Globally Proven Construction Solutions

LEVEL DL PLUS

LEVEL DL PLUS (*Formerly known as 9400 Self-leveling)* is a premium quality self-leveling, fast-drying, wear surface topping. It makes the designers choice for attractive finished floors when polished integrally tinted or topically stained applications.

ADVANTAGES

- Fast Drying
- Can be placed from 3 to 12 mm per lift.
- Superior abuse and abrasion resistance
- Long heal times for extended workability
- Pumpable, free-flowing; eliminates sanding and troweling
- Mix with suitable aggregates for decorative terrazzo finishes.

USES

- Superior abrasion resistance makes it perfect for multiple environments, such as offices, retail, and commercial areas.

MANUFACTURER

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STANDARDS

Applicable Standard: JC/T 985-2005

Packaging,

- 20 kg bags, 72 bags per pallet

Available colors:

- White
- Grey
- Off- white
- Coffee
- Beige

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.

Approximate Coverage*

By mixing a 20-kg bag with 4.4 – 4.6 liters of water, can cover approximately 3.68m^2 at 3mm thick.

*Coverage is only an estimate and may vary depending on the amount of water, mixing equipment, temperature and field conditions.

Limitations

- For interior use only.
- Do not install when surface temperature is below 4°C (40°F) or above 32°C (90°F), or when ambient air temperature is expected to fall below 10°C (50°F) during placement or before material takes final set.
- 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.
- Do not apply self-leveling 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 Waterproofing Membrane (Consult LATICRETE® technical support).
- Contact LATICRETE® technical support for the installation over wood substrates.
- Not for submerged applications.
- Self-leveling should not be installed over any moving joints or structural cracks (cracks greater than 1.5mm [1/16"] in width or any crack which experiences vertical displacement). All existing expansion joints, cold joints and control joints must be brought up through the wear surface cement. Failure to honor movement joints will result in cracking or loss of bond.

Note: Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes.

Cautions

Consult MSDS for more safety information before using any LATICRETE Self Leveling product.

- Read and understand the Product Information Data Sheet and Material Safety Data Sheet.
- Perform a mock-up to ensure product will perform as required and achieve the desired final appearance.
- Contact your local LATICRETE Technical Sales Representative with any questions
- 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

Physical Properties

Physical Properties	Requirement	Results
Tensile Bond Strength, MPa ASTM D4541	>1.0	2.8
24 hours Compressive Strength, MPa BS-EN 13892	>6.0	12.2
24 hours Flexural Strength, MPa BS-EN 13892	>2.0	3.8
28 days Compressive Strength, MPa BS-EN 13892	>35	38.2
28 days Flexural Strength, MPa (Grade F10) BS-EN 13892	>10	10.6
Shock Resistance	No cracks or debond from Substrate	Pass

Powder/water ratio = 1:0.21 by weight

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

Working Properties

Working Time	60 minutes
Final set	2 - 3 hours
Wet density	1.98

INSTALLATION

Surface Preparation

Installation Over Concrete Slabs

- For installation of LEVEL DL Plus as a decorative topping, all concrete slabs must be Pre-treated.
- Clean substrate to eliminate dust, dirt, oil, grease, paint or any contaminants which may inhibit bonding. Do not use chemicals to clean substrate. Remove any felt-backed floor coverings. Remove any loose particles and vacuum.
- Test tensile pull bond strength of substrate. If minimum 217 psi (1.5 MPa) bond strength is not achieved or the substrate is contaminated, mechanically clean by shot blasting or scarifying until satisfactory bond strength is achieved.
- All surfaces should be between 4°C (40°F) and 32°C (90°F) during application of LEVEL DL Plus.
- Surfaces should be structurally sound, clean and free from all dirt, oil, grease, adhesives, paint, sealers or curing compounds.
- All surfaces must be primed with LEVEL Primer. Maintain ambient temperature between 15 and 32°C (60 - 90°F) and substrate temperature 3°C (5°F) above dew point during, and for a minimum of 16 hours after, application of LEVEL Primer. Provide adequate ventilation to ensure uniform drying for 24 hours after installation.
- Expansion joints shall be provided through the LEVEL DL Plus work from all construction or expansion joints in the substrate. 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 LEVEL 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. Make sure that galvanized diamond metal lath is completely encapsulated.

