/4" (2.2 m <sup>2</sup> at 6 mm) thickness
Mortar Bed (Dry Pack Consistency)	3701 Fortified Mortar Bed	60 lb. (27.3 kg) bag to 0.7 – 0.8 gal (2.6 – 3.0 l) of water	3 ft <sup>2</sup> at 2" thick (0.3 m <sup>2</sup> at 50 mm) thickness
Thin Bed (Trowelable)	Powder gauged with 4237 Latex Additive	35 lbs. to 1 gal. (16 kg to 3.8 l)	40 ft <sup>2</sup> (3.6 m <sup>2</sup> )
	254 Platinum	50 lb (22.7 kg) to 5 quarts (5.2 l) of water	60 ft <sup>2</sup> (5.4 m <sup>2</sup> )
Grout (Plastic)	PERMACOLOR® Grout	25 lb. (11.3 kg) bag to 1/2 gal (1.9 l) of water	Refer to Grout Coverage Chart

## Limitations

- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for waterproof membranes. When a waterproof membrane is required, use a LATICRETE® Waterproofing Membrane (see Section 10 FILING SYSTEM)

- A primary roof membrane must be installed first; the System is then loose-laid over the membrane
- Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick 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 for cases where local building codes take precedence [e.g. International Building Code Exterior Adhered Veneers – maximum allowable deflection under total anticipated load not to exceed L/600]). See ANSI A108.1.2.3/TCNA page 10–Maximum Allowable Deflection for Substrates Installed by Other Trades for more information.
- Consult local building codes and regulations for structural requirements.

## Cautions

- During cold weather, protect finished work until fully cured.
- Keep out of reach of children.

## 4. TECHNICAL DATA

### Physical Properties

Weight of System @ 2" (50 mm) Thickness (excluding veneer)	27 lbs 1 per ft <sup>2</sup> (132 kg/m <sup>2</sup> )
Compressive Strength of System with 1/2" (12 mm) Paver Tile	432,000 lbs/ft <sup>2</sup> (20.7 MPa)
Service Rating per ASTM C627	Extra Heavy

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.

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## 5. INSTALLATION

### Preparation

Wood framed & plywood systems must use exterior glue plywood. Slope of concrete or wood structures to drain, to an edge, or scuppers must be provided, pitch 1/4" per foot (19 mm per 1 m).

### Application

#### PITCH LAYER

To provide pitch over a concrete deck, prepare a Latex Leveling Bed mix. Apply mortar over dampened substrate. Build from featheredge up

to 3/4" (19 mm). Primary roof waterproofing membrane (provided by others) must be properly installed according to manufacturer's instructions over the hardened pitch layer. Flood testing of primary waterproofing membrane is required prior to the installation of Plaza and Deck System.

*Note: Contact roofing membrane manufacturer for installation and protection requirements.*

### **TILE DRAIN MAT**

Tile Drain Mat is loose laid over primary roof waterproofing membrane. Mat is placed so that open cups face up. Roll out mat and cut to desired length with utility knife (protect waterproofing membrane from damage). Interlock by placing one row of disks over top of adjacent sheet and lay in. Sheets can be cut easily for precise fit at restraining wall surfaces. If Drain Tile Mat will be exposed for a period of time. Cover with a protection board. Also, place temporary weight on Tile Drain Mat to prevent uplifting by wind.

*Note: Tile Drain Mat interlocks in only one direction.*

**LATEX MORTAR BED**—Screed the mortar in a normal manner, remembering to maintain the proper pitch in the deck. Place galvanized wire reinforcing in the middle of the bed. Compact or tamp the mortar bed to ensure proper strength and durability.

A minimum bed thickness of 2" (50 mm) is required. Note: Additional pitch can be built into mortar bed if primary membrane has not been sufficiently pitched (minimum required 1/4" per foot/ 18 mm per meter.)

### **HYDRO BAN®**

(For detailed installation guidelines please refer to data sheet 663.0, 663.5) HYDRO BAN® can be applied after Mortar Bed has hardened (72 hours @ 70°F (21°C)). Do not install membrane over areas with standing water. If membrane is to be left temporarily exposed, cover with protection board. Protect from rain with polyethylene sheet for 7 days @ 70°F (21°C) after installation. Flash membrane over edge of Mortar Bed at expansion joints (see detail drawing ES-EJ01).

*Note: Do not bridge expansion joints with membrane. Flash membrane down into joint and seal joint with foam backer rod and sealant.*

### **Latex Thin-set Mortar**

Install ceramic tile, pavers and stone directly over HYDRO BAN® using 254 Platinum or 4237 Latex mixed with 211 Powder.

### **Latex Modified Grout**

Select grout color from Grout Color Card Data Sheet 254.3 US. Prepare grout using PERMACOLOR® Grout<sup>2</sup> mixed with water. Expansion and Control Joints—Ensure that all wall/floor and field expansion joints are properly designed and spaced, and are free to move using a traffic-bearing, exterior grade sealant or pre-formed jointing material. Use LATASIL™.

## **6. AVAILABILITY AND COST**

### **Availability**

LATICRETE materials are available worldwide.

### **For Distributor Information, Call:**

Toll Free: 1.800.243.4788

Telephone: +1.203.393.0010

For on-line distributor information, visit LATICRETE at [laticrete.com](http://laticrete.com)

### **Cost**

Contact a LATICRETE Distributor in your area.

## **7. WARRANTY**

See 10. FILING SYSTEM:

- 25 Year System Warranty (US) (English)
- 1 Year Product Warranty (US) (English)

## **8. MAINTENANCE**

LATICRETE and LATAPOXY grouts require routine cleaning with a neutral pH soap and water. All other LATICRETE and LATAPOXY materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

## **9. TECHNICAL SERVICES**

### **Technical Assistance**

Information is available by calling the LATICRETE Technical Service Hotline:

Toll Free: 1.800.243.4788, ext. 1235

Telephone: +1.203.393.0010, ext. 1235

Fax: +1.203.393.1948

### **Technical and Safety Literature**

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

## **10. FILING SYSTEM**

Additional product information is available on our website at [laticrete.com](http://laticrete.com). The following is a list of related documents:

- DS 230.13: LATICRETE® Product Warranty (United States and Canada)
- DS 025.0APD: LATICRETE 25 Year Tile & Stone System Warranty (United States and Canada)
- DS 100.0: 3701 Fortified Mortar Bed

- DS 230.1: 4237 Latex Additive
- DS 231.0: 3701 Mortar Admix
- DS 236.0: 9235 Waterproofing Membrane
- DS 239.0: 211 Powder
- DS 239.1: 226 Thick Bed Mortar
- DS 250.0: PERMACOLOR® Grout?
- DS 254.3: Grout & Sealant Color Card
- DS 663.0: HYDRO BAN®
- DS 663.5: HYDRO BAN Installation Instructions
- DS 677.0: 254 Platinum
- DS 6200.1: LATASIL™

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