

### PRODUCT DESCRIPTION

Stonblend ESD is a nominal 5 mm conductive and decorative trowelled mortar system. It is comprised of:

#### ATK Primer

A two-component conductive epoxy primer

#### Stonblend ESD Base

A four-component trowelled mortar consisting of epoxy resin, curing agent, coloured quartz silica and conductive aggregates.

#### Stonblend ESD Groutcoat

A two-component clear and conductive epoxy sealer.

#### Stonblend ESD Topcoat

A three-component, clear flat, high-performance, conductive, water-based polyurethane sealer.

### SYSTEM OPTIONS

#### Waterproofing

Where the total system must be waterproof, use of Stonhard's Stonproof ME7 membrane system with Texture #3 broadcast to refusal is required with a strict adherence to application instructions.

#### Cove Base

To provide an integral seal at the joint between the floor and the wall cove bases in heights from 5 to 15 cm are available. Suitable primer is ordered separately for cove base applications.

### PACKAGING

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

#### ATK Primer

- 1.2 units of Primer, each containing:
  - 1 plastic pail of Amine
  - 1 plastic pail of Resin

0.5 bags of Stonblend ESD Conductive Aluminium

#### Stonblend ESD Base

- 2 boxes of Stonblend ESD AB, each containing:
  - 6 foil bags of Amine
  - 6 poly bags of Resin
- 12 individual bags of Part C 1 Aggregate
- 1.5 bags of Stonblend ESD Conductive Aluminium

#### Stonblend ESD Groutcoat

- 1 box of Stonblend ESD Groutcoat, containing:
  - 2 foil bags of Amine
  - 2 poly bags of Resin

#### Stonblend ESD Topcoat

- 0.33 boxes of Stonblend ESD Topcoat, containing:
  - 1 foil bag of Isocyanate
  - 1 plastic pail of Polyol
  - 1 small jar of Conductive Part C

### COVERAGE

Each unit of Stonblend ESD will cover approximately 18.6 m<sup>2</sup> of surface at a nominal 5 mm thickness.

### STORAGE CONDITIONS

Store all components of Stonblend ESD between 16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life on Stonblend ESD Base and Groutcoat materials are three years in the original, unopened container. ATK Primer and Stonblend ESD Topcoat have a one-year shelf life in their original, unopened containers.

### PHYSICAL CHARACTERISTICS

Compressive Strength .....	30 N/mm <sup>2</sup>
(EN/ISO 604)	
Adhesion Strength .....	>1.5 N/mm <sup>2</sup>
(EN 13892 8) (cohesive failure of concrete substrate)	
Flexural Strength.....	18.7 N/mm <sup>2</sup>
(EN/ISO 178)	
Flexural Modulus of Elasticity .....	3.06 N/mm <sup>2</sup>
(EN/ISO 178)	
Hardness .....	85
(ASTM D 2240, Shore D)	
Abrasion / Wear Resistance .....	0.13g
(EN/ISO 9352)	
Impact Resistance .....	Class I
(EN/ISO 6272 1)	
Cure Rate .....	16 hours for foot traffic
(@25° C) .....	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. All sample preparation and testing are conducted in a laboratory environment, values obtained on field applied materials may vary and certain test methods can only be conducted on lab made test coupons.

### STATIC CONTROL PROPERTIES

Stonblend ESD has been specifically designed for the protection of electrical and electronic parts, assemblies, and equipment in compliance with EN 1081 - Resilient Floor Coverings - Determination of Electrical Resistance.

Surface Resistance .....<1.0 x 10<sup>6</sup> ohms (Ω)  
(EN 1081, triangle probes)

Electrostatic Discharge (ESD) flooring has a variety of applications from microchip manufacturing to military ordinance. Therefore, each facility may have unique 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 system.

Note: Stonhard verifies that Stonblend ESD meets the conductive threshold of "less than 1 megaohm" based on EN 1081 using triangle probes. Other ESD test methods may not attain the same results. Validate the test method and resistance requirement before installing ESD flooring.

## COLOUR

Stonblend ESD is available in 8 standard colours. Note that a standard colour used in Stonblend ESD will be a different appearance than if that same aggregate were used in a non-ESD Stonblend System like Stonblend GSI or Stonblend HDF.

