

### PRODUCT DESCRIPTION

Stonkote ESD is a seamless, self-leveling, conductive high build coating that provides outstanding static control properties along with the high performance and durability associated with Stonhard products. Stonkote ESD provides a smooth, easy to clean surface and has excellent chemical and abrasion resistance. This system is applied at a thickness of 0.5 to 0.6 mm.

The Stonkote ESD system is a three-component, self-leveling, epoxy formulation consisting of resin, curing agent and selected, graded aggregates that provide conductivity throughout the entire system thickness.

### USES, APPLICATIONS

Stonkote ESD flooring systems can be used to control static electricity. It is especially necessary in electronics manufacturing, packaging, assembly and test facilities, and in installations of highly sensitive electronic equipment. Since Stonkote ESD is seamless and easy to maintain, it is ideal for clean environments. Stonkote ESD is also perfect for static control applications that also require chemical and abrasion resistance.

### SUBSTRATE

Stonkote ESD, with the appropriate primer, is suitable for application over concrete, wood or metal. Not recommended on asphalt, brick, quarry tile, mastic or painted surfaces. These must first be removed by mechanical means to expose the substrate prior to priming and overlayment.

### SYSTEM OPTIONS

#### Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in heights from 5 to 15 cm are available. When coating the coves you will need to use Stonkote GS4/HT4 or Stonseal PA7. Do not use the liquids from the flooring system to coat the coves.

#### Moisture Barrier

To ensure long-term adhesion to concrete slabs in the absence of a proper vapor barrier, the use of Stonhard's Stonfil OP2 grouting system or StonDri MVT is required with strict adherence to application instructions.

### PACKAGING

Stonkote ESD is packaged in units for easy handling. Each unit consists of 2 cartons:

- 1 carton containing:
  - 2 foil bag of Amine
  - (2) c.a. 4 liter can of Resin
- 1 carton containing:
  - 2 bags of Part C aggregate

### PHYSICAL CHARACTERISTICS

<b>Tensile Strength</b> (ASTM C-307)	32.7 N/mm <sup>2</sup>
<b>Flexural Strength</b> (ASTM C-580)	42.4 N/mm <sup>2</sup>
<b>Flexural Modulus of Elasticity</b> (ASTM C-580)	1,9 x 10 <sup>3</sup> N/mm <sup>2</sup>
<b>Hardness</b> (ASTM D-2240, Shore D)	70 to 75
<b>Abrasion Resistance</b> (ASTM D-4060, CS-17)	0.08 gm max. weight loss
<b>VOC Content</b> (ASTM D-2369, Method E)	10 g/l
<b>Cure Rate</b> (at 25°C)	12 hours for initial set 24 hours for normal operations

**Note:** The above physical properties were measured in accordance with the referenced standards. Samples of the actual floor system, including binder and filler, were used as test specimens.

### COVERAGE

Each unit of Stonkote ESD will cover approximately: 18.6 m<sup>2</sup> at a thickness of 0.5 - 0.6 mm.

### STORAGE CONDITIONS

Store all components of Stonkote ESD between 21 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

### COLOR

Stonkote ESD is available in 9 standard colors. Refer to the Stonkote ESD Color Sheet.

### SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond and system performance. The substrate must be dry and properly prepared utilizing mechanical methods. Questions regarding substrate preparation should be directed to your local Stonhard representative or Technical Service.

**Note:** Since Stonkote ESD is a free-flowing system, it is essential that the installation surface be flat. When going over a rough substrate, it is important that any holes be patched prior to installation.

### PRIMING

The prepared substrate must be completely sealed utilizing the appropriate Stonhard priming system. Standard/SL Primer or Stondri MVT are the recommended priming systems under Stonkote ESD.

## MIXING

1. Premix the can of resin for 30 seconds using a drill and c.a. 4 liter jiffler mixer.
2. Empty the entire contents of one can of resin and one foil bag of amine into a mixing pail and mix for 60 seconds with a slow speed drill (400-600 rpm) and a c.a. 7,5 ltr to 20 ltr Jiffy Mixer.
3. Add the contents of one of the bags of Part C to the mixing pail and continue to drill mix for 120 seconds until the material is uniform.

