

# Durex® Dur-A-Static ESD 100

## Intermediate Conductive Coating for Dur-A-Static ESD System

- Description** Durex® Dur-A-Static ESD 100 is a high-performance epoxy-based electrostatic discharge (ESD) intermediate conductive coating for the Durex® Dur-A-Static ESD flooring system. Durex® Dur-A-Static ESD 100 is designed for use as a static dissipative intermediate coating that, as a system, provides electric conductive resistance to protect sensitive electronic equipment and machinery. The system performs to a range of  $2.5 \times 10^4$  to  $1.0 \times 10^6$  ohms. The system consists of a priming/leveling layer which is then combined with conductive grounded copper wire, Durex® Dur-A-Static ESD 100 intermediate conductive coat and Durex® Dur-A-Static 200 Topcoat.
- Uses** Durex® Dur-A-Static ESD 100 is the Intermediate Conductive Layer for Durex® Dur-A-Static ESD 100 Electrostatic Discharge (ESD) flooring system to provide electrostatic control properties to concrete and other construction substrates. The system is recommended for floors in environments where static electricity and stray currents produced by friction could pose risks of explosions or interference with the working of precision electronic instruments.
- Ideal For**
- Data Processing Centers, Computer and IT-related rooms and processing facilities
  - Dry powder filling and handling facilities
  - Solvent handling facilities
  - Flammable gas handling locations
  - Aircraft and aerospace facilities and hangars
  - Pharmaceutical plants
  - Hospitals and health care facilities / laboratories
  - Electronic-based manufacturing facilities and production areas with electrically sensitive equipment
  - Computer, conductor and circuit board production areas
  - Explosion hazard facilities
- Features**
- Protects sensitive electronic parts from the effects of static charges by dissipating them away
  - Prevents explosions due to sparks of accumulated static charges by effectively conducting it away
  - Avoid errors in readings recorded by sensitive electronic instruments monitoring vital parameters
  - Enables easy maintenance of clean room environment through its seamless, pore-free smooth surface
  - Improves the working environment by its pleasant aesthetics
  - Conforms to ANSI S20.20,  $< 3.5 \times 10^7$  ohms when tested in accordance with ANSI STM 97.1
  - Available in conductive range ( $2.5 \times 10^4$  to  $1.0 \times 10^6$ ) ohms per ANSI/ESD S7.1/ASTM F-150
  - Low BVG, Body Voltage Generation
  - Maintain electrical resistance throughout coating thickness

### TECHNICAL DATA

PHYSICAL PROPERTIES		
	DUR-A-STATIC ESD 100	
Colour	Black	
Resin Type	Water-based Epoxy	
Mix Ratio	Part B (Hardener): Part A (Resin) 3:1 by volume	
Coverage	380-400 ft <sup>2</sup> /gal @ 4-5 mils WFT	
Cure Time @ 23°C	To recoat: 8-24 hours	
Pot Life @ 23°C	2 hours	
Recommended Film Thickness	4-5 mils WFT	
PERFORMANCE PROPERTIES	TEST METHOD	DUR-A-STATIC ESD 100
Percent Solids	ASTM D7232-06	55%
V.O.C.	ASTM D3960	0 g/L
Specific Gravity (Mixed)	ASTM D333	1.13 ± 0.05 g/L
Viscosity (Brookfield, 23°C)	ASTM D2196	1000-1500 cps
Abrasion Resistance	ASTM 5178-91 CS-17 wheel	
Tensile Strength	ASTM D638-86	
Compressive Strength	ASTM C579	
Adhesion to Concrete	ASTM D4541	> 350 Psi Concrete fails

<b>Packaging</b>	Durex® Dur-A-Static ESD 100 is packaged in 3.78 L (1 gal) kits.
<b>Storage Conditions</b>	Store Durex® Dur-A-Static ESD 100 in a dry, vented, waterproof location, stacked off the ground, out of direct sunlight and other detrimental conditions. <b>KEEP FROM FREEZING.</b>
<b>Surface Preparation</b>	<p>Durex® Dur-A-Static ESD 100 is to be applied over top of an appropriate specific primer as part of the Durex® Dur-A-Static ESD flooring system that has been electrically grounded with copper wire installed over top. Recommended primers are Durex® Epotel Multiprime and Durex® Epotel GSC. Please contact Durabond for appropriate copper tape.</p> <p>Surfaces to be coated must be free of dirt, oils, and any other contaminants that may prevent proper adhesion. Contact Durabond Technical Services for surface preparation methods of surfaces contaminated by oil or other materials.</p>
<b>Mixing Instructions</b>	Mixing shall be carried out in a clean, rust-free container, and mixed by a power drill at 400-500 rpm maximum. See the respective product data sheets for specific mixing ratios and instructions.
<b>Application</b>	<p><b>Isolation Layer Primer:</b> Refer to Durex® Dur-A-Static ESD system data sheet.</p> <p><b>Electrical Grounding:</b> Refer to Durex® Dur-A-Static ESD system data sheet.</p> <p><b>Intermediate Conductive Coat (Durex® Dur-A-Static 100 ESD):</b></p> <p>Durex® Dur-A-Static ESD 100 is supplied in proportionate quantities in two-component containers. The entire contents of the A component are emptied into the previously stirred B component. The two components are mixed until homogeneous for at least 2–3 minutes using a suitable low-speed mixing drill and a non-air entraining mixing paddle. The inclusion of air in the stirring process must be avoided. Durex® Dur-A-Static ESD 100 is poured onto the surface and spread very thin over the entire area using a rubber squeegee (consumption approx. 380-400 SF/ gallon) and rolled with a short pile roller (max. 8 mm) afterwards. To obtain a homogeneous good conductivity and correct curing, it is very important that the conductive layer is applied evenly over the whole area. No sand or thixotropic agent may be added and no sand shall be spread on the surface of the conductive layer. A value of &lt; 5.0 X 103 ohms should be achieved as per ANSI/ESD S7.1 or ASTM F-150.</p> <p><b>ESD Body Coat:</b> Refer to Durex® Dur-A-Static ESD system data sheet.</p>
<b>Limitations</b>	<p>Durex® Dur-A-Static ESD Flooring System shall not be installed under the following conditions:</p> <ul style="list-style-type: none"> <li>• Concrete slabs with a moisture content greater than 4% by weight</li> <li>• High-compression (super-plasticized) concrete slabs</li> <li>• Application temperature is less than 3 degrees Celsius above dew point</li> <li>• On-grade slabs and split concrete slabs with existing membrane coating</li> <li>• Minimum ambient and substrate temperatures: Below 10 degrees Celsius</li> </ul>
<b>Clean-up</b>	Wash tools and equipment immediately with mineral spirits. Wash all tools and equipment immediately with mineral Xylene or solvent-based cleaner. Allow any unused product to harden in container and discard according to local regulations.
<b>Health and Safety</b>	Use rubber gloves when handling the product. Avoid contact with eyes and prolonged contact with skin. Read published Safety Data Sheet prior to use and for additional information.
<b>Warranty</b>	Durabond warrants this product is free of manufacturing defects, and will replace at no charge, provided it has been applied within 12 months of purchase, it has been installed for uses suitable for this product and in accordance with the manufacturer's instructions.
<b>Technical Services</b>	Technical support is available upon request at <a href="mailto:info@durabond.com">info@durabond.com</a> . For the latest version of this data sheet, please visit our website at <a href="http://www.durabond.com">www.durabond.com</a> , call toll free at 1-877-DURABOND (387-2266) or speak with your Durabond Technical Coatings Ltd. sales representative.

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