## SUBSTRATE

Stonblend ESD, in conjunction with an appropriate primer where necessary, is suitable for application over properly prepared concrete, wood, brick, quarry tile, metal, or Stonset grouts. For questions regarding other substrates or an appropriate primer, contact your local representative or Technical Service.

## 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

An initial primer step before the ATK Primer may be necessary to prevent soak in of the ATK Primer. Questions regarding the necessity of primer should be directed to your local Stonhard representative or Stonhard Technical Service. Stonblend ESD is not trowelled into a wet primer like other Stonblend Products.

## MIXING

**Proper mixing is critical for the product to exhibit the proper application properties, cure properties and ultimate physical properties. Mechanical mixing using a JB Blender (or equivalent 20 L pail mixer) or a larger mortar mixer (e.g., a Baugh 3 Batch Mixer) is required. See Stonblend ESD Directions for further details.**

## APPLYING

- DO NOT attempt to install material if the temperatures of Stonblend ESD components are not within 16 to 30 °C. The cure time and application properties of the material are severely affected in temperatures outside these ranges.
- A suitable screed applicator is used to distribute the mixed Stonblend ESD Mortar onto the floor.
- Material must be applied immediately after mixing.
- Steel finishing trowels are used to compact and smooth the surface of the mortar material to the 5 mm finished thickness. Compact the mortar well and closed.
- Use of a power trowel to evenly distribute and compact the material is recommended. If using a power trowel, plastic blades are required to avoid burnishing or damaging the mortar during application.
- The cured surface of the mortar should not mechanically ground by diamond grinders. Use stones made from the same mortar material to address small imperfections in the mortar.
- Stonblend ESD Groutcoat is applied wet on wet to the floor and allowed to cure.
- Stonblend ESD Sealer is applied over the cured Groutcoat at a wet film thickness of 150 microns.
- Test & verify the conductivity of floor after each conductive layer is applied. Record results with the Stonhard Static Control Report.
- Detailed instructions on application and installation techniques can be found in the Stonblend ESD Directions.

## PRECAUTIONS


- Use these materials only in strict accordance with the manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- 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.
- In case of contact, flush area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- If material is ingested, immediately contact a physician. DO NOT INDUCE VOMITING.
- During prep-work of floor substrate or mixing of Stonhard product while adding aggregate, dust masks must be worn.
- Use only with adequate ventilation.

## NOTES

- All aggregate material on site must be counted and lot numbers recorded. If multiple lots of Stonblend Aggregate C-1 are found, then provisions must be made for blending the different lot numbers to produce one uniform colour. Contact Stonhard's Technical Service Department for additional details.
- 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 Stonhard Chemical Resistance Guide.
- Safety Data Sheets for Stonblend ESD are available online at [www.stonhard.com](http://www.stonhard.com) under Products or upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related to Stonhard products.
- Requests for literature can be made through local sales representatives and offices, or corporate offices located worldwide.
- The appearance of all floors, walls 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 because 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 13813 "Screed material and floor screeds - Screed materials - Properties and requirements" specifies the requirements for screed materials for use in floor construction internally. Resinous flooring systems as well as resinous screeds fall under this specification, they have to be CE-labelled as **per Annex ZA., Table ZA.1.5 and 3.3** and fulfil the requirements of the given mandate of the Construction Products Regulation no. 305/2011

	
StonCor Europe Rue du Travail 9 1400 Nivelles, Belgium  20	
EN 13813 Screed Material and Floor Screeds	
Synthetic resin flooring system for use in buildings (system as per Product Data Sheet)	
Reaction to Fire:	NPD*
Release of corrosive substances:	SR
Water permeability:	NPD*
Compressive strength:	C30
Flexural strength:	F15
Wear resistance:	AR0.5
Bond strength:	B2.0
Impact resistance:	IR4
Sound insulation:	NPD*
Sound absorption:	NPD*
Thermal resistance:	NPD*
Chemical resistance:	CRG**
*NPD: No Performance Determined **CRG: See Stonhard Chemical Resistance Guide	

### 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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### European Offices:

Belgium  
France  
Poland

+32 674 93 710  
+33 160 064 419  
+48 422 112 768

Spain  
Portugal  
United Kingdom  
East Europe

+34 933 623 785  
+351 227 535 642  
+44 1925 649 458  
+48 422 112 768

Germany  
The Netherlands  
Italy

+49 240 541 740  
+31 165 585 200  
+39 022 53 751

