

ARMOR-STAT ESD FLOOR SYSTEM

IMPORTANT! Read these instructions carefully several days prior to starting your work. Seek answers to any questions you may have before you begin. DUR-A-FLEX, Inc. maintains a Technical Staff that will be glad to answer your questions and give you advice pertaining to your particular installation.

INSTALLATION OVERVIEW

The general steps required to install this system are:

1. Prepare the slab: shot blast, patch
2. Prime with DUR-A-GLAZE #4 ESD PRIMER
3. Install copper foil grounding tape
4. Install DUR-A-GARD ESD
5. Install ARMOR-STAT ESD TOPCOAT
6. Honor joints
7. Test resistivity at 24 hrs.

SURFACE PREPARATION

Surface must be sound, dry and perfectly clean, free of all oil, grease, detergent film, sealers and/or curing compounds. A surface profile of CSP 2 to 3 is appropriate for most applications. All epoxy coatings should be removed unless it is properly bonded, totally de-glossed, high quality epoxy. If going over existing coating apply DUR-A-GLAZE #4 with SUPER-STICK ADDITIVE. Upper level rooms, like mechanical rooms, bathrooms, or wet process areas that have space below should receive ELAST-O-COAT seamless fluid applied membrane. Please refer to the DUR-A-FLEX **Surface Preparation Guide** for detailed instructions. No epoxy coatings should be applied unless surface temperature is a minimum of 5 degrees F above dew point. See Dew Point Calculation Chart on our website for detailed instructions.

NOTE: For each application of material and before mixing, mark your batches to ensure you achieve your spread rate targets. This is best accomplished by dividing your target spread rate by the width of the area being coated (or your planned wet edge). Example: If your spread rate is 100 square feet and your area is 20 feet wide you would make a mark every 5 feet (100 divided by 20 = 5).

JOINT GUIDELINES

Refer to the **Joint Guidelines** on our website for complete details.

MIXING AREA

Select a convenient mix area and protect the surface from spillage by covering with a layer of cardboard and/or sheet of plastic. Be generous with the amount of space you allocate for this function. The more comfortably your

mixer works, the less likely you are to have a “mix error”. Make ready all necessary tools, mix and measure containers, etc. DO NOT MIX ANY EPOXY UNTIL READY FOR IMMEDIATE USE. Once hardener and resin are combined, it must be used without delay, working time is dependent on size of batch and the temperature of the floor and product. To obtain neat, straight, chip resistant edges at termination points and/or drains, a “keyed edge” must be installed.

PRE-PATCH

Pre-patch badly eroded, spalled or cracked areas. Use ELAST-O-COAT with NO-SAG #1 for moving joints, and DUR-A-GLAZE #4 mixed with NO-SAG #2 or FLINTSHOT for non-moving joints. BE SURE TO LEAVE AS LITTLE EXCESS AS POSSIBLE AS IT WILL BE HIGHLIGHTED IN SUCCESSIVE STEPS. Sanding or grinding pre-patch areas will help to hide deviations.

PRIMING WITH DUR-A-GLAZE #4 ESD PRIMER

All surfaces must be primed with DUR-A-GLAZE #4 ESD PRIMER as soon as the surface has been prepared. Due to the porosity of the concrete, the possibility of out gassing may occur after shot blasting, if this occurs, a second primer coat is needed.

1. Pre-mix hardener and resin components separately before combining.
2. DUR-A-GLAZE #4 ESD PRIMER is mixed 1 part Hardener to 2 parts Resin. Measure out 1/2 gallon of DUR-A-GLAZE #4 ESD PRIMER Hardener and 1 gallon of DUR-A-GLAZE #4 ESD PRIMER Resin. When combining, be sure to add the hardener first. Add the resin and scrape out the container. Be careful to pour both hardener and resin into the center of the mixing pail. Mix the blended epoxy with a slow speed power drill with a Jiffler mixing blade for 2 minutes. Always scrape the sides and bottom of the mixing bucket to assure thorough blending.
3. Pour a 4 to 6 inch “ribbon” of blended epoxy onto the floor (typically along the far wall or a joint). DUR-A-GLAZE #4 ESD PRIMER is typically applied at 200 Sq Ft per gallon to yield 8 mils DFT per coat with a 1/8” notched squeegee. Back roll with a quality non-shed 3/8” nap roller. While wearing spiked shoes, cross roll entire area as you go. Be sure to remove any impurities as you see them. It is much harder to cut or grind them out after the product has cured. Allow to cure.

COPPER FOIL TAPE INSTALLATION

Install Copper foil tape conductive adhesive to ground (such as metal support columns). Copper foil tape is available from McMaster-Carr Company (www.mcmaster.com). Dur-A-Flex, Inc. recommends using the 1/2" tape with conductive adhesive part number 76555A642. Copper foil tape should be installed across joints at each end of the slab and at one point per 1,000 square feet minimum.

