

LevelQuik® ES (Extended Setting) Self-Leveling Underlayment

1 Product Name

LevelQuik® ES (Extended Setting) Self-Leveling Underlayment

2 Manufacturer

Custom Building Products
 Technical Services
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3 Product Description

Helps level floors prior to the installation of ceramic tile, natural stone, resilient flooring, carpet, wood and other floor coverings. This underlayment can be applied to 1.5" (3.8 cm) thick in one pour and seeks its own level in minutes. With proper installation, the use of LevelQuik® ES can achieve an extra heavy rating for high impact use in food plants, dairies, breweries and kitchens. LevelQuik ES may be applied in residential structures with floor joists up to 24" o.c.

Formulated using Controlled Cure® Technology, Level Quik ES helps eliminate installation problems such as bond failure, crumbling and staining of resilient flooring caused by the free moisture found in traditional underlayments.

Key Features

- Extended set time - walkable hardness in 12 hours
- Apply from feather edge to 1.5" (3.8 cm) thick in one pour
- Use with LevelQuik Latex Primer

Uses

Suitable as an Underlayment for:

- Vitreous, semi-vitreous or non-vitreous tile
- Ceramic, mosaic or quarry tile
- Impervious porcelain and glass tile
- Cement-based precast terrazzo
- Natural stone tile
- Carpet
- Wood, parquet
- Vinyl composition tile (VCT)
- Sheet vinyl flooring
- Laminated flooring

Suitable Substrates

- Absorbent concrete
- Non-absorbent concrete
- Lightweight concrete
- Gypsum-based underlayments
- Existing ceramic tile
- Cement terrazzo
- Exterior grade plywood
- OSB
- Cutback adhesive residue
- Resilient flooring

Composition of Product

LevelQuik® is a proprietary dry blend of copolymers, cements and inorganic chemicals.

Benefits of Product in the Installation

- Can be applied from feather edge to 1.5" (3.8 cm) thick in a single pour.
- Reduces bond failure 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 up to 24" (61 cm) per ASTM C627.

Limitations to the Product

- Do not bond directly to hardwood, Luan plywood, particle board, parquet, cushion or sponge-back vinyl flooring, metal, fiberglass or plastic. Contact CUSTOM technical services for recommendations.
- Do not use when the temperature is below 50°F (10°C) or above 90°F (32°C).
- Do not use as a permanent wear surface.
- Do not use on sloped surfaces that require drainage.
- Precautions should be taken when applying over post-tensioned concrete, pre-stressed concrete or prefabricated concrete planks. Contact CUSTOM technical services for further details.
- For installations over metal decks, contact CUSTOM technical services for recommendations.

Packaging

50 lb (22.68 kg) Bags

4 Technical Data

Applicable Standards

ASTM International (ASTM)

- ASTM C1708 Standard Test Methods for Self-leveling Mortars Containing Hydraulic Cements
- 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



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

Technical Chart

Property	Test Method	Typical Results
Pot Life		15 minutes
Flow Time		18 minutes
Compressive Strength at 28 days	ASTM C-109	>4,000 psi
Flexural Strength at 28 days	ASTM C-109	>800 psi (5.5 MPa)
Walkable Hardness		12 Hours
Robinson Test	ASTM C627	Extra Heavy
Time Before Installing Floor Covering		
Ceramic tile		18-24 Hours
Most Floor Coverings		30 Hours
Installed Density - Dry		approx. 118 lbs/cu ft

Environmental Consideration

Custom® Building Products is committed to environmental responsibility in both products produced and in manufacturing practices. Use of this product can contribute towards LEED® v3 certification:

- Up to 2 points towards MR Credit 5, Regional Materials

5 Instructions

General Surface Prep

USE CHEMICAL-RESISTANT GLOVES, such as nitrile, when handling product.

All surfaces must be structurally sound, clean, dry and free from contaminants that would prevent a good bond. Concrete must be fully cured. Refer to final flooring manufacturer's requirements for maximum moisture vapor transmission limitations. Concrete surfaces should be primed with [LevelQuik Latex Primer](#). Smooth concrete surfaces, existing glazed tile, terrazzo, or polished stone must be roughened or scarified. Concrete surfaces must be mechanically profiled and prepared by shotblasting, sandblasting, water-jetting, scarifying, diamond-grinding or other engineered approved methods (reference ICRI CSP 3 standards for acceptable profile height).

Bonding to Concrete Surfaces

Contaminants or curing compounds should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to moisture beyond the floor covering manufacturers' limits or hydrostatic pressure. Lightweight concrete surfaces must have a tensile strength in excess of 200 psi (1.4 n/mm²).

Bonding to Plywood Surfaces

Plywood floors, including those under resilient flooring, must be structurally sound and must meet all industry guidelines. For questions about proper subfloor installation, call CUSTOM Technical Services. A 2.5 lb/yd² metal lath must be fastened every 6" - 8" (15 - 20 cm) with fasteners that have a galvanized or corrosion-resistant coating over primed surfaces.

OSB Underlayments

OSB underlayments should be coated with 10-15 mils of [RedGard® Waterproofing and Crack Prevention Membrane](#) prior to priming with [LevelQuik Latex Primer](#). A 2.5 lb/yd² metal lath must be fastened every 6" - 8" (15 - 20 cm) with fasteners that have a galvanized or corrosion-resistant coating. A minimum of 1/4" (6 mm) of LevelQuik® ES can be applied over this properly prepared OSB.

