Epoxy 400 isolation coat, 175 conductive ground plane, and 375

1.0 Moisture Vapor Emissions/Alkalinity Precautions

1.1 All interior concrete floors not poured over an effective moisture vapor retarder meeting ASTM E 1745 Standard Specification for Plastic Water Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs and ACI 302.2R Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials are subject to possible excessive moisture vapor transmission and excessive relative humidity (above 85%) that may lead to blistering and failure of the coating system. It is the applicator's responsibility to conduct ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes to determine if excessive levels of moisture are present before applying any cementitious polyurethane mortars. Arizona Polymer Flooring and its sales agents will not be responsible for cementitious polyurethane mortar failures due to undetected excessive moisture vapor emissions or excessive relative humidity. Consult APF for information on moisture remediation products.

2.0 Surface Preparation

2.1 Concrete surfaces must be clean, dry, and structurally sound.

2.1.1 Mechanically abrade concrete substrate via shot blasting or scarification. Termination, transition, penetrations and other confined concrete surfaces must be diamond ground with a coarse #12 to #16 disk and meet the International Concrete Repair Institute ICRI Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers Coatings and Polymer Overlays CSP 3 to CSP 5.

3.0 Application of the Epoxy 400 Isolation Coat

3.1 Mix only the amount of material that can be spread during the pot life of the product – 35 minutes for regular cure and 15 minutes for fast cure.

3.2 Pre-mix the Part A well before adding the Part B using a low-speed drill with a clean Jiffy type mixer.

3.3 Add (2) Parts A to (1) Part B by volume and stir well for 2-3 minutes using a low-speed drill with a clean Jiffy type mixer.

3.4 Recommended coverage rate is 160 square feet per gallon (10 wet mils). Pour the mixed material immediately onto the floor in ribbon strips. Brush-trim the edges and spread the poured material using a notched trowel or squeegee. Follow by backrolling with a 3/8" nap roller that has been de-shedded. Applicators on the application area should wear spiked shoes.

4.0 Electrical Grounding

4.1 It is required that StatRez Nano be applied in direct, uninterrupted contact with properly prepared grounding points. Metal floor joints, metal equipment bases and steel columns or posts may be used if they have been electrically tested to conform continuity with an earth ground. A minimum of one grounding point per every 1000 square feet of electrically dissipative or conductive flooring is sufficient for proper dissipation of static electricity.

4.2 Adhesive-backed copper grounding tape is typically used as a grounding point from the floor to the ground source. Copper tape can also be used to bridge control joints around columns or different concrete slabs. Copper tape and the StatRez Nano cannot be expected to maintain integrity over expansion joints that experience wide movement.

4.3 Installation – Use the copper tape to make an electrical connection with the green wire or grounding portion of an electrical outlet. A 4-inch portion of the copper tapeis adhered to the cured epoxy 400 isolation coat. Run the remaining tape up the wall and attach it to the electrical outlet.

4.4 Alternate Installation – Drop a No. 10 or 12-gauge copper wire inside the wall from any convenient ground bus so that the wire emerges at the floor/wall junction. At this point, a small hole cut into the drywall or chipped out of the concrete should allow the copper wire to emerge. The copper tape grounding strip is then intertwined, or soldered to, the stranded copper wire. If intertwined, use conductive adhesive tape to secure the copper tape with the copper wire. Insert the connection of the copper tape and wire into the wall. The balance of the copper tape grounding strip, typically 4-inches, is then adhered to the epoxy 400 isolation coat.

4.5 The copper tape can be used to make ground connections with steel columns. The copper tape is adhered to the floor and run up onto lightly sanded steel column or base. Drill and tap a hole into the steel column or base, then secure the copper tape using a machine screw and washer.

5.0 Application of StatRez ESD Nano 175 Conductive Primer

5.1 StatRez ESD Nano 175 Conductive Primer should be applied after the Epoxy 400 isolation coat has cured overnight. If more than 24 hours elapses between coats, abrade the Epoxy 400 surface with 100-120 grit sandpaper or screen disc and thoroughly clean before proceeding to ensure inter-coat adhesion.

5.2 Mix only the amount of material that can be applied during the pot-life of the product, approximately 30-45 minutes in bucket.

5.3 StatRez ESD Nano 175 Conductive Primer is supplied in pre-measured kits. Do not split kits.

5.4 Pre-mix the Part A well, taking care to re-incorporate any settled pigment from the bottom of the container using a low-speed drill with a clean Jiffy type mixer. Mix until the Part A has a uniform consistency.

5.5 Add the Part B to the Part A and mix well for 2-3 minutes using a low-speed drill with a Jiffy type mixer, scraping the bottom and sides to ensure uniform consistency. DO NOT ADD WATER TO THIN as it will adversely affect conductivity.

5.6 Recommended coverage rate is 4-6 mils (265 – 400 square feet per mixed gallon).

5.7 Apply using a dip-and-roll method out of the bucket or pan using a 9-inch or 18-inch (1/4-inch or 3/8-inch nap) solvent resistant roller cover that has been de-shedded.

5.8 Ensure a uniform thickness by monitoring coverage rate and/or mil thickness gauge.

6.0 Application of StatRez 375 Nano

6.1 StatRez 375 Nano can be applied after the StatRez ESD Nano 175 has achieved dry-to-finish coat status (approximately 6 hours). If more than 24 hours elapses between coats, contact APF Technical Services as it is not recommended to sand the StatRez ESD Nano 175.

6.2 Mix only the amount of material that can be spread during the pot-life of the product, approximately 20 minutes.

6.3 StatRez 375 Nano is supplied in pre-measured kits. Do not split kits.

6.4 Pre-mix the Part A well before adding the Part B using a low-speed drill with a clean Jiffy type mixer.

6.5 Add the Part B to the Part A and stir well for 2-3 minutes using a low-speed drill with a clean Jiffy type mixer.

6.6 Recommended coverage rate is 80 square feet per gallon (20 wet mils). Pour the mixed material immediately onto the floor in ribbon strips. Brush-trim the edges and spread the poured material using a notched trowel or squeegee. Follow by backrolling with a 3/8" nap roller that has been de-shedded. Applicators on the application area should wear spiked shoes.