Product Datasheet

Premium Plus - Surface Strengthener / MVR

UZIN PE 414 TURBO

1-Component Reaction Resin

DESCRIPTION:

UZIN PE 414 Turbo is a ready-to-use, rapid-drying, moisture-cure polyurethane resin offering various application properties.

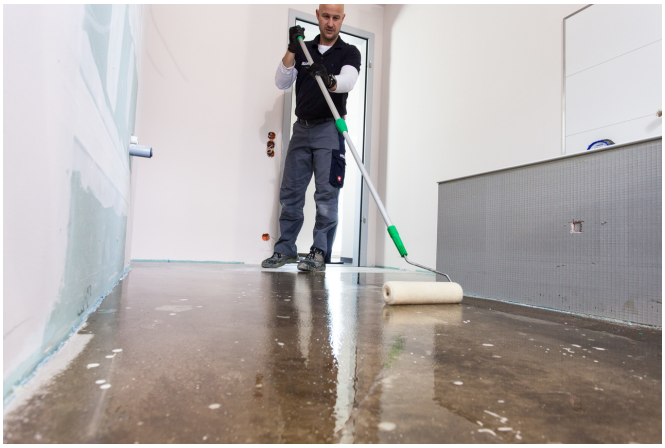
SUITABLE FOR:

- Interior use only
- Use as a moisture vapor retarder over concrete substrates up to 98% RH*
- Non-porous and absorbent surfaces
- In renovation of weak and distressed substrate surfaces before leveling and floor covering
- Use over concrete, portland and gypsum underlayments, plywood, OSB, well bonded adhesive residues (including water soluble adhesive residues), metal
- pH barrier over concrete substrates up to pH 14
- As a priming system with sand broadcast
- Residential and commercial applications
- Use with radiant floor heating systems up to 85% RH*

*See “Application” for additional information.

FEATURES AND BENEFITS:

- pH Barrier • Single coating protection 5-14 pH
- Fast drying • Minimal downtime
- Consolidates weak surfaces • Improved strength at the bond line of floorcovering systems
- Low viscosity • Easy roller application and excellent surface penetration



TECHNICAL DATA:

Packaging	1 gal. / 4.5 kg / 3.8 l plastic pail 2.6 gal. / 11.6 kg / 9.8 l plastic pail
Storage	min. 12 months
Color, wet	red
Color, dry	red
Coverage	see coverage chart
VOC	< 5 g/L
Drying time	40–90 minutes*
Minimum application temperature	50 °F (10 °C) at floor level 60-80 °F (16–27 °C) on radiant heat systems
Frost resistance for 5 cycles	-4 °F (-20 °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.

LEED® contributing product

UZIN PE 414 TURBO

EXTENDED APPLICATIONS:

- hardener primer for weak, porous or cracked substrates
- bonding primer prior to installation with levelling compounds

PRODUCT PROPERTIES:

1-component fast drying polyurethane formula for use as a surface strengthener, consolidator, and MVR (up to 98% RH).

Coverage rate: (approx.*)	150-580 sq. ft. / pail (1 gal.) 13-53 m² / pail (1 gal.) 390-1,500 sq. ft. / pail (2.6 gal.) 34-139 m² / pail (2.6 gal.)

*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 contaminates 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.

Guidelines for UZIN PE 414 Turbo Application and Surface Preparation

UZIN PE 414 Turbo applications are recommended to be covered within 72 hours of application. If more than 72 hours has elapsed since the last coat of PE 414 Turbo, you must abrade the surface before applying additional coats, UZIN PE 280 primer, or direct bonding with wood flooring adhesives. Abrade the surface using 36-60 grit sandpaper, then thoroughly vacuum and clean it. Wipe down the vacuumed surface with a clean, slightly damp microfiber cloth, rinsing the cloth frequently.

APPLICATION:

1. Optimum product application conditions are 60–77 °F (16–25 °C) and relative humidity below 65%.
2. Before use, allow product to acclimate to room temperature.
3. Thoroughly shake container.
4. Pour required amount of liquid into a clean bucket.
5. Apply a full, even thin coat of UZIN PE 414 TURBO (4 mils) onto the subfloor using a UZIN nylon roller sleeve. Thick applications MUST be avoided; this will produce unwanted foaming during cure, leaving a weak surface.
6. Avoid any pooling.
7. Coverage rate up to approx. 580 sq. ft. per gal. See Application Chart.
8. Allow product to dry completely.
9. If used as a moisture vapor retarder (up to 98% RH), it is always necessary to apply two coats. A: After first coat is ready for foot traffic (approximately 60 minutes), B: Apply second coat.
10. Prime with UZIN PE 280 before applying UZIN self-leveling compound, patching compound, and thinset mortar.
11. Alternatively, PE 414 TURBO may be utilized as a priming system with a full broadcast of sand for UZIN self-leveling compounds when applied over:
    - non-porous surfaces
    - PE 414 TURBO cured (first coat) on porous surfaces or plywood
    - PE 414 TURBO cured two-coat moisture vapor retarder system
    - PE 460 cured

    Follow Application #1 thru #7, and while wet, immediately after application, broadcast clean, dry sand (ASTM sieve size #20). Apply sand at a rate of approximately 160 sq. ft. (15 m2) per 100 lb. bag (45 kg) to the point of refusal, completely covering the wet surface (beached) without dark spots. Allow for drying. Squeegee, broom, and vacuum to remove all loose sand leaving a gritted surface. Apply UZIN self-leveling compound.
12. Product has a minimum 12-month storage life in original packaging when stored indoors in dry conditions.

The above information is based on our experience and testing. Uzin Utz North America, Inc. is not responsible for the variety of associated materials and variable construction and working conditions that occur on jobsites. The quality of your work depends on your own professional judgment and product usage. If in doubt of any application recommendation or instruction, conduct a small test or obtain technical advice. Observe the installation recommendations of the floor covering manufacturer. The publication of this Product Data Sheet invalidates all previous product information. us.uzin.com | 01/2025

UZIN PE 414 TURBO

APPLICATION CHART:

Substrate	Application Equipment	Dry Time (approx. per coat)*	Spread Rate (approx.)
Dense to slightly absorbent surfaces	UZIN Nylon Fiber Roller Item #9394	40–90 mins*	Up to 580 sq. ft. (53 m²) per gal.
Absorbent surfaces	UZIN Nylon Fiber Roller Item #9394	40–90 mins*	Up to 460 sq. ft. (42 m²) per gal.
Highly absorbent surfaces (existing gypsum SLC, patch, and concrete)	UZIN Nylon Fiber Roller Item #9394	40-90 mins*	Up to 150 sq. ft. (13 m²) per gal.
Existing surfaces with well-bonded adhesive residues	UZIN Nylon Fiber Roller Item #9394	40–90 mins*	Up to 580 sq. ft. (53 m²) per gal.

*At 70 °F (21 °C) and 65 % relative humidity and dependent on application quantity.

IMPORTANT NOTES:

- Tightly reseal opened packaging and use the contents as quickly as possible.
- High humidity will accelerate drying.
- Low humidity 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.
- High humidity will shorten the drying times.
- On highly absorbent surfaces, the application of a second coat should be considered in preliminary calculations.
- In the case of moisture values higher than 98% RH and 18 lbs. MVER, select UZIN PE 460.
- 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 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”.

COMPOSITION:

Moisture-curing, modified polyurethane prepolymers.

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 1113

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

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