Installation Over Cutback Adhesive (over concrete only)

- Refer to requirements under Surface Preparation - Installation Over Concrete Slabs.

Installation Over Vinyl Tile (over concrete only)

- All vinyl tile must be well adhered to the substrate and free from any bond breaking or bond inhibiting surface contaminates. Ensure and document suitable tensile pull strength tests from a representative sample floor area that the adhesion of the vinyl tile to the substrate is a minimum 217 psi (1.5 MPa). If the floor does not pass the minimum pull strength requirements you must remove the tile and thoroughly shot blast the floor. It is the responsibility of the installation contractor to ensure the substrate is properly prepared prior to the installation of this material. Cementitious decorative coatings and epoxy resin floor coverings including epoxy terrazzo are excluded from this application.

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 contaminates. If LEVEL DL Plus is intended for use as a wearing surface (not as a self-leveling underlayment) then existing tile or stone must achieve a minimum of 217 psi (1.5 MPa) tensile pull strength. If LEVEL DL Plus is intended for use as a self-leveling underlayment (not as a wearing surface) then existing tile or stone must achieve a minimum of 72 psi (0.5 MPa) tensile pull strength. If the floor does not pass the minimum pull strength test requirements you must remove the tile or stone and thoroughly shot blast the floor.
- Mechanically abrade existing ceramic tile and stone with a carborundum disk. Wash and rinse thoroughly with clean water. Allow to dry.
- Prime surface according to "Priming" section and install LEVEL DL Plus according to "Application" section.

Priming
Use LEVEL Primer with every application. Mix thoroughly before using. Mix and apply primer according to LEVEL Primer data sheet prior to the application of LEVEL DL Plus Self leveling.
Note: Keep primed surface clean. Do not allow any foot traffic onto surface.

Mixing
LEVEL DL Plus should be mixed with 4.4 – 4.6 Ltr. water per 20kg bag. Do not over water. For manual application, add product to water and mix for 2–3 min. with a heavy-duty drill (650 rpm) to obtain a lump free mix.

Self-leveling can also be used in most pump equipment. Please consult with a representative to verify equipment compatibility. A slump test should always be performed to ensure that mix is homogenized and free from separation. The ideal slump range for is 10–11" (250–280 mm).

Application
Pour blended material onto substrate at a thickness of 1/8" to 1/2" (3– 12 mm) for all surfaces. Immediately smooth the poured slurry with a smoother. After initial set of material, remove all overlap marks, seams, and inconsistencies by scraping with steel trowel.

Perimeter Isolation Strip
It is essential that all walls and building elements are isolated from the self-leveling pours to ensure proper expansion allowance against all restraining surfaces.
Note: It is recommended to install a perimeter isolation strip before the installation of LATICRETE. 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 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 LATICRETE 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 1–2 hours.

Time to Traffic
Allow 3–4 hours (depending on thickness) for foot traffic, 24 hours for light traffic and can bear full load (i.e. fork truck etc.) after 7 days at 70°F (21°C).

Flooring Finishes
Surface must be sealed with a suitable sealer. Refer to TDS 185D for more information.

AVAILABILITY AND COST

Availability
LATICRETE® materials are available worldwide.

For distributor information, please contact us by email at: enquiry@laticrete.me or, visit www.laticrete.me

Cost
Contact a LATICRETE® closer distributor to obtain complete information and cost.

WARRANTY
For the extended system warranty: Please contact LATICRETE® technical support.

MAINTENANCE
Some cleaning products/processes may alter the color of the installed LATICRETE floor. Test cleaning product and process in a small area prior to applying to the entire floor.

TECHNICAL SERVICES
Technical assistance
For information contact us by email at: enquiry@laticrete.me

Technical and safety literature
To obtain technical and safety literature, please visit our website at: www.laticrete.me

Warning: The information and the instructions in the data sheet, although based on knowledge gained through years of applications, are indicative. LATICRETE® unable to directly control the installation conditions and modalities of application of products, do not assume any liability arising from their implementation. Those who want to use the LATICRETE® products must conduct adequate tests to determine the site specifications. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation method and site conditions.