

Premium Plus - Moisture Vapor Retarder / Surface Strengthenener

UZIN PE 460

2-component reaction resin

DESCRIPTION:

Two component epoxy resin moisture vapor retarder for concrete substrates with high residual moisture. UZIN PE 460 can also be used as a surface hardener for absorbent substrates and as a bonding agent.

SUITABLE FOR:

- ▶ Interior & exterior use
- ▶ Use as a MVR over mechanically prepared concrete substrates up to 100% RH*
- ▶ Surface consolidation of weak substrates
- ▶ Bonding over abraded ceramic tile, stone and terrazzo surfaces, existing substrates with adhesive residues (including water soluble adhesive residues), smoothing compounds, certain metals and non-absorbent surfaces
- ▶ Use with UZIN KR 518 two-component joint filler
- ▶ Fast-track installations with the addition of UZIN Epoxy Accelerator* (3.5 hr. dry time)
- ▶ Use with radiant floor heating systems (obtain technical advice)

*See "Application Instructions" for additional information.



FEATURES AND BENEFITS:

- ▶ Water and solvent free • Easy application, very low odor
- ▶ Water and frost resistant • Excellent protection from the elements
- ▶ Alkali resistant • Controls substrate conditions up to pH of 14
- ▶ Compliant with ASTM F3010 • Meets standard practice requirements for moisture mitigation systems under resilient floor coverings

TECHNICAL DATA:

Packaging	1 gal. / 4.2 kg / 3.8 l metal combi-can (Comp. A & B) 2.5 gal. / 10.5 kg / 9.5 l metal combi-can (Comp. A & B)
Storage	min. 12 months
Color	Comp. A: blue, Comp. B: green A/B mixed: green
Color, dry	green
Coverage	see coverage chart
VOC	< 5 g/L
Pot life	10-15 minutes*
Drying time	Set to foot traffic & load bearing: 21 hrs* @ 50 °F (10 °C) 8 hrs* @ 68 °F (20 °C) 5 hrs* @ 86 °F (30 °C)
Working time	25-30 minutes*
Minimum application temperature	50 °F (10 °C) at floor level
Frost resistance for 5 cycles	-13 °F (-25 °C)

*At 70 °F (21 °C) and 65 % relative humidity. Surface profile and porosity, application depth, temperature, and humidity will affect dry time and coverage.



EXTENDED APPLICATIONS:

- ▶ EP levelling compound when mixed with UZIN Perl sand 0.8 or quartz powder mix
- ▶ EP mortar when mixed with special filler UZIN XS 3.2, strength class SR-C35-F10 according to DIN EN 13 813
- ▶ primer prior to bonding work with epoxy-, PUR- or silane-based adhesives

PRODUCT PROPERTIES:

2-component epoxy resin moisture vapor retarder for concrete substrates with high residual moisture. UZIN PE 460 can also be used as a surface hardener for absorbent substrates and as a bonding agent.

Coverage chart:	
One coat application: (approx.*)	108 sq. ft. (10 m ²) per 1 gal., on CSP 3 270 sq. ft. (25 m ²) per 2.5 gal., on CSP 3 *Actual coverage may vary depending on substrate conditions
Two coat application: (approx.*)	108 sq. ft. (10 m ²) per 1 gal. (1st coat), on CSP 3 270 sq. ft. (25 m ²) per 2.5 gal. (1st coat), on CSP 3 216 sq. ft. (20 m ²) per 1 gal. (2nd coat) 540 sq. ft. (50 m ²) per 2.5 gal. (2nd coat) *Actual coverage may vary depending on substrate conditions

SUBSTRATE PREPARATION:

The subfloor must be structurally sound, solid, dry, free from active cracks, clean, and free of all contaminants, including but not limited to dust, grease, oil, paint, wax, curing, and sealing compounds, or cleaning solution residue that would impair adhesion. If necessary, mechanically prepare and clean the surface by grinding, shot blasting, or sanding, and thoroughly vacuum off all loose material and dust following OSHA recommended guidelines. Do not use sweeping compounds. Any weakly bonded or soft surface material, such as loose patching compounds, leveling compounds, floor coverings, or coatings, must be removed. Do not apply this product over any acid-etched or chemically abated adhesive surfaces. Wood substrates must provide a rigid base and be securely fastened without excessive vertical movement. The surface of the wood must be clean and free of oils, grease, wax, dirt, varnish, shellac, and any contaminants that would impair adhesion. If necessary, sand down to bare wood. Do not apply UZIN products directly to fire-retardant or pressure-treated wood surfaces. Please refer to the UZIN Substrate Preparation Guide for additional information.

