



Globally Proven  
Construction Solutions

# Level

Level is an economical, easy-to-use, self-leveling underlayment designed for use over various substrates including concrete and ceramic tile. Level provides a smooth and flat surface on which sensitive finished floor goods can be installed. Level can be placed from 5–20 mm in a single lift.



## FEATURES/BENEFITS

- Pourable and pumpable
- Inorganic; will not contribute to mold/mildew growth
- Suitable surface for most finished floor goods
- Can be applied directly over concrete testing at RH of 95% or less per ASTM F2170

## USES

- o Used to level floor & correct any surface irregularities prior to installation of screed or finished floor like tile, stone, wood, carpet etc.
- o Fix uneven surfaces, smoothing rough, spalled concrete & finishing rough screed concrete slab especially floor surface.
- o Interior and dry areas for new and upgrading projects in both residential and commercial applications.

## MANUFACTURER/ DISTRIBUTED BY

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## STANDARDS/CERTIFICATIONS

- ASTM C109
- ASTM C307
- ASTM C348
- ASTM C531

### Suitable Substrates

- Certain Gypsum Substrates  
Check with gypsum-based underlayment manufacturer for installation recommendation.
- Concrete
- Cement backer board\*
- Ceramic tile and stone\*\*
- Exterior Glue Plywood\*\*
- Cement mortar beds
- Cement terrazzo\*\*
- Vinyl Tile^
- Non-cushioned Sheet Vinyl^
- Linoleum^
- LATICRETE® MVB ^

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

\*\* See 5. Installation - Surface Preparation

^ See Section 5 Installation Over Vinyl Tile, Linoleum, Sheet Vinyl and LATICRETE MVB

### Packaging

25kg bag, 80 bags per pallet

Colour: Grey

### Coverage

Yield/coverage is only an estimate and may vary depending on the mixing ratio and field conditions.

25kg bag of Level yields approximately 15m<sup>2</sup> to 18m<sup>2</sup> per mm thickness

### Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for 6 (months)\* if stored off the ground in a dry area, at temperatures 0 - 40 °C.

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

### Limitations

- For interior use only.
- Do not install when surface temperature is below 8°C above 35°C, or when ambient air temperature is expected to fall below 10°C during placement or before material takes final set.
- Do not install over painted surfaces.
- Do not install over certain moisture-sensitive gypsum-based surfaces. Check with gypsum-based underlayment manufacturer for installation recommendation.
- 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 wear surface.
- Do not apply Level directly over waterproofing or crack isolation membranes.
- 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.

- Do not bond directly to luan, OSB, particle board or Masonite® surfaces
- Not for use in submerged applications.
- Level should not be installed over any moving joints or structural cracks (cracks greater than 1.5mm in width or any crack that experiences any vertical displacement). All existing expansion joints, cold joints and control joints must be brought up through the underlayment and the finish. Failure to honor movement joints will result in cracking and/or loss of bond. Do not bond directly to luan, interior glue plywood, OSB, particle board, contaminated concrete, moisture sensitive gypsum underlayment, or dirty surfaces.
- **Note:** Substrate deflection under all live, dead and impact loads, including concentrated loads, shall comply with applicable building code and finish floor manufacturer requirements.

### Cautions

Before using any LATICRETE product:

- Check [se.laticrete.com](http://se.laticrete.com) for any technical bulletins or updated information about the product and its application
- Contact your local LATICRETE Technical Sales representative with any questions
- 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.

### TECHNICAL DATA

#### Performance Properties

Test	Test Method	Results
Compressive Strength (28 days)	ASTM C109	>39N/mm <sup>2</sup>
Tensile Strength (28 days)	ASTM C307	>4N/mm <sup>2</sup>
Flexural Strength (28 days)	ASTM C348	>10N/mm <sup>2</sup>
Shrinkage (28 days)	ASTM C531	<0.1%

#### Working Properties

Working Time	20 minutes
Time to Foot Traffic	12 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.

