



# 86 LatiLevel™

DS-238.9-0707



McCarran Airport International, Las Vegas, NV  
Architect: Tate Snyder Kimsey Architects, Las Vegas, NV  
Contractor: Bottema Tile, St. George, UT

## 1. PRODUCT NAME

LATICRETE® 86 LatiLevel™

## 2. MANUFACTURER

LATICRETE International, Inc.  
1 LATICRETE Park North  
Bethany, CT 06524-3423 USA

Telephone: 203.393.0010, ext. 235  
Toll Free: 800.243.4788, ext. 235  
Fax: 203.393.1684  
Internet: [www.laticrete.com](http://www.laticrete.com)

## 3. PRODUCT DESCRIPTION

LATICRETE 86 LatiLevel is a cementitious powder that is mixed with water to produce a free-flowing self-leveling underlayment mortar for rapid leveling of interior sub-floors. Can be poured from feather edge to 1" (25 mm) thickness in one pour, LATICRETE 86 LatiLevel will produce a smooth and flat surface with excellent durability, which is ready for foot traffic in less than 4 hours.

### Uses

For leveling uneven concrete or exterior glue plywood floors; smoothing rough, spalled concrete and finishing rough screed concrete slabs. Ideal for new construction and remodel projects, in both residential and commercial applications.

### Advantages

- From feather edge to 1" (25 mm) thickness in one pour
- Economical and easy to use
- Fast setting
- Long heal times for extended workability
- Water resistant, non-shrinking
- Pumpable, free-flowing; eliminates sanding and troweling
- Compatible with most adhesives

### Suitable Substrates

#### For interior use only

- Concrete
- Cement backer board\*
- Exterior glue plywood\*\*
- Ceramic tile and stone\*\*
- Cement mortar beds
- Cement terrazzo\*\*

\* Consult cement backer board manufacturer for specific installation recommendations.

\*\* See 5. Installation—Surface Preparation.

### Recommended Coverings

- Ceramic tile
- Carpet
- Linoleum
- Stone
- Vinyl tile
- Wood parquet
- Traffic bearing epoxy coating

### Packaging

LATICRETE 86 LatiLevel 55 lb bag (25 kg)

Check your LATICRETE distributor for pallet quantity

### Primer

LATICRETE Admix & Primer:

5 qts (4.8 l) jug, 4 jugs per carton, 28 cartons per pallet

## Approximate Coverage:

Per 55 lb (25 kg) bag

Nominal Thickness	Approximate Coverage
1/8" (3 mm)	52 ft <sup>2</sup> (4.8 m <sup>2</sup> )
1/4" (6 mm)	26 ft <sup>2</sup> (2.4 m <sup>2</sup> )
1/2" (12 mm)	13 ft <sup>2</sup> (1.2 m <sup>2</sup> )
3/4" (18 mm)	8.6 ft <sup>2</sup> (.8 m <sup>2</sup> )
1" (25 mm)	6.7 ft <sup>2</sup> (.6 m <sup>2</sup> )

## 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 at 65–80°F (18–26°C) 50% relative humidity.

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

## Limitations

- For interior use only.
- Do not** install when surface temperature is below 40°F (4°C).
- Do not** install over painted or gypsum-based surfaces.
- Do not** exceed recommended mixing ratio as indicated in mixing instructions. Over watering may weaken product properties.
- Never mix with cement or admixtures.
- Not a wearing surface, must be covered with flooring.
- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for waterproof membranes. When a waterproofing membrane is required, use a LATICRETE® Waterproofing Membrane (see Section 10 **FILING SYSTEMS**).
- Do not** bond directly to luan, OSB, particle board or Masonite® surfaces.

## Cautions

Consult MSDS for more safety information.

- 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.
- Keep out of reach of children.

## 4. TECHNICAL DATA

### Performance Properties

Test ASTM 109	Results
Compressive Strength	
4 hours	1500–2000 psi (10.3–15.8 MPa)
1 day	2800–3200 psi (19.3–22.1 MPa)
28 day	4300–4600 psi (29.7–31.7 MPa)
Tensile Strength	500–600 psi (3.4–4.1 MPa) ANSI 118.7 3.6
Flexural Strength	1000–1200 psi (6.9–8.3 MPa) ANSI 118.7 3.7

Report for RLS 2122A

### Working Properties—70°F (21°C)

Working Time	30 minutes
Flow Time	15 minutes @ 70°F (21°C)
Time to Foot Traffic	3–4 hours

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

#### Installation Over Concrete Slabs

- ALL CONCRETE SURFACES MUST BE SHOT BLASTED/MECHANICALLY ABRADED.
- All surfaces must be primed with LATICRETE Admix and Primer and should be between 40°F (4°C) and 90°F (32°C). Surfaces should be structurally sound, clean and free from all dirt, oil, grease, adhesives, paint, sealers or curing compounds.
- New concrete surfaces must be at least 28 days old.
- 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.

