

# LEVELLITE®

## SELF-LEVELING UNDERLAYMENT

### 1. Product Name

LevelLite® Self-Leveling Underlayment

### 2. Manufacturer

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### 3. Product Description

LevelLite helps level floors prior to the installation of ceramic tile, natural stone, resilient flooring, carpet, wood and other floor coverings. This quick setting underlayment can be applied to 2" (5 cm) thick in one pour and seeks its own level in minutes. With proper installation, the use of LevelLite can achieve an extra heavy rating for high impact use in food plants, dairies, breweries and kitchens. LevelLite may be applied to in residential structures with floor joists up to 24" o.c. Formulated using Controlled Cure Technology™, LevelLite helps eliminate installation problems such as bond failure, crumbling, mildew and staining of resilient flooring caused by the free moisture found in traditional underlayments.

Substrates for LevelLite include:

- Concrete, existing mortar beds
- EasyBoard®, WonderBoard® cement backerboards
- Exterior grade plywood (interior) with floor joists up to 24" (61 cm) o.c.
- Existing ceramic tile, pavers, brick
- Stone
- Concrete terrazzo
- Well bonded sheet vinyl
- Cutback adhesive (non-water soluble)

Flooring types include:

- Ceramic tile, pavers, brick, thin brick
- Stone, terrazzo
- Carpet
- Wood, parquet
- Vinyl composition tile (VCT)
- Sheet vinyl flooring
- Laminated flooring

### COMPOSITION & MATERIALS

LevelLite is a dry, proprietary blend of copolymers, Portland cement, post industrial and consumer recycled aggregate and inorganic chemicals.

### PACKAGING

LevelLite Underlayment is offered in 30 lb (22.68 kg) bags, providing the same coverage as a typical sanded product.

### BENEFITS

- This product contributes to LEED.
- Can be applied from featheredge to 2" (5.08 cm) thick in a single pour
- Reduces bond failure, mildew and crumbling of resilient flooring
- Cures fast and develops high early strength for quick installation
- Rated for extra heavy use on wood subfloors with joists to 24" (61 cm) per ASTM C627.
- Protected by MoldGard® Technology to resist mold and mildew growth

### LIMITATIONS

- Do not use over lightweight concrete, gypsum underlayment. For special preparation of these surfaces, RedGard® Waterproofing and Crack Prevention Membrane is required. See Section 5, Lightweight & Gypsum Cement Underlayment.
- Do not use over oriented strand board (OSB), particle board, hardwood floors, parquet floors or metal.
- Do not use when the temperature is below 50° F (10° C).
- Do not use on sloped surfaces that require drainage.
- This product is not meant for use as a wear surface.
- Precautions should be taken when applying over post-tensioned concrete, pre-stressed concrete or prefabricated concrete planks. Contact Custom Building Products for further details.

### 4. Technical Data

#### APPLICABLE STANDARDS

ASTM International (ASTM)

- ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester
- ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

American National Standards Institute (ANSI) — ANSI A108.01 A108.02 of the American National Standards for the Installation of Ceramic Tile

Resilient Floor Covering Institute (RFCI) — Recommended Work Practices for Removal of Resilient Floor Coverings

Tile Council of North America (TCNA) — TCNA Handbook for Ceramic Tile Installation, TCNA Method EJ171

TECHNICAL PROPERTIES

Property	Results
Flow time	10 minutes
Pot life @ 70° F (21° C)	30 minutes
ASTM C191	
Initial set@ 70° F (21° C)	90 minutes
ASTM C191	
Final set@ 70° F (21° C)	3 1/2 hours
Walkable hardness after final set	2 - 4 hours
Drying time before covering installation	
Ceramic tile and stone Impervious floor coverings	4 hours 14 hours
ASTM C109	
Compressive strength	
1 day cure 28 day cure	2600 psi (1.75 MPa) 4600 psi (3.23 MPa)
ASTM C109	
Flexural strength	
28 day cure	1100 psi (7.58 MPa)
ASTM C627	
Robinson-type floor test	Extra heavy rating

5. Installation

PREPARATORY WORK

General Surface Preparation:

Surfaces must be structurally sound, clean, dry and free from grease, oil, dirt and other contaminants that would prevent a good bond.

Ambient temperature, surfaces and materials should be maintained at temperatures higher than 50° F (10° C).

Moisture vapor transmission should be less than 6 lb (1.8 kg) per 1000 ft<sup>2</sup> (92.9 m<sup>2</sup>) per day in accordance with ASTM F1869 or equivalent. If vapor transmission exceeds the recommended maximum, contact Custom Building Products Technical Services for further assistance.

Cementitious Surfaces:

Concrete or plaster surfaces must be fully cured and must accept water penetration. Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond can be achieved; if water beads, surface contaminants are present, and

loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a broomed or brushed finish to enhance the bond. Smooth concrete slabs must be roughened to ensure a good bond.

Lightweight, Gypsum based Underlayments:

Lightweight or gypsum based underlayments must first be treated with RedGuard® Waterproofing and Crack Prevention Membrane and must obtain a minimum of 2000 psi (1.37 MPa) compressive strength at the manufacturer's recommended cure time.

The underlayment must be sufficiently dry and properly cured to the manufacturer's specifications for permanent, non-moisture permeable coverings.