Bonding to Gypsum Surfaces

Gypsum-based underlayments must obtain a minimum 2000 psi (13.8 MP) compressive strength. The underlayment must be sufficiently dry and properly cured to the manufacturer's specifications for permanent, non-moisture permeable coverings. Surfaces must be structurally sound and subject to deflection not to exceed the current industry standards. Surfaces shall be free of all grease, oil, dirt, dust, curing compounds, waxes, sealers, efflorescence, or any other foreign matter.

All Gypsum surfaces should be primed with a properly applied sealer or a primer coat of [RedGard](#), consisting of 1 part RedGard diluted with 4 parts clean, cool water. Mix in a clean bucket at low speed to obtain a lump-free solution. The membrane can be brushed, rolled or sprayed to achieve an even coat. Apply the waterproofing coat to the floor at a rate of 300 sq. ft./l (7.5 sq. m/L). Drying time depends on site conditions, but is normally less than 1 hour. Extremely porous surfaces may require 2 coats. At this point, [LevelQuik Latex Primer](#) and LevelQuik® ES 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 industry guidelines.

Bonding to Cutback Adhesive

Adhesive layers must be removed. Use extreme caution; 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 of LevelQuik® ES.

Joints or Cracks in Substrate

Expansion joints and cold joints, as described in ANSI A108.01, should be carried from the substrate up through the tile or flooring surface and filled with an appropriate elastomeric sealant, such as [Custom's® 100% Silicone Caulk](#). For the proper treatment of control or saw cut joints and cracks for flooring, refer to ASTM F710. For tile installations, refer to TCNA Details EJ171, F125 & F125A. Contact Custom Technical Services for additional information.



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Mixing Ratios

Mix the entire 50 lb (22.68 kg) bag of powder with 5.25 - 5.75 quarts (5 - 5.4 L) of clean, cool water.

Mixing Procedures

Mix 50 lb. (22.68 kg) bag of powder with the appropriate amount of clean, cool water. Slowly add powder to water while mixing with a heavy-duty 1/2" (13 mm) electric drill and an "egg-beater" mixing paddle at minimum 650 RPM. Thoroughly mix for 2 minutes to a lump-free consistency. Do not overmix. Overmixing or moving the mixer up and down during the mixing process could trap air, which could shorten the pot life or cause pinholing during application and curing.

Application of Product

Apply [LevelQuik Latex Primer](#) according to the specifications in its technical data sheet prior to the application of LevelQuik ES.

Pour LevelQuik® ES, then spread with a long-handled gauged spreader. Will seek its own level during the first 20 minutes. For featheredging and touch-ups, use a smoothing tool. Can be applied up to 1.5" (3.8 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 second application. Dries to a walkable hardness in 12 hours. For pumping and large scale applications, contact Custom's® Technical Services Department for more information.

Curing of Product

Install non-moisture-sensitive ceramic tile or stone in 12 hours; all other floor coverings should be installed after 30 hours. Drying time can vary with temperature and humidity. Test for moisture content before applying vinyl or wood flooring to the surface of the self-leveler.

Cleaning of equipment

Clean with water before the material dries.

Health Precautions

This product contains Portland cement. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Use with adequate ventilation; do not breathe dust and wear a NIOSH-approved respirator. If ingested, do not induce vomiting; seek medical attention immediately.

Conformance to Building Codes

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

6 Availability & Cost

Location	Item Code	Size	Package
USA	LQESL50	50 lb (22.68 kg)	Bag
Canada	CLQESL50	50 lb (22.68 kg)	Bag

7 Product Warranty

Obtain the applicable **LIMITED PRODUCT WARRANTY** at www.custombuildingproducts.com/product-warranty or send a written request to Custom Building Products, Inc., Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured under the authority of Custom Building Products, Inc. © 2017 Quikrete International, Inc.

When LevelQuik® ES (Extended Setting) Self-Leveling Underlayment is used as a part of a qualifying full installation system of CUSTOM products, the installation can qualify for up to a lifetime system warranty. CUSTOM will repair and/or replace, at its discretion, the affected area of the system. For more information, find details and limitations to this warranty at custombuildingproducts.com.

8 Product Maintenance

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

9 Technical Services Information

For technical assistance, contact Custom technical services at 800-272-8786 or visit custombuildingproducts.com.

10 Filing System

Additional product information is available from the manufacturer upon request.

Expected Wear

Properly installed tile will last for more than 60 years.

Related Products

LevelQuik® Advanced Acrylic Primer



CUSTOM®

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Coverage

SQUARE FOOT COVERAGE PER 50 LB BAG (SQUARE METER PER 22.68 KG)

Thickness	Coverage (sq ft)		Coverage (sq m)	
	Min	Max	Min	Max
1/8" (3.2 mm)	46	48	4.3	4.5
1/4" (6.4 mm)	23	24	2.1	2.2
3/8" (9.5 mm)	15.3	16	1.4	1.5
1/2" (12.7 mm)	11.5	12	1.07	1.1
3/4" (19 mm)	7.7	8	0.72	0.74
1" (25.4 mm)	5.7	6	0.53	0.56
1 1/2" (38 mm)	3.8	4	0.35	0.37
2" (51 mm)	2.9	3	0.27	0.28

Chart for estimating purposes. Coverage may vary based on installation practices and jobsite conditions. For more sizes, use the material calculator at CustomBuildingProducts.com or contact CUSTOM Technical Services at 800-282-8786