### INSTALLATION SYSTEM

#### Surface Preparation

#### Installation over Concrete Slabs

- ALL CONCRETE SURFACES MUST BE SHOT BLASTED/ MECHANICALLY ABRADED if minimum 0.5MPa bond strength is not achieved as per ASTM C1583.
- All surfaces must be primed with Admix & Primer and should be between 8°C and 35°C. Surfaces should be structurally sound, clean and free from all dirt, oil, grease, adhesives, paint, sealers or curing compounds.
- 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:** 15mm thick exterior glue plywood, either plain with all sheet edges blocked or tongue and groove, over bridged joists spaced 400mm o.c. maximum; fasten plywood 150mm o.c. along sheet ends and 200mm o.c. along intermediate supports with 8d ringshank, coated or hot dip galvanized nails (or screws); allow 3mm between sheets and 6mm between sheets edges; all sheet ends must be supported by a framing member; glue sheets to joists with construction adhesive.
- **UNDERLAYMENT:** 15mm thick exterior glue plywood fastened 150mm o.c. along sheet ends and 200mm o.c. in the panel field (both directions) with 8d ring-shank, coated or hot dip galvanized nails (or screws); allow 3mm to 6mm between sheets and 6mm 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.
- Prime cleaned and properly prepared surface with Admix & 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.

#### **Installation over Cutback Adhesive (Over Concrete Only)**

- Mechanical removal of cutback (i.e. grinding, sanding, blasting) can be hazardous, as old cutback adhesive may contain asbestos. Consult adhesive manufacturer and any governmental agencies for proper removal of any adhesive containing asbestos.
- Level can be installed over a thin layer of non-water soluble cutback or other non-water-soluble adhesive residue.
- Since the weakest link of the system will be the bond of the adhesive to the substrate, it is important that the adhesive be very thin, firm and have a good bond to the substrate. After

scraping the non-water soluble cutback down to a thin "transparent" residue, and if the floor then passes the 0.5MPa pull strength test pour Level without shot blasting. If the floor does not pass the 0.5MPa pull strength test you must thoroughly shot blast the floor to a CSP of 3-5. It is the responsibility of the installation contractor to ensure the substrate is properly prepared prior to the installation of any LATICRETE material.

- Water soluble vinyl adhesives must be completely removed (e.g. shot-blasted) from the floor surface.
- For adhesives that do not contain asbestos remove the non-water soluble cutback adhesive to a thin residue by razor scraping or equivalent and then remove any loose particles by thoroughly sweeping, vacuuming and then wet mopping the substrate.

#### **Installation over Vinyl Tile, Linoleum, Sheet Vinyl and MVB (over concrete only)**

All vinyl tile, linoleum, non-cushioned sheet vinyl and MVB must be well adhered to the substrate and free from any bond breaking or bond inhibiting surface contaminants. Ensure bond strength of the vinyl tile to the substrate is a minimum 0.5MPa. If the floor does not pass the 0.5MPa pull strength test you must remove the tile and thoroughly shot blast the floor to a CSP of 3-5. It is the responsibility of the installation contractor to ensure the substrate is properly prepared prior to the installation of any LATICRETE material. Cementitious decorative coatings are excluded from this application. Consult Technical Services prior to any installation over vinyl tile. See "Priming" section for specific instructions over vinyl tile, linoleum, sheet vinyl and MVB.

#### **Installation over Existing Ceramic Tile, Stone or Cement Terrazzo**

- All tile and stone must be well adhered to the substrate and free from any bond breaking or bond inhibiting surface contaminants. Ensure bond strength of the tile or stone to the substrate is a minimum 0.5MPa. If the floor does not pass the 0.5MPa pull strength test you must remove the tile or stone and thoroughly shot blast the floor to a CSP of 3-5.
- Mechanically abrade existing ceramic tile and stone with a carborundum disk. Wash and rinse thoroughly with clean water. Allow to dry. Skim coat existing ceramic tile, cement terrazzo or stone with Premium Skim coat Patch Underlayment (min. 3mm thick continuous coating). Allow to dry.
- Prime surface according to "Priming" section and install Level according to "Application" section.

