Durex® Dur-A-Static ESD Nano

Advanced Nano Technology - Self-Leveling Epoxy Electrostatic Dissipative Flooring System

Description

Durex® Dur-A-Static ESD Nano is a 1mm thick advanced Nano technology based, self-leveling epoxy electrostatic dissipative topcoat for Durex® Dur-A-Static electrostatic discharge (ESD) flooring systems. Durex® Dur-A-Static ESD Nano is designed for use as a high build, durable, wear resistant topcoat in a static discharge system that provides electrical resistance to protect sensitive electronic equipment and machinery. The system performs to the required electrical resistance as per ASTM F 150, which is sustained throughout the 1mm Durex® Dur-A-Static ESD Nano coating. The system consists Priming/leveling layer which is then combined with conductive grounding points and Durex® Dur-A-Static ESD Nano top coat.

Uses

Durex® Dur-A-Static ESD Nano is the 1mm self-leveling top coat for Durex® Dur-A-Static Electrostatic Discharge (ESD) Nano 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

- High Traffic Areas
- Data Processing Centers, Computer and IT related rooms and processing facilities
- Dry powder filling and handling facilities
- Solvent handling, flammable gas handling & explosion hazard facilities
- Aircraft & Aerospace facilities and hangars
- Pharmaceutical plants
- Hospitals and health care facilities / laboratories
- Electronic based manufacturing facilities & production areas with electrically sensitive equipment
- Computer, conductor & circuit board production areas

Features

- Abrasion Resistant, Self-Leveling, High-Build 1mm Coating
- Innovative ESD Nano Technology – Consistent Ohm readings
- 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.
- Low BVG Body Voltage Generation
- Maintain electrical resistance throughout coating thickness
- Dissipative ESD Performance - Conforms to (1.0×10^6 to 1.0×10^9) ohms per ANSI/ESD S7.1/ASTM F-150

TECHNICAL DATA

PHYSICAL PROPERTIES	
Colour	Please see Durex® ESD Colour Selection Guide for available colour options.
Resin Type	Specialized Epoxy Resin
Mix Ratio	Factory controlled Unit
Coverage	1.3 Kg per m^2 @ 1mm thick / 2.6kg per m^2 @ 2mm thick
Cure Time @ 23°C	To touch: 10-12 hours *Drying times will vary due to temperature* Foot traffic: 24-48 hours Total cure: 7 days
Pot Life @ 23°C	30 minutes
Recommended Film Thickness	40 mils (1mm) to 80mils (2mm)

	TEST METHOD	RESULTS
Percent Solids	ASTM D 7232-06	100%
V.O.C.	ASTM D 3960	0 g/L
Specific Gravity (Mixed)	ASTM D 333	1.3± 0.05 g/L
Viscosity (Brookfield, 23°C)	ASTM D 2196	3000 cps
Abrasion Resistance	ASTM 5178-91 CS-17 wheel	25 mg loss, 1000 g load, 1000 cycles
Tensile Strength	ASTM D 638-86	2,100 psi
Elongation	ASTM D638-86	8%
Compressive Strength	ASTM 695-85	67 MPa (9,770 psi)
Static Control	ASTM F150	1.0×10^6 to 1.0×10^9 ohms per ANSI/ESD S7.1 (ASTM F-150) - Dissipative
Shore D Hardness	ASTM D 2240	85

Coefficient of Friction (smooth finish)	ANSI A326.3 / BOT 3000e	Wet - 0.33	Dry - 0.90

Packaging

Durex® Dur-A-Static ESD Nano is packaged in an 18 kg combined kit. Durex® Dur-A-Static ESD Nano is available in restricted standard colours.

Storage Conditions

Store Durex® Dur-A-Static ESD Nano in a dry, vented, waterproof location, stacked off the ground, out of direct sunlight and other detrimental conditions. KEEP FROM FREEZING.

Surface Preparation

Surfaces to be coated must be free of dirt, oils, and any other contaminants that may prevent proper adhesion. Concrete to be prepared to ICRI CSP 3 by mechanical abrasion or shot blasting. Contact Durabond Technical Services for surface preparation methods of surfaces contaminated by oil or other materials.

Durex® Dur-A-Static ESD Nano is to be applied overtop of a primer, either Durex® Epotel 100 GSC or Durex® Duracrete SL. Durex® Dur-A-Static ESD Nano must be applied overtop of Durex® Epotel 100 GSC or Durex®Duracrete SL within 8-24 hours of application. Please contact your Durabond representative for further details. Electrical grounding must be installed overtop of the primer after cured and before the installation of Durex® Dur-A-Static ESD Nano.

Mixing Instructions

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.

Application

Concrete Primer: Refer to Durex® Epotel 100 GSC or Durex®Duracrete SL system data sheet

Electrical Grounding Points: There must be two grounding points for less than 1000 ft^2 and one extra grounding point per additional 1000 ft^2.

Self-Leveling ESD Body Coat (Durex® Dur-A-Static ESD Nano**):**

Apply Durex® Dur-A-Static ESD Nano over cured Durex® Epotel 100 GSC or Durex® Duracrete SL within an 8-24-hour window after application. Substrate and ambient temperatures must be above 10 degrees C. For best results, apply using a notched squeegee to a thickness of 1mm to 2mm followed by back-rolling with a spike roller to level the coating.

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.

Clean Up

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.

Limitations

Durex® Dur-A-Static ESD Nano Flooring System shall not be installed under the following conditions:

- Concrete Slabs with a moisture content greater than 4% be weight
- High Compression (super-plasticized) concrete slabs
- Application Temperature is less than 3 degrees Celsius above dew point
- On-Grade Slabs & Split Concrete Slabs without existing vapour barrier
- Minimum Ambient and Substrate Temperatures: Below 10 degrees Celsius.

Health and Safety

Use rubber gloves and protective clothing at all times when handling the product. Avoid contact with eyes and prolonged contact with skin. Keep away from children. Read published Safety Data Sheet prior to handling, use and for additional information.

Warranty

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.

Technical Services

Technical support is available upon request at *info@durabond.com*. Data sheets are subject to change without notice. Please visit our website at *www.durabond.com* for the most current information, or call toll free at 1-877-DURABOND (387-2266).