After mixing, Stonkote ESD will have a working time of approximately 30 minutes at 21 °C. The working time will vary depending upon temperature.

## APPLYING

1. Pour the mixed Stonkote ESD onto the floor in a bead.
2. Distribute the material using a black 0.4 mm rubber squeegee.
3. Once the material is spread you should back roll with a microfiber/medium nap roller to eliminate the squeegee lines.
4. A loop roller should be used to eliminate the roller lines and rolled perpendicular to the microfiber roller.
5. Roll with a spiked roller to help in air release.

For further details regarding mixing or applying of Stonkote ESD, refer to the Stonkote ESD Direction Sheet.

## STATIC CONTROL PROPERTIES

Stonkote ESD has been specifically designed to comply with the ANSI/ESD S20.20 specification for the protection of electrical and electronic parts, assemblies and equipment.

**Surface Resistance** ..... <1.0 megohms (ESD-S7.1)

**Body Voltage Generation** ..... <100 volts\* (ESD STM97.2)

*\* Body Voltage Generation is not solely a function of flooring conductivity but is a combination of many factors, including footwear and environmental conditions. Your specific environment and choice of footwear may yield slightly different results.*

Electrostatic Discharge (ESD) flooring has a variety of applications from microchip manufacturing to military ordinance. Therefore, each facility may have unique resistance requirements based on their individual ESD programs. It is important to identify the resistance requirements and test method used for each project prior to installing any ESD flooring

## ELECTRICAL TESTING

The floor must be tested 24 hours after the application of Stonkote ESD. Point-to-point and point-to-ground readings should be taken. All values must fall below  $1.0 \times 10^6$  ohms ( $\Omega$ ).

**Note:** Stonhard tests all floors in accordance with the ESD S7.1 test method. Various other ESD standards and test methods are available and they each have their own unique parameters. Please contact the Stonhard's technical service department if you wish to use a different test method.

## RECOMMENDATIONS

- DO NOT attempt to install the material if the temperature of the Stonkote ESD components is above 30 °C. High temperatures will cause the material to harden more quickly than desired. Conversely, if the temperature of the components is 21 °C or lower, Stonkote ESD will not flow and level properly.
- Do not use water or steam in the vicinity of the application. Moisture can seriously affect the working time and other properties.
- Application equipment must be cleaned immediately after use with scouring pads and warm, soapy water, or acetone.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles or safety glasses and impermeable gloves are required.
- Use only with adequate ventilation.

## NOTES

- All material on-site must be counted and all lot numbers recorded. If more than one lot number of Part B (resin) is found, provisions must be made for blending the different lot numbers to produce one uniform color. Contact Stonhard's Technical Service Department for additional details
- Detailed instructions on application and installation can be found in the Stonkote ESD Directions.
- Procedures for maintenance of the flooring system during operations are described in the Stonkleen Floor Cleaning Procedures Brochure.
- Specific information regarding chemical resistance is available in the Stonkote ESD Chemical Resistance Guide.
- Safety Data Sheets for Stonkote ESD are available on line at [www.stoncor-europe.com](http://www.stoncor-europe.com) under Products or upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related to our flooring products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.
- The appearance of all floor, wall and lining systems will change over time due to normal wear, abrasion, traffic and cleaning. Generally, high gloss coatings are subject to a reduction in gloss, while matte finish coatings can increase in gloss level under normal operating conditions.
- Surface texture of resinous flooring surfaces can change over time as a result of wear and surface contaminants. Surfaces should be cleaned regularly and deep cleaned periodically to ensure no contaminant buildup occurs. Surfaces should be periodically inspected to ensure they are performing as expected and may require traction-enhancing maintenance to ensure they continue to meet expectations for the particular area and conditions of use

**IMPORTANT:**

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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