CAUTION: Inhalation of asbestos dust may cause asbestosis or other serious bodily harm. Do not sand, grind, or disturb any surface or adhesive residue that may contain asbestos or lead, as harmful dust may result. Refer to the Resilient Floor Covering Institute's publication "Recommended Work Practices for Removal of Resilient Floor Coverings" for instructions.

Substrate Moisture Testing and Assessment

Evaluate concrete substrates following ASTM F710 guidelines. Always reference the limitations of the UZIN products, floor covering, and adhesive manufacturers' guidelines. If these limitations are in conflict, the most stringent requirements shall apply.

APPLICATION:

- Optimum product application conditions are 60–77 °F (16–25 °C) and relative humidity below 65%.
- Before use, allow the metal combi-can to acclimate to room temperature.
- Remove the small black plastic clip from the metal band, positioned between the top and bottom containers. Unfasten the metal band and dispose of. Using a screwdriver or similar long pointed object, pierce the plastic plug on the top of the metal combi-can (container: part B). Ensure that object used pierces through both the plastic plug and the base of the top container (part B). Do this several times to create holes that will allow the top container contents (liquid hardener: part B) to drain completely into the bottom container contents (resin: part A). Do not twist or bend piercing object from side-to-side as it will distort the base of top container (part B) preventing all the liquid hardener from draining into the bottom container (part A). NOTE: It is very important that all the hardener is completely mixed into the UZIN PE 460 resin. DO NOT MIX PART QUANTITIES.
- Remove the now empty top container (part B) and dispose of appropriately.
- Thoroughly mix solution in the bottom container (part A) using a heavy-duty drill (drill speed > 300 rpm should be maintained for a minimum of 2 minutes). Avoid high speed mixing to prevent entraining air into solution.
- After mixing solution in the metal container (part A), empty entire contents into a separate clean plastic container (UZIN Mixing Bucket, 8 gal.) ensuring that all of the solution around the base and walls of the original metal container (part A) is incorporated. NOTE: If you intend to use UZIN Epoxy Accelerator to accelerate the setting process of UZIN PE 460, this product should be added at this stage.
- Mix the solution for a second time (drill speed > 300 rpm should be maintained for a minimum of 1 minute).
- Immediately after mixing, pour the entire contents of UZIN PE 460 out of the plastic container.
- Spread UZIN PE 460 evenly across the substrate using your chosen application method. When installing UZIN PE 460 as a mitigation membrane, a one coat application of UZIN PE 460 requires material to be installed using either a flat v-notched 3/32" x 3/32" x 3/32" stainless steel trowel or notched squeegee. UZIN PE 460 can also be used as a surface consolidator over weak substrates. It can also be used to coat over thin water-based and solvent-based adhesive residues (not when applied as a mitigation membrane).

10. Immediately back roll material (90 degrees to the direction of squeegee / trowel coat) using an UZIN Nylon Fiber Roller pre-saturated in UZIN PE 460 solution. Seal the entire surface as missed spots will make the material ineffective. To minimize possible air entrainment roll material at a smooth even pace.
11. Standard concrete prepared to CSP 3 should be coated with UZIN PE 460 at 108 sq. ft. per U.S. gal. UZIN PE 460 moisture vapor retarder must be installed at a uniform layer thickness of at least 14 mils (0.1 perms).
12. Allow for epoxy to cure for approx. 5–21 hours, depending on ambient conditions.
13. Apply UZIN PE 280 Super-Fast Primer over the cured surface of PE 460 using an UZIN Nylon Fiber Roller. For subsequent self-leveling or patching depths that do not exceed 1/2" (12.5 mm), PE 280 can be covered after approx. 45 minutes. For self-leveling or patching depths not exceeding 1" (25 mm), PE 280 must be allowed to cure for a minimum 12 hours. When applying UZIN self-leveling compounds in excess of 1" depth, a two coat application of UZIN PE 460 must be made, requiring material to be installed using an UZIN Nylon Fiber Roller for each surface coat. When the first surface coat is dry to accept foot traffic, apply the second coat rolled at 90 degrees to the direction of the first coat (not later than 24–36 hours). To visually differentiate between the two coats, mix approximately 3 ozs. of UZIN Epoxy Colorant (red color) into the second coat solution. You must grit-bind by broadcasting sand over the second coat of UZIN PE 460, while it is still wet. Liberally broadcast clean, dry sand, # 20 (ASTM U.S. Sieve Number) to point of refusal. Approximate sand coverage 160 sq. ft. (15 m²) per 100 lb. bag (45 kg). After the application has set, vacuum off any loose sand. Always use the sand broadcast system when installing Hardwood Flooring (over suitable UZIN self-leveling compounds).
14. Clean tools immediately after use with mineral spirits.
15. Product has a minimum 12 month storage life in original packaging when stored indoors in dry conditions.

