

## SYSTEM DESCRIPTION

APF ARMOR-REZ™ HD-EC is a five-component, high performance troweled epoxy mortar system consisting of a low viscosity epoxy resin combined with a proprietary blend of graded aggregates, with APF Stat-Rez® 375 Nano ESD finish coat. The Armor-Rez HD-EC system is engineered to be installed at 1/8 to 1/4-inch thickness. This system provides a very durable, wear-resistant, electrically conductive surface that complies with ANSI S20.20-2014, as well as other applicable ESD standards. It cures to a hard, impact-resistant flooring system with good abrasion and chemical resistance.

## PRODUCT USE

APF ARMOR-REZ HD-EC is designed for heavy use environments that require protection against impact and abrasion, with good chemical resistance as well as compliant electrostatic protection. It can also be used to resurface older or damaged floors. APF Armor-Rez HD-EC is used in heavy manufacturing facilities, aircraft maintenance facilities, automotive repair facilities, and traffic aisles where electrostatic charge reduction is required for personnel, rolling stock, and equipment.

## ADVANTAGES

- **NANO**WISE TECHNOLOGY provides exceptional ESD performance
- Eliminates problems of metal-oxide and carbon fiber products
- Highly reflective, easily cleaned surface
- Resistant to common industrial chemicals
- Monolithic, seamless, non-porous
- Can be metered and certified the next day after application

## USES

### Typical Uses

- Electronics Manufacturing and Assembly
- Military/ Aerospace/ Aircraft Hangars
- Hazardous Industries (dust or explosion hazards)
- Clean Rooms
- Pharmaceutical Facilities

## COLORS

|            |          |               |               |
|------------|----------|---------------|---------------|
| Adobe      | Sand     | Buff          | Hygiene Green |
| Light Gray | Sterling | Concrete Gray |               |
| Blue       | Black    | Slate         |               |

## TECHNICAL DATA

|  |   |
|--|---|
| Compressive Strength (ASTM C-579)  | 11,500 psi                                  |
| Tensile Strength (ASTM C-307)  | 2,500 psi                                   |
| Flexural Strength (ASTM C-580)   | 4,000 psi                                   |
| Impact Resistance (ASTM D-2794)  | 160 in/lb                                   |
| Taber Abrasion 1000 g load/1000 cycles/CS17 Wheel (Stat-Rez 375 Finish)  | <30mg                                       |
| VOC  | See Individual Component Data Sheet         |
| Electrical Resistance per ANSI S7.1 – 13   | $2.5 \times 10^4$ to $1.0 \times 10^6$ Ohms |
| Body Voltage Generation ANSI ESD 97.1  | <15 volts                                   |
| Meets ANSI S20.20 – 2014 Product Qualification & Compliance Verification <sup>2</sup> Certification available on request |   |
| See product data sheet for individual component for more information.  |   |

## SURFACE PREPARATION

Concrete must be cured 30 days and be clean, dry, and structurally sound. Surface must be shot blasted or diamond ground to achieve a minimum ICRI profile of CSP-3. Consult ICRI Technical Guidelines Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair for complete information. If the surface is diamond ground, use 20-30 grit diamonds and vacuum the floor to completely remove any concrete dust. Excessive dust in the pores of the concrete will compromise adhesion. Previously coated surfaces must be mechanically cleaned and abraded prior to application to achieve a clean, gloss-free and open texture.

