

AQUAFIN Inc.
 505 Blue Ball Rd. #160
 Elkton, MD 21921
 p: 410-392-2300
 f: 410-392-2324
 e: info@aquafin.net
 w: www.aquafin.net



Technical Datasheet



LEVEL-One EZ

Synthetically-engineered cementitious self-leveling underlayment
Clean, Prime and Pour!

CSI Div. 03

03 54 00 Cementitious Underlayment

LEED Points

MR Credit 5.1, Regional Materials.....Up to 2 Points
 IEQ Credit 4.2, Low-Emitting Materials Paints and Coatings...1 Point
 Using this AQUAFIN product can help contribute to LEED certification of projects in the categories shown above.

Product Description:

LEVEL-One EZ is a polymer-modified, self-leveling cementitious underlayment synthetically-engineered for leveling, smoothing and repairing interior concrete substrates and non-water soluble adhesive residue on concrete prior to the installation of finished floor coverings. LEVEL-One EZ provides a durable, flat, smooth floor surface with minimum labor and installation time. It can be poured or pumped when mixed with water and seeks its own level to produce a smooth, flat, hard surface.

Advantages:

- No mechanical preparation required for pedestrian traffic and light commercial applications. Just clean, prime, and pour!
- Walk on in 4 hours.
- Can be installed from 1/4" - 2" (6.3 mm - 50.8 mm) neat.
- Compatible with in-floor radiant heating systems.
- Suitable for vinyl, carpet, wood, ceramic and other floor covering systems.
- Compatible with sound attenuation systems.

* always follow floor covering manufacturers' recommendations

Substrate Preparation:

- Substrates must be of load bearing capacity, cleaned (i.e. sand or scrape if necessary, sweep, vacuum, etc.), and dried. Ensure substrate is free from dirt, dust, grease, oil, sealers, curing compounds, laitance, loose toppings and foreign substances that may interfere with adhesion.
- After properly preparing the substrate, Aquafin strongly recommends "Anhydrous Calcium Chloride" testing as per ASTM F 1869-98 on slabs to be treated, to determine the MVER (moisture vapor emission rate) in lbs/24hrs • 1000 ft² (grams/hr. • m²). Alternately determine RH content (%) as per ASTM F 2170. Note: MVER fluctuates within slab areas, and can have significant seasonal variations (i.e. in Nov./Dec. 6 lbs and in July/Aug. 16 lbs or more). When using LEVEL-One EZ as an underlayment with other finished floor systems (such as resilient, VCT and ceramic), always follow manufacturers' recommendations regarding maximum allowable MVER and RH content prior to installation. In cases where MVER and RH exceed allowable levels, Aquafin recommends installation of a suitable Aquafin moisture-reduction barrier, i.e. VAPORTIGHT COAT-SG2, SG3 or SG4. Once the barrier is cured, apply Aquafin SLU-PRIMER before the application of LEVEL-One EZ.
- All expansion and control joints should be properly repaired prior to the installation of LEVEL-One EZ.
- All adhesive residue must be tested to make certain it is not water-soluble. Water-soluble adhesives must be removed mechanically down

Technical Properties:	
Physical state	Powder
Color	Gray
Flammability	Flame Spread: 0 Fuel Contribution: 0 Smoke Development: 0
LEVEL-One EZ Mixed	
Mix ratio (water:powder)	~4.5 - 4.75 qts. water: 50 lbs powder (4.3 - 4.5 L : 22.7 kg)
Application temp. range	50°F to 95°F (10°C to 35°C)
Working time	~15 - 18 minutes
Open to foot traffic	~4 hours
Physical Properties: The values stated are applicable with ambient temperatures of 73°F (23°C) and 50% rh. Higher temperatures shorten the processing time, lower temperatures extend processing times.	
Compressive strength ASTM C 109	~1,250 psi (8.6 MPa) @ 24 hrs ~2,700 psi (18.6 MPa) @ 7 d >4,100 psi after (28.3 MPa) @ 28 d
Storage/Shelf Life/Packaging	
Cool and dry, 6 months in original sealed packaging	50 lb bags (22.7 kg)
Approximate Yield per 50 lb (22.7 kg) Bag	
1/4" (6.35 mm)	approx. 21 ft ² (1.9 m ²)

to clean concrete. Non-water-soluble adhesives must be scraped to a thin, well-bonded residual as recommended by the Resilient Floor Covering Institute (www.rfci.com) to remove thick areas and adhesive build-up. If adhesive residue is not well-bonded to the concrete or is brittle, powdery or otherwise weak, it must be completely removed by mechanical means down to clean, sound, solid concrete.

- Fill and repair deep areas, holes or cracks with appropriate Aquafin concrete repair materials.
- Wood floors must satisfy local building codes and be free from deflection. Wood floors that exhibit any deflection will require the use of mesh in the LEVEL-One EZ.

Priming:

- Prime all substrates with SLU-PRIMER or EPOXY-Primer. Refer to relevant technical datasheet for proper application instructions.

Note: Low substrate temperatures and/or high humidity will result in longer drying times for primers.

Mixing:

Mixing Ratio: ~4.5 - 4.75 qts. water: 50 lbs powder
(4.3 - 4.5 L : 22.7 kg)

DO NOT OVERWATER. (Over-watering will cause segregation and low

LEVEL-One EZ

compressive strengths.)

