



# 255 MultiMax™

United States Invention Patent No.: 6,784,229 B2

DS-255.0-1010



## 1. PRODUCT NAME

LATICRETE® 255 MultiMax™

United States Invention Patent No.: 6,784,229 B2

## 2. MANUFACTURER

LATICRETE International, Inc.

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## 3. PRODUCT DESCRIPTION

LATICRETE 255 MultiMax is a patented, versatile polymer modified thin-set that provides maximum non-sag performance on walls, maximum build up of up to 3/4" (18 mm) without shrinkage for floors and maximum coverage due to its lightweight creamy smooth consistency. In addition, LATICRETE 255 MultiMax is reinforced with Kevlar® to provide maximum strength and durability.

## Uses

- For wall installations of interior and exterior ceramic tile, porcelain tile and stone.
- Can be used as a medium bed mortar for flooring installations.
- Ideal for showers, bathrooms and areas where mastic is used.

## Advantages

- Revolutionary patented formula for optimum performance.
- Inhibits the growth of stain-causing mold and mildew with Microban® antimicrobial product protection.
- Reinforced with Kevlar for maximum strength and performance.
- Incredible non-sag performance, even with heavy tile.
- High coverage—15% more than conventional thin-sets.
- Lightweight mortar—very smooth and easy to trowel.
- Excellent medium bed performance, 3/4" (18 mm) thick without shrinkage.
- “Extra Heavy Service” rating per TCNA performance levels (RE: ASTM C627 Robinson Floor Test).

## Suitable Substrates

- Exterior glue plywood\*
- Concrete
- Concrete block
- Ceramic tile
- Gypsum wallboard\*
- Cement backer board\*\*
- Masonry and brick

\* Interior use only.

\*\* Consult cement backer board manufacturer for specific installation recommendations and to verify acceptability for exterior use.

## Packaging

- 40 lb (18 kg) bag Colors: Grey and White
- 20 lb (9 kg) bag Color: White

## Approximate Coverage

40 lb (18 kg) bag

## Trowel Size

Wall Applications—6.25 qts (5.9 l) of Water	ft <sup>2</sup>	m <sup>2</sup>
1/4" x 1/4" (6 mm x 6 mm) notched trowel	72-88	6.7-8.2
1/4" x 3/8" (6 mm x 9 mm) notched trowel	48-58	4.4-5.4
Medium Bed Applications—6.25 qts (5.9 l) of Water		
1/2" x 1/2" (12 mm x 12 mm) notched trowel	36-44	3.3-4.1
Thin Bed Applications—7 qts (6.7 l) of Water		
1/4" x 1/4" (6 mm x 6 mm) notched trowel	80-98	7.4-9.1
1/4" x 3/8" (6 mm x 9 mm) notched trowel	54-66	5.0-6.1

## 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

- Not for use directly over particle board, luan, Masonite® or hardwood floors.
- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- Not for use over VAT, VCT cutback, vinyl and plastic laminates.
- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for waterproofing membranes. When a waterproofing membrane is required, use a LATICRETE Waterproofing Membrane (see Section 10 FILING SYSTEM).
- Not for use in submerged applications. For these applications, use LATICRETE 254 Platinum.
- Note:** 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 where local building codes specify more stringent deflection requirements)

## Cautions

Consult MSDS for more safety information.

- Some marbles and other natural stone have low flexural strength and might not be suitable for installation over wood floors.
- Use LATAPOXY® 300 Adhesive for installing green marble or water sensitive stone and agglomerates, and resin backed tiles and stones.
- During cold weather, protect finished work from traffic 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, use LATICRETE® 255 MultiMax™† (white).
- Keep out of reach of children.

† United States Invention Patent No.: 6,784,229 B2

## 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 6.25 qts of [5.9 l])

Test	Test Method	Results
Shear Bond, Porcelain Tile, 28 day	ANSI AS118.4 5.2.4	300–330 psi (2.1–2.3 MPa)
7 day Cure, Water Soak Test, Porcelain Tile	ANSI A118.4 5.2.3	190–250 psi (1.3–1.7 MPa)
Shear Bond, Quarry Tile/Plywood, 28 day	ANSI A118.11 4.1.1.2	150–160 psi (1.0–1.1 MPa)
Sag on Wall	EN 1308	0 mm

From NAP Report 154

### Working Properties

Pot Life	4 hours
Time To Traffic	24 hours
Wet Density	11.9 lbs per gallon (1.43 gm/cm <sup>3</sup> )

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

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. Rough or uneven concrete surfaces should be made smooth with a LATICRETE latex fortified underlayment or leveling mortar to provide a proper finish. Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface. New concrete slabs shall be damp cured and 28 days old before application. All slabs must be plumb and true to within 1/4" (6 mm) in 10 ft (3 m). Expansion joints shall be provided through

the tile work 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 interior plywood floors does not exceed industry standards of L/360 for ceramic tile and brick or L/480 for stone installations where L=span length.
- Minimum construction for interior plywood floors.