## TYPICAL CHEMICAL RESISTANCE

- Fuels, Mild Acids, Caustics
- Hydraulic Fluid
- Brake Fluid
- Ethylene Glycol
- Motor Oil/Grease Lubricants

## Typical System Buildup

| Coat                              | Product   | Thickness/Coverage             |
|-----------------------------------|---|--------------------------------|
| Patching, Filling, Moisture Vapor | APF Epoxy 300 Flex Paste<br>APF VaporSolve System | As required                    |
| Primer                            | APF Epoxy 400                                     | 200 sq. ft./gallon             |
| Epoxy Mortar Base                 | APF Epoxy 400 & Trowel Grade Quartz               | 3/16 - 1/4-inch (4.75 - 6.3mm) |
| Intermediate Operation            | Grind Cured Surface                               | As Required                    |
| Grout Coat                        | APF Epoxy 400 Thixo                               | 180 - 225 sq. ft./gallon       |
| Conductive Ground Plane           | APF Stat-Rez 175 Nano                             | 265 - 300 sq. ft./gallon       |
| ESD Finish Coat                   | APF Stat-Rez 375 Nano                             | 100 sq. ft./gallon             |

## LIMITATIONS

- Refer to individual component product data sheets for specific limitations.
- Not inherently spark-proof if struck by steel tools. For spark-proof applications, see APF Armor-Rez™ HD-EC SPARK PROOF system.

## GROUNDING

APF STAT-REZ NANO 375 conductive and static-dissipative flooring systems are naturally self-grounding, and for most applications, no additional grounding is needed. Casual contact of the coating system with grounded structural elements in most cases is adequate. For critical processes and hazardous applications such as very low body voltage generation requirements and flammable liquids, powders, gases, & explosives, positive ground points are required. Refer to the APF Stat-Rez 375 Nano product data sheet for complete grounding information.

## CONCRETE MOISTURE

Test for concrete moisture in accordance with ASTM F2170 – 19. If moisture is indicated to be in excess of 85%, apply **APF Vapor-Solve®** system in accordance with the published technical data sheet. Consult APF Technical Service for further information.

## HANDLING & SAFETY

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used during application in confined areas. Avoid contact with skin; wear protective gloves. User must read and understand Safety Data Sheet before using. APF Safety Data Sheets are available at [www.apfepoxy.com](http://www.apfepoxy.com)

### Standard Warranty

ICP BUILDING SOLUTIONS GROUP, the owner of Arizona Polymer Flooring, warrants that the product is produced within specifications and is free from defect. No warranty shall be in effect until ICP Building Solutions Group Terms and Conditions of Sales are met, including payment and cooperative promotional considerations. ICP Building Solutions Group warrants that the covered product is free of defect and suitable for the specified purpose for a period of one (1) year from the date of shipment, provided the product is installed within its published shelf life, in strict conformance with specifications, and/or written project-specific installation guidance from authorized representation. ICP Building Solutions Group warrants only when product is handled, stored, mixed and applied in accordance with published recommendations. It is purchaser responsibility to initiate any claim against this warranty within a reasonable time. If determined by ICP that the product does not meet this warranty, the liability of ICP Building Solutions Group shall be limited to refund of the purchase price or provision of replacement product, neither needing to exceed the affected area as determined by a person authorized to perform technical representation for ICP Building Solutions Group. To obtain a replacement or refund the customer must provide written notice containing full details of the non-conformity suspected. The purchaser, owner or their representative shall notify ICP Building Solutions Group, in writing, within five (5) working days concerning any potential defect, or as needed before conditions deteriorate and increase repair costs. ICP Building Solutions Group reserves the right to inspect the non-conforming material prior to replacement. ICP Building Solutions Group may in its discretion refund the purchase price received by ICP Building Solutions Group in lieu of replacing the material. Except for the expressed warranty stated above, there are no other warranties, expressed or implied, including without limitation, any implied warranty of merchantability or fitness for purpose. ICP Building Solutions Group's obligation shall not extend beyond the obligations expressly undertaken above and ICP Building Solutions Group shall have no liability or responsibility to purchaser or any third party for any loss, cost, expense, damage or liability, whether direct or indirect, or for incidental or consequential damages. No customer, distributor, or representative of ICP Building Solutions Group is authorized to change or modify the published data sheets or this warranty in any way. No one is authorized to make oral warranties on behalf of ICP Building Solutions.