#### **Priming**

Use Admix & Primer with every application of LATICRETE self-leveling products. Shake Admix & Primer thoroughly before using. Pour, mop or spray Admix & Primer onto the surface and distribute evenly using a bristle broom to ensure complete saturation of the entire surface. Remove any puddles or areas where Admix & Primer is especially thick. Admix & Primer to dry to a clear film (tacky), but no more than 24 hours prior to application of Level. Admix & Primer should not be applied when the surface temperature is below 4°C or above 32°C. Insufficient drying time or poor film formation of Admix & Primer due

to low temperature and/or high humidity may result in pinholes in the surfacing layer. Maintain adequate ventilation during and after application of Admix & Primer to help ensure quicker drying. If Admix & Primer dries within 45 minutes, substrate is excessively dry and will require another application as directed on Admix & Primer data sheet. For installation of Admix & Primer over sheet vinyl, linoleum, VCT/VAT, or MVB; apply Admix & Primer (diluted 1:1 with water) over entire substrate then lightly scatter LATICRETE self-leveling underlayment powder over the wet primer and broom to form a light slurry. Allow slurry to dry prior to applying LATICRETE self-leveling product.

**NOTE:** Keep primed surface clean. Do not allow any foot traffic onto primed surface. Admix & Primer is milky when wet and clear when dry. Admix & Primer allowed to sit on substrate for more than 24 hours without a LATICRETE self-leveling product being installed must be re-primed.

### Mixing

Level should be mixed with 4.5ℓ to 5ℓ of water per 25kg bag. Do not over water. For manual application, add product to water and mix for 5 minutes with a high speed mixer (1000 - 14000 rpm) to obtain a lump free mix. Level can also be used in most pump equipment. Please consult with a LATICRETE representative to verify equipment compatibility. A slump test should always be performed to ensure that mix is homogeneous and free from separation.

### Application

#### Perimeter Isolation Strip

Note: It is recommended to install a perimeter isolation strip before the installation of Level. Attach the perimeter isolation strip to the perimeter wall of the entire subfloor, as well as around the perimeter of any protrusions, in order to isolate the floor and wall/restraining surfaces. Temporarily fasten perimeter isolation strip in place with staples or masking, duct, or carpet tape. The perimeter isolation strip can then be removed after the tiles have set firm. The joints can then be filled with LATASIL™.

Pour or pump the Level 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 after 12 hours. Follow manufacturer's recommendations for installing vinyl tile, linoleum, carpet, or wood parquet over concrete. Before installing wood or resilient flooring, consult manufacturer for recommendations on substrate moisture content requirements. Allow Level to dry in accordance with those recommendations.

### Topping

A finish coat of a LATICRETE self-leveling wear surface (such as Level DL) may be applied to Level after material has set 24 hours). It is extremely important that Level is primed with two coats of Admix & Primer following instructions for highly absorptive substrates prior to application of a LATICRETE self-leveling wear surface. (Refer to Admix & Primer data sheet chart for dilution ratios on installations over highly porous surfaces)

### Flooring Installation

Floor goods can be applied to surface from 24 – 72 hours after application, depending on thickness, drying conditions and type of finished floor. Due to the relatively low pH level of self-leveling underlayment, finished floor goods can be applied rapidly without risk of adhesive bond failure. Always test performance suitability and compatibility of finished floor systems prior to their application. Sample surfaces should be installed as a field test so as to be representative of entire surface and tested for intended use. Always refer to finished floor manufacturer's recommendations regarding installation instructions, restrictions and compatibility.

### AVAILABILITY AND COST

#### Availability

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

**Telephone:** (65) 6515-3028

**Fax:** (65) 6515-3037

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

#### Cost

Contact a LATICRETE Distributor in your area.

### WARRANTY

LATICRETE South East Asia Pte Ltd warrants that Level is free from manufacturing defects and will not to break down, deteriorate or disintegrate under normal usage for a period of one (1) year from date of purchase subject to terms and conditions stated.

### 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.

### TECHNICAL SERVICES

#### Technical Assistance

Information is available by calling:

LATICRETE South East Asia Pte Ltd  
(Level 2, A3)

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Singapore 729245

Telephone: (65) 6515-3028

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### Technical and safety literature

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