

DESCRIPTION

EC-ESD is a seamless and conductive two component epoxy coating. It provides a monochrome color with opaque and glossy, seamless, and slightly textured finish. **EC-ESD** meets the EOS/ESD Standards (2.5×10^4 to 1.0×10^6 ohms) for conductivity while providing excellent resistance to abrasion and chemicals. **EC-ESD** meets all kinds of requirements such as durability, performance as well as aesthetics. This seamless coating from Elite Coatings offers an unlimited choice of color. Seamless plinths are optional. This system has been approved by the Canadian Food Inspection Agency (CFIA).

This system is composed of: (possible options: superior)

1. Optional: A coat of primer (**ECE-LV** or **ECE-WDP**)
2. 1st coat of (**ECE-CLEAR**) 8 mils
3. 2nd coat of (**ECE-CLEAR**) 8 mils (surface must be smooth and free of imperfections)
4. 1st coat of (**EC-ESD**) 8 mils
5. Application of electrical grounds
6. Top coat of (**EC-ESD**) 12-16 mils
7. Optional coves can be created

PRIMARY APPLICATIONS

- Electronic manufacturing, calibration and repair facilities
- Explosion hazard areas
- Military premises
- Aerospace industries
- Solvent production and storage areas
- Warehouses for fireworks

ADVANTAGES

- Impermeable and seamless
- Conductive surface as per EOS/ESD Standards (2.5×10^4 to 1.0×10^6 ohms)
- System conductivity integrated in the matrix of the coating
- As resistant as the **ECE-COATING** system
- Seamless coves can be shaped
- Dense surface resistant to bacteria and moisture and easy to clean
- Excellent adhesive properties, allowing for application on a wide variety of substrates
- May apply several layers on itself with excellent adhesion

ELITE COATINGS CANADA INC.

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EC-ESD: Technical Data Sheet: April 23, 2024

PROPERTIES @ 23°C (73°F) 50% R.H.

Bond Resistance (psi) ASTM D4541		Permeability (%) ASTM D570		
> 350 (substrate ruptures)		0.3		
Hardness (Shore D) ASTM D2240		Tensile Strength (psi) ASTM D638		
85-90		5500		
Compressive Strength ASTM D695		Elongation (%) ASTM D638		
6800		6.7		
Abrasion Resistance, ASTM D4060 (CS17/1000 cycles / 1000 g)		Viscosity @ 25°C (cps)	Part A	Part B
0.10 gram		colors	1400-1600	200-400
				Mixture
				1000-1200

SURFACE PREPARATION

The surface to be coated must be well primed. Remove dust, laitance, grease, oils, dirt, impregnating agents, waxes, foreign matter, any previous coatings, and disintegrated substances by mechanical means such as shot-blasting (BLASTRAC) or any other approved method to obtain an ICRI-CSP 3-4 profile. The compressive strength of the concrete must be at least 25 MPa (3625 lbs/in²) after 28 days and the tensile strength at least 1.5 MPa (218 lbs/in²).

MIXING

The products must be conditioned at a temperature between 18°C (65°F) and 30°C (86°F).

Pre-mixed color (A)

Mix the resin part (A) perfectly before pouring the hardener (part B) according to the indicated mixing ratio. Depending on product amount and size of mixing equipment, mix for 1 to 3 minutes at low speed (300 to 450 rpm). During mixing, scrape the walls and bottom of the container at least once with a trowel to obtain a homogeneous mixture. As the pot life is limited, prepare amount of desired product as required in order to avoid any loss.

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APPLICATION

APPLICATION: 1st coat of ECE

Apply the coating using a rubber squeegee and pass a roller to obtain a uniform coating.

APPLICATION: 2nd coat of ECE

Apply the finish coat using a rubber squeegee and pass a roller to obtain a uniform coating.

APPLICATION: 1st coat of EC-ESD

Apply the finish coat using a rubber squeegee and pass a roller to obtain a uniform coating.

INSTALLATION OF GROUNDS

It is important that this product be applied in direct, uninterrupted contact with properly prepared grounding points. A minimum of one grounding point per 93m² (1000 ft²) of flooring should be established, with a minimum of two ground connections for any isolated area less than 93m² (1000 ft²) in order to achieve proper dissipation for static electricity. Once the primed coat is dried and resists damage from foot traffic, begin placement of the electrode ground point connections. Install the earth ground connections using copper tape within the edge of the primed surface, as close as possible to the walls or steel columns, to provide maximum protection and prevent in-service traffic damage.

APPLICATION: 2nd coat of EC-ESD

Apply the finish coat using a rubber squeegee and pass a roller to obtain a uniform coating.

CLEANING

Clean all application equipment with your preferred cleaner. Once the product has hardened, it can only be removed by mechanical means. In case of skin contact, wash thoroughly with warm soapy water.

RESTRICTIONS

- Do not apply at temperatures below 10°C / 50°F or above 30°C / 86°F
- The relative humidity of the surrounding work environment during the application of the coating and throughout the curing process should not exceed 85%
- Substrate temperature must be 3 °C (5.5°F) above dew point measured
- Humidity content of substrate must be <4% when coating is applied
- Do not apply on porous surfaces where a transfer of humidity may occur during the application
- The application of this coating on an interior or exterior substrate without a moisture barrier is at risk of detachment (by hydrostatic pressure)
- Protect the coating from all sources of moisture for a period of 48 hours
- Surface may discolor in areas exposed to regular ultraviolet light

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HEALTH AND SAFETY

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation. Consult the material safety data sheet for further information.

IMPORTANT NOTICE

The information and recommendations contained in this document are based on reliable test results according to Elite Coatings Canada Inc. The data mentioned are specific to the material indicated. If used in combination with other materials, the results may be different. It is the responsibility of the user to validate the information therein and to test the product before using it. Elite Coatings Canada Inc. assumes no legal responsibility for the results obtained in such cases. Elite Coatings Canada Inc. assumes no legal responsibility for any direct, indirect, consequential, economic or any other damages except to replace the product or to reimbursement the purchase price, as set out in the purchase contract.

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