#### Installation Over Wooden Sub-Floors

- 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 joists 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 sheets and 1/4" (6 mm) between sheets edges; all sheet ends must be supported by a framing member; glue sheets to joists 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” for complete details.

- Prime cleaned and properly prepared surface with LATICRETE Admix and Primer as described in “Priming” section.
- Allow primer to dry accordingly. Install 3.2# galvanized diamond metal lath over entire wood floor. Ensure proper fastening to eliminate any loose sections. **Do not** install over wet primer.
- Install LATICRETE 86 LatiLevel™ over floor in accordance with “Application” section below.

#### Installation Over Cutback Adhesive

- Consult adhesive manufacturer and any governmental agencies for proper removal of any adhesive containing asbestos. Consult the Resilient Floor Covering Institute “Recommended work & practices for removal of resilient floor covering” for removal instructions. All cutback adhesive must be removed by thoroughly shot-blasting the floor prior to installation of LATICRETE 86 LatiLevel.

## Installation Over Existing Ceramic Tile, Stone or Cement Terrazzo

- Skim coat existing ceramic tile, cement terrazzo or stone with LATICRETE® 254 Platinum Rapid (min. 1/8" [3 mm] thick continuous coating). Allow to dry.
- Prime surface according to "Priming" section and install LATICRETE 86 LatiLevel™ according to "Application" section.

## Priming

Use LATICRETE Admix & Primer with every application. Shake thoroughly before using. Pour, mop, or spray primer onto the surface. Apply an even thickness of primer to the prepared substrate using a bristle broom to ensure the primer is absorbed into the substrate, removing any puddles or thick areas. Per 5 qt. (4.8 l) jug of primer, dilute 1:1 with clean potable water in a clean mixing pail. Coverage is approximately 500 ft<sup>2</sup> (45 m<sup>2</sup>) when mixed 1:1. If primer dries within 45 minutes, slab is excessively dry and will require another application as directed above. Allow the primer to dry to a clear film usually 2–3 hours, but less than 24 hours before application of LATICRETE 86 LatiLevel. **Note:** Keep primed surface clean. Do not allow any foot traffic onto surface.

## Mixing

Place 6 qts (5.7 l) of clean potable water into a clean pail. Add one 55 lb (25 kg) bag of LATICRETE 86 LatiLevel slowly into the pail; mix as the material is poured. Use a high speed mixer (500 rpm) and mix thoroughly for one minute for a smooth creamy mix with no clumps. Follow all mixing instructions on bag. Be sure to not add too much water. Mix no more than two bags at a time with appropriate water.

## Application

All concrete surfaces are to be shot blasted/mechanically abraded to ensure any contaminants, such as sealers or glue, are removed. Pour or pump the LATICRETE 86 LatiLevel over the primed substrate and spread with a spike roller or gauging rake. Use a smoothing paddle to combine pours and to obtain a flat smooth surface. Floor will be ready for foot traffic in 4 hours. When LATICRETE 86 LatiLevel has hardened, ceramic tile may then be installed using a LATICRETE Latex Thin-Set Mortar. Follow manufacturer's recommendations for installing vinyl tile, linoleum, carpet, wood parquet or seamless epoxy flooring over concrete. Before installing wood or resilient flooring, consult manufacturer for recommendations on substrate moisture content requirements. Allow LATICRETE 86 LatiLevel to dry in accordance with those recommendations. For applications requiring pours thicker than 1" (25 mm), use LATICRETE 88 LatiLevel.

## Cleaning

Clean tools and tile work with water while mortar is fresh.



## 6. AVAILABILITY AND COST

### Availability

LATICRETE and LATAPOXY materials are available worldwide. For Distributor information, call:

Toll Free: 800.243.4788  
Telephone: 203.393.0010

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

### Cost

Contact a LATICRETE/LATAPOXY Distributor in your area.

## 7. WARRANTY

See 10. FILING SYSTEM:

DS 230.13: LATICRETE Product Warranty

A component of:

DS 230.12: LATICRETE 10 Year 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: 800.243.4788, ext. 235  
Telephone: 203.393.0010, ext. 235  
Fax: 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 230.12: LATICRETE 10 Year System Warranty  
DS 236.0: LATICRETE 9235 Waterproofing Membranes  
DS 662.0: LATICRETE Admix & Primer  
DS 238.4: LATICRETE 88 LatiLevel  
DS 729.0: LATICRETE 254 Platinum Rapid  
TDS 152: Installing Ceramic Tile, Stone or Brick over Wood Floors

---

LATICRETE International, Inc.  
One LATICRETE Park North  
Bethany, CT 06524-3423 USA  
1.800.243.4788  
+1.203.393.0010  
[www.laticrete.com](http://www.laticrete.com)

©2008 LATICRETE International, Inc.  
LATICRETE, LATAPOXY, SPECTRALOCK and the  logo are Registered Trademarks of LATICRETE International, Inc.

DS-238.9-0707