- **Mixing:** Using the appropriate mixing ratio, combine LEVEL-One EZ powder and water using a high-speed mixer (~850 rpm) with an “egg-beater” mixing paddle. A typical mix consists of two bags of LEVEL-One EZ with the correct amount of water per bag. Mix to a homogenous, lump-free consistency for approximately 2.5 minutes. Do not over mix. Over mixing can cause air entrapment, which can shorten pot life and/or cause pinholing during application and curing.
- **Pumping:** LEVEL-One EZ is suitable for pumps that utilize either batch or inline mixing. For inline mixing/pumps, ensure hose used on pump is a minimum of 100 ft long. Mixer and pump must be in good working condition. Periodic cleaning of pumping equipment is required per the manufacturer’s instructions. Be sure to pressure-test rotor and stator before mixing. To ensure a suitable mix and flow, test mixed material from the pump hose’s end in a small test area before general application. Once mixed, pour material onto the substrate immediately to maximize material flow and placement time.

Application Notes:

- Read all instructions thoroughly prior to installation.
- Ensure substrate and ambient room temperatures are between 50°F and 95°F (10°C and 35°C) before application. Temperatures must be maintained within this range for at least 72 hours after the installation of LEVEL-One EZ.
 - Application of LEVEL-One EZ over large areas can be made easier and more efficient by using conventional piston, rotor-stator or underlayment type pumps (contact Aquafin’s Technical Services Department for recommendations).
 - For best results provide a continuous flow of wet material, this will avoid trapping air or creating cold joints.
 - Set the width of the pour at a distance that is ideal for maintaining a wet edge throughout placement. Quickly pour or pump LEVEL-One EZ in a ribbon pattern onto the properly prepared and primed surface.
 - LEVEL-One EZ has an approximate working time of 15 - 18 minutes at 73°F (23°C). Temperature and humidity will affect working time, flowability and setting time.

Application:

- Immediately after placing LEVEL-One EZ, spread the material using a suitable gauge rake to assist in achieving the desired depth. Apply enough material to adequately cover all high points with a minimum of 1/4” (6.3 mm) of material. Follow with a suitable smoother to de-aerate the LEVEL-One EZ. To prevent pinholing or surface dimpling, it is acceptable to use a spiked roller.
- Deep applications should be done in lifts of 1 1/2” (38.1 mm) at a time. Please contact Aquafin Technical Department for assistance.

Curing:

- LEVEL-One EZ L2 is self drying, do not wet cure or use curing or sealing compounds. Refer to Dry Time Requirements for Floor Coverings Table prior to installing flooring systems.
- To facilitate drying, ensure rooms where LEVEL-One EZ is installed have air circulation without introducing heavy drafts across the floor. Temperature and humidity impact drying time, therefore the use of a moisture meter is recommended to verify readiness for flooring. Multiple areas should be surveyed to ensure dryness throughout. Use of a Delmhorst G-79 and a reading of 5% moisture content or lower, or a GE® Protimeter moisture meter such as the Surveymaster or Aquant. In the RF (Radio Frequency) mode a reading of 180 or lower indicates suitable dryness for any floor covering.

Dry Time Requirements for Floor Coverings	
Breathable Flooring Systems	
Depth	Dry time required before installing flooring
0 - 1”	16 hours (next day)
1” - 2”	36 hours (1.5 days)
Non-Breathable/Impervious Flooring Systems	
Depth	Dry time required before installing flooring
0 - 1/2”	24 hours
1/2” - 1”	48 hours
>1”	48 hours plus 36 hours for each additional 1/2”
Dry times indicated at 70°F (21 °C) and above. Double the dry time for every 10°F (12°C) below 70°F (21 °C) (to 50°F (10°C) minimum).	

Limitations

- For interior use only.
- Do not use in areas where extended or repetitive exposure to moisture is anticipated – such as bathrooms, locker rooms, showers, kitchens, etc.
- Turn off radiant heating systems 24 hours prior to and after installation.
- Avoid walking on installed surface for at least 4 hours after installation, depending upon temperature and humidity conditions.
- LEVEL-One EZ is not designed as a finished permanent wearing surface, but may be exposed to rolling dynamic loads (i.e. fork/scissor lifts during construction) after minimum 72 hours following installation at 1/4” (6.3 mm).
- Provide for expansion and control joints where specified, including the perimeter of the room, columns, supports and equipment pedestals. **NEVER BRIDGE EXPANSION AND CONTROL JOINTS**, always ensure such joints are honored completely through LEVEL-One EZ and primer. Where control or expansion joints do not exist in the substrate, provide for them in the system per design professionals recommendations.
- Never install LEVEL-One EZ over particleboard, chipboard, hardboard (Masonite), Luan panels, metal, asbestos, gypsum-based patching materials or any other non dimensionally stable materials.
- Not suitable as a substrate for epoxy coatings
- In cases where moisture vapor emission is an issue, always mitigate the substrate prior to application of LEVEL-One EZ with VAPORTIGHT COAT-SG2, SG3 or SG4. Never install a moisture barrier product over LEVEL-One EZ.

Note:

Proper application is the responsibility of the user. Field visits by Aquafin personnel are for the purpose of making technical recommendations and not for supervising or providing quality control on-site.

Clean-up:

Promptly wash hands and tools with water before material hardens. Cured material must be removed mechanically.

Storage & Shelf Life:

Store cool and dry, 6 months in unopened, undamaged bags.

Safety:

Refer to SDS.

KEEP OUT OF REACH OF CHILDREN.

LIMITED WARRANTY: AQUAFIN, INC. warrants its products for a period of one year from the date of installation, to be manufactured free of defects and to be consistent with its standard high quality. We will replace or, at our election, refund the purchase price of, any product which is proven to be defective, provided that the product was properly applied. Our product recommendations are based on Industry Standards and testing procedures. We assume no warranties either written, expressed or implied as to any specific methods of application or use of the product. AQUAFIN, INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN, INC. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.

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