CAUTION: Epoxy materials can become extremely hot and may react by foaming in the container approx. 20–30 minutes after mixing, especially when there is more than 20 % of mixed product left in the container. UZIN PE 460 solution must not be left unattended in the container after mixing. If all of the UZIN PE 460 contents are not emptied from the second mixing container (see "Application" instruction # 8), it is very important that this be moved outdoors immediately to allow any residues to react. Always wear personal protective equipment when handling this material (see hazard label and SDS).

"Fast-track" installations (using UZIN Epoxy Accelerator)

FOR EXPERIENCED USE ONLY

To accelerate the setting process of UZIN PE 460, 1 bottle of UZIN Epoxy Accelerator per 1 gal. container or 2 bottles of UZIN Epoxy Accelerator per 2.5 gal. container can be added. The Accelerator will shorten the working time to 4–6 mins (1 gal. PE 460) & 5–8 mins (2.5 gal. PE 460) and allow for covering after approx. 3.5 hours, at 70 °F (21 °C) and 65 % relative humidity.

Attention: Limited working time must be closely observed. Higher temperatures will shorten working time considerably.

IMPORTANT NOTES:

- ▶ High temperatures will accelerate drying.
- ▶ Low temperature will delay drying.
- ▶ Do not apply to wet surfaces. Observe surface temperature at a minimum 5°F (3°C) above the dew point with temperature on the rise during application.
- ▶ Concrete subfloors should be at least three days old and visually dry before applying UZIN PE 460. A two-coat application is always recommended on highly absorbent or very porous substrates.
- ▶ Excessive moisture in moisture-sensitive subfloors such as plywood, OSB or gypsum based products must not be coated for moisture mitigation.
- ▶ UZIN PE 460 must be gritted with clean, dry sand, # 20 (ASTM U.S. Sieve Number) or primed with UZIN PE 280 when covered with any self-leveling material or mortar product (see: "Application" instruction # 13). Product must not be used as a finish wear surface. It must always be covered.
- ▶ When using UZIN PE 280, substrate conditions (surface profile, (surface profile, density or surface strength, in-service use) are recommended to be qualified before application of UZIN products that will exceed 1/2" (12.5 mm) depth. UZIN PE 460 reaction resin gritted with a broadcast of clean, dry sand #20 (ASTM U.S. Sieve Number) should be considered. Please call UZIN Technical Department regarding your specific job site condition.
- ▶ While substrate porosity can affect application appearance, it does not affect the product performance.
- ▶ Do not acid-etch surfaces or apply UZIN PE 460 over chemically abated surfaces.
- ▶ The maximum dry time from the initial application is 72 hours. Ensure the PE 460 surface remains clean, remove any dust or contamination before applying PE 280.
- ▶ This product is designed to reduce moisture vapor diffusion from concrete substrates. It will NOT prevent damage to the flooring caused by lack of moisture control from other sources. All other sources of moisture caused by leaks, broken pipes, poor drainage, subsurface hydrologic factors, etc., must be eliminated prior to installation.

- ▶ The following standards, regulations and notices are applicable and especially recommended:
 - ASTM F710 "Standard Practice for Preparing Concrete Floors To Receive Resilient Flooring".
 - ASTM F3010 "Standard Practice for Two Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings"
 - ASTM F2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes"
 - ASTM F1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"

SEALS OF QUALITY & ECOLABELS:

- ▶ Solvent-free

COMPOSITION:

Polyamine-hardened epoxy resin.

PROTECTION OF THE WORKPLACE AND THE ENVIRONMENT:

Read and follow all safety and environmental precautions and instructions on the packaging label and the Safety Data Sheet (SDS). The SDS is available at www.uzin.us.

DISPOSAL:

For disposal and recycling, follow the applicable laws and regulations. When possible, avoid or minimize waste generation. Do not allow the material to get into sewers, waterways or unlined ground surfaces. Empty packaging can be recycled.

INDOOR AIR QUALITY INFORMATION

Certification: SCS Indoor Advantage™ Gold

VOC content: < 5 g/L, compliant with SCAQMD rule 1113

VOC emission: Conforms to the CDPH Standard Method (CA 01350) V1.2-2017; 5.0 mg/m3 or less TVOC emission.