QUALITY CONTROL

The color of DUR-A-GARD ESD resin may vary slightly from batch to batch. It is recommended that the lot number on the side of the resin pail be checked, if lot numbers are different, segregate and apply each lot contiguously to minimize slight color variations on the floor.

BODY COAT WITH DUR-A-GARD ESD

After priming with DUR-A-GLAZE #4 ESD PRIMER and installing Copper foil tape to grounds, apply DUR-A-GARD ESD.

1. Pre-mix hardener and resin components separately before combining.
2. DUR-A-GARD ESD is mixed in a 1part Hardener to 3 parts Resin mix ratio. Measure out 1/2 gallon of DUR-A-GARD ESD hardener and 1 1/2 gallons of DUR-A-GARD ESD resin. When combining, be sure to add the hardener first. Add the resin and scrape out the container. Be careful to pour both hardener and resin into the center of the mixing pail. Mix the blended epoxy with a slow speed power drill with a Jiffler mixing blade for 3 minutes. Always scrape the sides and bottom of the mixing bucket to assure thorough blending.
3. Pour a 4 to 6 inch "ribbon" of blended epoxy onto the floor (typically along the far wall or a joint). DUR-A-GARD ESD is applied at 100 Sq Ft per gallon to yield 16 mils WFT per coat with a 3/16" notched squeegee and then back rolled with a quality non-shed 3/8" nap roller. While wearing spiked shoes, cross roll entire area as you go. Be sure to remove any impurities as you see them. Allow to cure.

TOPCOAT WITH ARMOR-STAT ESD TOPCOAT

ARMOR-STAT ESD TOPCOAT ARMOR-STAT ESD is typically applied with a 1/8" notched squeegee.

1. Pour ARMOR-STAT ESD hardener into a 2 gallon bucket. Pre-mix the Armor-Stat resin with a Jiffler for 30 seconds. Add ARMOR-STAT ESD resin to the hardener and mix for 30 seconds. Add ARMOR-STAT ESD Powder slowly and mix for another 30 seconds. Slowly add ARMOR-STAT ESD Grit and continue mixing for an additional 30 seconds. Pour a 4 to 6 inch "ribbon" of the mixed ARMOR-STAT ESD on the floor (typically along the far wall or a joint) and apply using a 1/8" notched squeegee. (NOTE: Best results are achieved

when the points of the squeegee are slightly worn.) Immediately back roll with a quality non-shed 3/8" nap roller. While wearing spiked shoes, cross roll entire area as you go. Spread at a rate of 350 sq. ft. per kit. Allow to cure.

IMPORTANT: Use a mil thickness gage at regular intervals to ensure proper thickness of 3 – 4 mils.

2. Occasionally remix ARMOR-STAT ESD TOPCOAT in tray or bucket with a stick to prevent settling of the grit/powder.

TESTING RESISTIVITY

Once ARMOR-STAT ESD TOPCOAT has cured for 24 hours at 70°F, resistance readings should be taken to ensure the floor is reading properly. DUR-A-FLEX, Inc. recommends using the OHM-STAT RT-1000 Megohmmeter from Static Solutions. Floor readings should be tested at 100V and read between 10⁶-10⁹ Ω/Square.

IMPORTANT!

Increasing room temperature to accelerate cure is not recommended, a slight reduction (3°-5°F) from reasonable room temperature may help reduce out gassing. Special care should be given to avoid surface contamination. USE SIGNS AND BARRIERS to keep traffic out of the area. Do not allow any water on coated surface for 24-48 hours, depending on temperature. Chemical spillage must be prevented for approximately 5 days. **NOTE:** Use DUR-A-SOLVE for clean up. This product is suitable for applications between 60° and 85° F concrete slab temperature.

DO NOT THIN DUR-A-GLAZE #4 ESD PRIMER OR DUR-A-GARD ESD WITH SOLVENT.

CAUTION

As with all chemical products, individuals may have different reactions to exposure to specific products. This is dependent upon many factors, including the individual's personal characteristics, the size of the installation, the ventilation available, the intensity of the exposure or the length of the exposure. Individuals may experience discomfort during the installation process of one product, but not another.

In some cases this is experienced as a skin irritation and in others it is experienced as an inhalant irritation. Typically, it disappears once the exposure is eliminated. In some cases people can become "sensitized" to a product and experience the discomfort every time there is exposure without Personal Protective Equipment ("PPE").

To protect yourself from various exposures or discomfort during the mixing and application of our products, we recommend covering exposed skin including, using gloves, long sleeves, safety glasses and a respirator such as the 3M 8577 P95 Universal Disposable Carbon Respirator or a cartridge respirator.

Use only as directed. KEEP OUT OF REACH OF CHILDREN.

Before using any DUR-A-FLEX, Inc. Product, be sure the Safety Data Sheet is read and understood.