**SUBFLOOR:** 5/8" (15 mm) thick exterior glue plywood, either plain with all sheet edges blocked or tongue and groove, over bridged joints spaced 16" (400 mm) o.c. maximum; fasten plywood 6" (150 mm) o.c. along sheet ends and 8" (200 mm) o.c. along intermediate supports with 8d ring-shank, coated or hot dip galvanized nails (or screws); allow 1/8" (3 mm) between sheet ends and 1/4" (6 mm) between sheet edges at the perimeter; all sheet ends must be supported by a framing member; glue sheets to joints with construction adhesive.

**UNDERLAYMENT:** 5/8" (15 mm) thick exterior glue plywood fastened 6" (150 mm) o.c. along sheet ends and 8" (200 mm) o.c. in the panel field (both directions) with 8d ring shank, coated or hot dip galvanized nails (or screws); allow 1/8" (3 mm) to 1/4" (6 mm) between sheets and 1/4" (6 mm) between sheet edges and any abutting surfaces; offset underlayment joints from joints in subfloor and stagger joints between sheet ends; glue underlayment to subfloor with construction adhesive. Refer to Technical Data Sheet 152 “Bonding Ceramic Tile, Stone or Brick Over Wood Floors”.

### Mixing—40 lb (18 kg) bag

#### For Walls and Medium Bed Applications

Place 6.25 qts (5.9 l) of clean water in a pail and slowly add the entire bag of LATICRETE 255 MultiMax. 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.

#### For Thin Bed Applications

Place 7 qts (6.7 l) of clean water in a pail and slowly add the entire bag of LATICRETE 255 MultiMax. 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.

### Application

#### Walls

Key materials into substrate thoroughly. Comb on additional mortar with the notched side, use 1/4" x 3/8" (6 mm x 9 mm) notched trowel. Back butter all tile and stone 8" x 8" (200 mm x 200 mm) or larger to provide full bedding of the veneer.

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

#### Medium Bed

Key the mortar to the substrate with the flat side of the trowel. Press firmly to work into the surface. Comb on additional mortar with the notched side. Use 1/2" x 1/2" (12 mm x 12 mm) or 3/4" (18 mm) half loop trowel.

**Note:** Use the proper sized notched trowel to ensure full bedding of the tile. Spread as much mortar as can be covered with tile in 15–20 minutes. Back butter large tiles >8" x 8" (200 mm x 200 mm)

to provide full bedding and firm support. Place tile into wet sticky mortar and beat in using a beating block and rubber mallet to embed tile and adjust until level. Check mortar for complete coverage by periodically removing a tile and inspecting bedding mortar transfer onto back of tile. If mortar is skinned over (not sticky), remove and replace with fresh mortar.

### Grouting

Grout installation after a minimum of 24 hours curing time at 70°F (21°C). Grout with LATICRETE® PermaColor™ Grout or, LATICRETE SpectraLOCK®†† PRO Grout, LATICRETE 1500 Sanded Grout or LATICRETE 1600 Unsanded Grout gauged with LATICRETE 1776 Grout Enhancer or with water.

†† United States Invention Patent No.: 6881768 (and other Patents)

### Cleaning

Clean tools with water.

## 6. AVAILABILITY AND COST

### Availability

LATICRETE and LATAPOXY® 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 [www.laticrete.com](http://www.laticrete.com).

### Cost

Contact a LATICRETE Distributor in your area.

## 7. WARRANTY

See 10. FILING SYSTEM

DS 230.13: LATICRETE Product Warranty

A component of:

DS 230.15: LATICRETE 10 Year System Warranty for Steel or Wood Framed Exterior Facades

DS 025.0: LATICRETE 25 Year System Warranty

DS 230.99: LATICRETE Lifetime System Warranty

## 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 (hours 8:00 AM to 5:30 PM EST):

Toll Free: 1.800.243.4788, ext. 235

Telephone: +1.203.393.0010, ext. 235

Fax: +1.203.393.1948

### Technical and safety literature

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

## 10. FILING SYSTEM

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

DS 230.13:	LATICRETE Product Warranty
DS 230.15:	LATICRETE 10 Year System Warranty for Steel or Wood Framed Exterior Facades
DS 025.0:	LATICRETE 25 Year System Warranty
DS 230.99:	LATICRETE Lifetime System Warranty
DS 633.0:	LATAPOXY 300 Adhesive
DS 236.0:	LATICRETE 9235 Waterproofing Membrane
TDS 152:	“Bonding Ceramic Tile, Stone or Brick Over Wood Floors”
DS 256.0:	LATICRETE 1600 Sanded Grout
DS 258.0:	LATICRETE 1600 Unsanded Grout
DS 265.0:	LATICRETE 1776 Grout Enhancer
DS 250.0:	LATICRETE PermaColor Grout
DS 685.0:	LATICRETE SpectraLOCK PRO Grout
DS 663.0:	LATICRETE Hydro Ban™

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