

# Durex® Dur-A-Static ESD 250N

## High Chemical Resistant Novolac Epoxy-Based Topcoat for Dur-A-Static ESD System

<b>Description</b>	Durex® Dur-A-Static ESD 250N is a highly chemical resistant, Novolac epoxy-based ESD coating designed as the top coat for Durex® Dur-A-Static electrostatic discharge (ESD) flooring system. Durex® Dur-A-Static ESD 250N is designed for use as a highly chemical resistant, wear-resistant top coat in a static dissipative system that 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 250N Top Coat.
<b>Uses</b>	Durex® Dur-A-Static ESD 250N is the chemical-resistant top coat layer for Durex® Dur-A-Static ESD 250N 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.
<b>Ideal For</b>	<ul style="list-style-type: none"> <li>• Data Processing Centres, Computer and IT-related rooms and processing facilities</li> <li>• Dry powder filling and handling facilities</li> <li>• Solvent handling facilities</li> <li>• Hazardous industries with dust and explosion hazards</li> <li>• Aircraft and aerospace facilities and hangars</li> <li>• Pharmaceutical plants</li> <li>• Hospitals and health care facilities / laboratories</li> <li>• Electronic-based manufacturing facilities and production areas with electrically sensitive equipment</li> <li>• Computer, conductor and circuit board production areas</li> <li>• Explosion hazard facilities</li> </ul>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Protects sensitive electronic parts from the effects of static charges by dissipating them away</li> <li>• Prevents explosions due to sparks of accumulated static charges by effectively conducting it away</li> <li>• Avoid errors in readings recorded by sensitive electronic instruments monitoring vital parameters</li> <li>• Enables easy maintenance of clean room environment through its seamless, pore-free smooth surface</li> <li>• Improves the working environment by its pleasant aesthetics</li> <li>• Conforms to ANSI S20.20, <math>&lt; 3.5 \times 10^7</math> ohms when tested in accordance with ANSI STM 97.1</li> <li>• Available in conductive range (<math>2.5 \times 10^4</math> to <math>1.0 \times 10^6</math>) ohms per ANSI/ESD S7.1/ASTM F-150</li> <li>• Low BVG, Body Voltage Generation</li> <li>• Maintain electrical resistance throughout coating thickness</li> </ul>

### TECHNICAL DATA

PHYSICAL PROPERTIES	
	DUR-A-STATIC ESD 250N
Colour	Please see <i>Durex® Colour Selection Guide</i> for available colour options
Resin Type	Cyclo-aliphatic Epoxy
Mix Ratio	Part A (Resin): Part B (Hardener) 2:1 by volume
Coverage	88-130 ft <sup>2</sup> /gal @ 12-18 mils DFT
Cure Time @ 23°C	To touch: 8-12 hours Light traffic: 48 hours Fully cured: 7 days
Pot Life @ 23°C	20 minutes
Recommended Film Thickness	12-18 mils DFT

PERFORMANCE PROPERTIES	TEST METHOD	DUR-A-STATIC ESD 250N
Percent Solids	ASTM D7232-06	100%
V.O.C.	ASTM D3960	≤ 15 g/L
Specific Gravity (Mixed)	ASTM D333	1.25 ± 0.05 g/L
Viscosity (Brookfield, 23°C)	ASTM D2196	1000 cps
Abrasion Resistance	ASTM 5178-91 CS-17 wheel	75 mg loss, 1000 g load, 1000 cycles
Tensile Strength	ASTM D638-86	6,000 psi
Compressive Strength	ASTM C579	11,250N psi
Adhesion to Concrete	ASTM D4541	> 350 Psi Concrete fails
Shore D Hardness	ASTM D2240	80

<b>Packaging</b>	Durex® Dur-A-Static ESD 250N is packaged in 3.78 L (1 gal) and in 18.9 L (5 gal) kits. Durex® Dur-A-Static ESD 250N is available in limited standard colours. Limited custom colour matching can also be attained at an additional cost. Please refer to the <i>Durex® ESD Colour Selection Guide</i> for all available colour options.
<b>Storage Conditions</b>	Store Durex® Dur-A-Static ESD 250N 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 250N is to be applied over top of Durex® Dur-A-Static ESD 100, an Intermediate Conductive Coat that is vital to the Durex® Dur-A-Static ESD system. Durex® Dur-A-Static ESD 250N must be applied over top of Durex® Dur-A-Static ESD 100 within 8-24 hours of application. Please contact your Durabond representative for further details. Durex® Dur-A-Static ESD 100 must be installed over top of an appropriate primer that has been electrically grounded with copper wire installed over top. Recommended primers are Durex® Epotel Moisture-Block 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.  <b>Electrical Grounding:</b> Refer to Durex® Dur-A-Static ESD system data sheet.  <b>Intermediate Conductive Coat</b> Refer to Durex® Dur-A-Static ESD system data sheet.</p> <p><b>ESD Body Coat (Durex® Dur-A-Static 100 ESD):</b>  Apply Durex® Dur-A-Static ESD 250N over cured Durex® Dur-A-Static ESD 100 within an 8-24-hour window after application. Substrate and ambient temperatures must be above 10 degrees C. For best results, apply by squeegee followed by back-rolling. The notched squeegee should be 450 to 600 mm (18 to 24 in) long with 1.6 -3.2 mm (1/16 to 1/8 in) notches at 6.4 mm (1/4 in) intervals.  Typically, this type of squeegee used to apply sufficient material to achieve 12 - 18 mil thickness when back-rolled. Recommend to apply material along perimeter edges with 75 mm (3 inch) - 100 mm (4 inch) wide synthetic brush, followed by a lint-free 12 mm (1/2 inch) pile roller. Carefully organize the work with sufficient tradesmen to complete an entire section at natural break points.  Avoid stop and start lines within any one section. Ensure that the final stroke of the roller is always in the same direction and with the same pressure applied to the roller. Maintain a wet edge to prevent overlap marks and gloss differences. Divide the floor into sections that can be applied and completed without interruption. When ending a section, tape it off to form a clean, straight edge for an adjacent section.</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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