PRODUCT DESCRIPTION

Stonkote ESD is a two-component, epoxy coating designed for areas requiring electrostatic discharge (ESD) properties. It is formulated to improve cleanability and control static charge generation. Stonkote ESD is easily applied and hardens to an attractive gloss finish. When tested according to EN 1081, this system measures a resistance lower than 1,000,000Ω (Ohms).

USES, APPLICATIONS

Stonkote ESD is a static control coating designed for use wherever a high-solids, chemically resistant, gloss coating is required. It may be applied over various sealed surfaces. Some applications of Stonkote ESD are:

- Data Centers requiring conductivity over appropriate primer(s)
- Over a Stonclad mortar system, combining the durability of Stonclad with a conductive gloss finish
- In conjunction with Stonclad ESD to provide an optional aesthetic improvement while maintaining respective resistance readings

PRODUCT ADVANTAGES

- Durable, gloss finish permits easy cleaning and maintenance
- Factory proportioned packaging ensures consistent, high quality and simplified mixing
- Static charge generation control even in low humidity environments
- Conductivity in a single layer allows for easy repair and maintenance
- Texture options providing slip resistance

PACKAGING

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

Stonkote ESD

1 carton of Stonkote ESD containing:
4 foil bags of Amine
4 poly bags of Resin

COVERAGE

Stonkote ESD coverage is 55 m^2 per unit over a smooth surface at 150µm wet film thickness (WFT). Proper thickness is required to achieve conductivity readings. *Material applied thinner than 150 µm may have higher resistance readings than specified.*

STORAGE CONDITIONS

Store all components of Stonkote ESD between 18 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.

COLOUR

Stonkote ESD is available in 8 standard colours. Custom colours are available upon request. Due to conductive elements in the material not all light colours are possible. Monument Gray is the lightest recommended colour. Please refer to the Stonkote ESD Colour Sheet for more information.

PHYSICAL CHARACTERISTICS

Pot Life ..... 20 minutes (@ 25°C)
Coverage .....55 m^2 per unit (@ 150 µm, WFT)
Cure Rate ..... 8 hours for light traffic (@ 25°C) 24 hours for normal operations
VOC Content ..... Stonkote ESD 44 g/l (ASTM D-2369, Method E)

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.

STATIC CONTROL PROPERTIES

Stonkote ESD has been designed and tested to comply with ANSI/ESD S20.20 and IEC 61340 specifications for protection of electrical and electronic parts, assemblies, and equipment.

Resistance to Earth ..... <$1.0x10^6$ ohms(Ω) (EN1081, Method B)
Resistance Point to Point .....<$1.0x10^6$ ohms(Ω) (EN1081, Method C)
Body Voltage Generation ..... <100 volts* (ESD STM97.2)

*Body Voltage Generation is not solely a function of floor conductivity and may vary based on environmental conditions and choice of footwear.

Electrostatic Discharge 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. Conductive flooring is one part of this larger program. These requirements and relevant test methods may be specified according to internationally recognized standards such as IEC 61340 or ANSI/ESD S20.20.

ELECTRICAL TESTING

After the Stonkote ESD is tack-free it must be tested for conductivity. Resistance-to-earth and point-to-point readings should be taken, with average values falling below $1.0x10^6$ ohms(Ω) at 100V according to EN-1081.

Note: Various other ESD Standards and test methods are available, with their own unique parameters and testing devices. Please contact Stonhard's Technical Service department if you wish to use a different test method.

Note: Stonkote ESD side-by-side with the same Stonkote or Stonseal colour may look slightly different due to conductive elements in the ESD.

SUBSTRATE

Stonkote ESD is a thin-mil coating and is not designed to be installed directly over a concrete substrate. It is required to be installed over a smooth, sealed surface, like Primer 150 or a cured layer of Stonkote HT4. If installing over Stonclad, the Stonclad should first be sealed with Stonkote HT4. If installing over a broadcast-texture surface like texture 3 or texture 8 it is recommended to apply the Stonkote ESD directly over the broadcast layer. If a substrate other than a trowelled mortar base, Stonkote HT4, or existing polymer system is being considered, contact Stonhard's Technical Service Department for recommendations.

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.

PRIMING
For applications over concrete, Primer 150 is recommended to seal the concrete substrate. Stonkote ESD may then be applied over the cured Primer 150. Applications over Stonclad mortars like Stonclad GS or HT should first be sealed with Stonkote HT4. Stonkote ESD can be applied to the cured Stonkote HT4 within 24 hours. Follow application instructions for Primer 150, Stonkote HT4, and/or Stonclad mortar systems appropriately prior to applying Stonkote ESD.

MIXING
- Stonkote ESD is supplied in factory proportioned quantities.
- To achieve thorough and proper mixing, the Stonkote ESD must be mechanically mixed using a heavy-duty, slow speed drill (400 to 600 rpm) with a Jiffy Mixer.
- Add one bag of Stonkote ESD resin and one bag Stonkote ESD amine and thoroughly mix for one minute. Be sure to fully remove contents from each component bag to ensure consistency. Use of a bag squeezer (87019) is recommended to achieve this as the materials contain conductive elements that must be removed from the packaging and mixed well.
- Avoid high-speed mixing that will entrain air into the mix.

APPLYING
- The ESD must be applied immediately after mixing the two components.
- Stonkote ESD is applied with a rubber squeegee and medium nap roller. The roller is used to remove squeegee lines and smooth out the surface.
- The substrate and material temperatures must be above 16°C before installing. Installing Stonkote ESD in colder conditions can lead to poor aesthetic finish and higher resistance than specified.
- Any questions regarding the application of Stonkote ESD should be directed to Stonhard's Technical Service Department.
- Note: Proper coverage is important to ensure that the floor will maintain good static control properties. Wet film thickness should be at least 150 microns to achieve proper conductivity.
- Use of grounding plates are necessary to discharge static buildup to ground. These grounding plates are available in standard copper "L" strips and can be mounted to equipment, walls, or support columns.

ELECTRICAL TESTING
- After curing (next-day) the floor should be tested to validate electrical conductivity. The floor should be tested using a digital megohmmeter according to EN 1081 Method B and C. Use Stonhard's Static Control Report to record the resistance values. Readings should fall below 1,000,000Ω (Ohms) at 100V.

NOTES
- Procedures for maintenance of the flooring system during operations are described in the Stonkleen Floor Cleaning Procedures Brochure.
- For environments not referenced in the Chemical Resistance Guide, consult Stonhard's Technical Service Department for recommendations.
- Safety Data Sheets for Stonkote ESD are available online at www.stonhard.com under Products or upon request.
- A staff of technical service engineers is available to assist with product application or to answer questions related to Stonhard products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.
- The use of safety glasses and impervious gloves is required during application.
- Avoid contact with all liquid amine and resin as they may cause skin and/or eye irritation. Workmen should cover hands with rubber gloves.
- Use only with adequate ventilation. A P3 dust mask must be worn during all grinding and sanding steps.
- 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.

CE MARKING
The harmonized European Standard EN 1504-2 “Products and systems for the protection and repair of concrete structures – Part 2: Surface protection systems for concrete” gives specifications for products for the various principles presented under EN 1504-9.

Products which fall under this specification must be CE labelled as per Annex ZA. according to the scope and relevant clauses there indicated to fulfil the requirements established under the Construction Products Regulation 305/2011.

CE
Stoncor Europe Rue du Travail 9 1400 Nivelles, Belgium 25
DOP.ESD.2025.02.02
Synthetic resin flooring for use internally as a surface improvement layer. Physical Resistance 5.1(C)

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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