Surfaces to be tiled must be structurally sound and subject to deflection not to exceed the current ANSI standards. Surfaces must be dry and free of all grease, oil, dirt, dust curing compounds, waxes, sealers, efflorescence, old adhesive residue and other compounds that may prevent a good bond.

All lightweight concrete and gypsum based underlayment surfaces to receive RedGuard must be primed with properly applied manufacturer's sealer or a primer coat of RedGuard, consisting of 1 part RedGuard diluted with 4 parts clean, cool water. Mix in a clean bucket at low speed until a lump free solution is obtained. The primer can be brushed, rolled or sprayed to achieve an even coat. Apply primer coat to the floor at a rate of 300 ft<sup>2</sup> (27.9 m<sup>2</sup>) per gallon of reduced material. Drying time will depend on site conditions, but is normally less than 1 hour. Extremely porous surfaces may require 2 coats.

At this point, RedGuard can be applied to the primed lightweight or gypsum based surface. Refer to the individual product data sheet or packaging directions for application instructions. Expansion joints must be installed in accordance with local building codes and ANSI/TCNA guidelines. See TCNA EJ171 for detailed specifications.

Plywood Substrates:

Plywood floors, including those under resilient flooring, must be structurally sound and must meet all ANSI and deflection requirements. For questions about proper subfloor installation, call Custom Building Products.

For a metal lath, fasten every 6" – 8" (15 – 20 cm) with fasteners that have a galvanized or corrosion resistant coating. For a 23/32" (18.2 mm) plywood subfloor with 24" (61 cm) o.c. joists, the metal lath must be a minimum of 2.5 lb/yd<sup>2</sup> (1.13 kg/m<sup>2</sup>). All plywood seams should be gapped 1/8" (3 mm) and protected by placing a minimum 1.5" (38 mm) bond breaker tape over the gaps.

Cutback Adhesive over Concrete:

Adhesive layers must be removed, as they reduce mortar bond strength to cement surfaces. Use extreme caution, as adhesives may contain asbestos fibers. Do not sand or grind adhesive residue, as harmful dust may result. Never use adhesive removers or solvents, as they soften the adhesive and may cause it to

penetrate into the concrete. Adhesive residue must be wet scraped to the finished surface of the concrete, leaving only the transparent staining from the glue. To determine desirable results, do a test bond area before starting. Refer to the RFCI Pamphlet, "Recommended Work Practices for Removal of Resilient Floor Coverings" for further information.

#### Priming

Prime all surfaces with LevelQuik® Latex Primer before application.

#### METHODS

##### Mixing

Mix the entire 50 lb (22.68 kg) bag of powder with 6-1/2 quarts (6.1 L) of clean, cool water. Slowly add powder to the water while mixing with a heavy duty 1/2" (13 mm) electric drill and mixing paddle at 500 RPM. Thoroughly mix for 2 minutes to a lump-free consistency.

##### Application

Apply LevelQuik Primer with a paint brush, short nap roller or soft push broom. Apply a thin even coat and allow to dry approximately 2 hours to a clear film. Pour or pump, and then spread with a long-handled gauged spreader. LevelLite will seek its own level during the first 10 minutes. For featheredging and touch up, use a smoothing tool. LevelLite can be applied to 2" (5.08 cm) thick in one application; if a second layer is required, install immediately after the first layer has set to a walkable hardness. If the first layer has dried over 12 hours, re-prime before the second application. For installation on wood subfloors with joists to 24" (61 cm) o.c., apply a 1/2" (13 mm) thick layer of LevelLite over 3/4" (19 mm) exterior grade plywood with a with a minimum of 2.5# properly fastened metal lath. For pumping and large scale applications, contact Custom Building Products' Technical Services Department for more information.

##### Curing

LevelLite dries to a walkable hardness in 2 – 4 hours. For ceramic tile and stone, allow 4 hours; for impervious floor coverings, allow 14 hours. Drying times can vary with temperature and humidity.

Test for moisture content before applying vinyl or wood flooring.

##### Coverage

LevelLite covers 45 ft<sup>2</sup> per 30 lbs (4.65 M<sup>2</sup>/22.68 kg) at a 1/8" (3 mm) thickness.

##### Cleaning

Clean with water before the material dries.

#### PRECAUTIONS

This product contains Portland cement and free silica. Wear rubber gloves and eye protection. Avoid eye contact or prolonged contact with skin and wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician.

#### BUILDING CODES

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

#### 6. Availability & Cost

Contact the manufacturer or visit the [www.custombuildingproducts.com](http://www.custombuildingproducts.com) website for information about product cost and availability.

#### 7. Warranty

LevelLite is eligible for a lifetime warranty as part of a complete installation system.

Custom Building Products warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Sole liability under this warranty shall be limited to the replacement of the product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply. This warranty will not extend to any product modified in any way or not used in accordance with the manufacturer's printed instructions. Custom Building Products makes no other warranties, either express or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

For details and complete warranty information, visit the Custom Building Products website: [www.custombuildingproducts.com](http://www.custombuildingproducts.com)

#### 8. Maintenance

Properly installed product requires no special maintenance. LevelLite is not recommended as a finish or wear surface.

#### 9. Technical Services

For technical assistance, contact Custom Building Products or visit the website: [www.custombuildingproducts.com](http://www.custombuildingproducts.com).

#### 10. Filing Systems

Additional product information is available from the manufacturer upon request