PC-Floor® ESD- A

An antistatic, highly chemical resistant, self-smoothing epoxy resin floor finish

PC FLOOR® ESD A is a high-performance, heavy-duty, conductive Novolac epoxy flooring system specially developed for nuclear power plants, radiation-sensitive facilities, laboratories, control rooms, and industrial cleanroom environments requiring electrostatic discharge (ESD) protection and superior chemical resistance.The system forms a seamless, non-porous, conductive surface designed to:Control electrostatic dischargeResist aggressive industrial chemicalsSupport nuclear decontamination operationsProvide durable long-term floor protection Minimize contamination retention. PC FLOOR® ESD A incorporates conductive carbon technology and copper grounding networks to provide controlled electrical conductivity throughout the flooring system.

FEATURES & BENEFITS

- Conductive / ESD flooring system
- Radiation-resistant epoxy technology
- Excellent chemical resistance
- Seamless hygienic surface
- Easy decontamination capability
- Excellent abrasion resistance
- High mechanical strength
- Solvent-free low VOC system
- Excellent adhesion to concrete
- Resistant to industrial cleaning chemicals
- Suitable for heavy traffic conditions
- Long service life

USES

- Nuclear power plant control rooms & Reactor auxiliary buildings
- Radiation monitoring facilities
- Nuclear medicine rooms
- Electronic instrumentation rooms
- Semiconductor facilities
- Pharmaceutical cleanrooms
- Battery manufacturing plants
- Hazardous chemical processing areas
- Static-sensitive industrial environments

PRODUCTS PROPERTIES

Physical Properties	Details
Product Type	Two-Component Self-Leveling Antistatic Epoxy Coating
Appearance	Colored Semi glossy
Chemical Base	Epoxy
Solid Content	≥ 88%
Density	Approx. 1.6 g/cm^3
Application Methods	Trowel, Roller, Brush, Airless Spray
Recommended Use	Npp Floors , Electric & chemicals plants
Durability	Grade A

SYSTEM DETAILS

Component / System consist of
PC FLoor® ESD A consist of (Pre measured set) :
• PC Primer® ESD (A+B)
• PC Floor® ESD Top Coat (A+B) / + C
• PC Floor® ESD Tape

APPLICATION INSTRUCTIONS

Requirements for the Foundation

PC-Floor® ESD A is suitable for use on well-prepared mineral surfaces, including new and existing concrete floors, cement screeds, self-leveling cement layers, and repair mortars. The surface must be strong, dry, clean, and properly ground before application. It should appear even, free from dust, grease, standing liquid, loose material, and visible pores. All contaminants such as oil, rubber marks, paint residue, or curing agents must be fully removed to ensure lasting adhesion. If the recoat time is exceeded, the surface must be mechanically roughened and re-primed before further work.

MIXING & TOLLS

PC Primer® ESD & PC Floor® ESD Top Coat are two-component materials supplied in pre-measured sets.Part A (Resin) should be mixed first using a low-speed mixer until uniform. Add all of Part B (Hardener) into Part A and blend for 2–3 minutes until smooth. For better consistency, transfer the blend to a clean container and mix again for 1–2 minutes. using a low speed electric stirrer (300 - 400 rpm).Mixing Ratio Part A : part B = 78:22 (by weight) or as per pre measured set .Keep the mixer blade below the surface to prevent air entry. Prepare only the amount that can be applied within the stated pot life. Follow PC WC approved Method Statement / technical instruction for Mixing and Application of PC Floor® ESD A system.

APPLICATION OF MATERIAL

After mixing, immediately pour PC Primer® ESD at prepared surface with roller or spray airless machines and allow the primer sruface at least 24 hours to be dried . A grounded connection needed to place copper tape in a grid pattern at intervals of 2 to 3 meters (approx. 6 to 10 feet), with a perimeter strip laid around the entire room. PC-Floor® ESD A onto the prepared and primed substrate and distribute evenly using a toothed trowel, flat spatula, or suitable application tool depending on the coating system design. To achieve a smooth and uniform finish, the applied layer should be treated with a needle roller within 10–15 minutes to remove trapped air and improve leveling. Quartz sand may be broadcast onto the wet coating when a non-slip or textured finish is required. quartz sand may be add on for gain thickness as per ratios. During application, the ambient and substrate temperature should remain between +10°C and +30°C with relative humidity below 75%. Freshly applied coating must be protected from water, condensation, dust, and contamination for at least 24 hours during the initial curing stage.

TECHNICAL DATA

Properties	Typical Value
Fire Resistance	BS476:Part 7 Surface spread of flame: Class 2 (indicative)
Slip Resistance	TRRL Pendulum Slip Test Dry 67
Compressive Strength	≥ 80 MPa ASTM C579
Tensile Adhesion Strength	> 1.5 N/mm² ASTM D4541
Flexural Tensile Strength	20 N/mm² ASTM C580
Abrasion Resistance	≤ 25 mg
Electrical Resistance	2.5 x 104 – 1.0 x 106 Ω (ASTM F150) 5.0 x 104 – 1.0 x 108 Ω (BS2050)
Chemical Resistance	Excellent against acid & alkali ASTM D1308
Consumption	• PC Floor ESD A Primer : 1 × 0.3 kg/m² • PC Floor ESD A Top Coat : ~3–3.5 kg/m² Binder + quartz sand (1:1.25) considering temperature,
Nominal thickness	~2.0–2.5 mm
Resistance of Petrochem	Excilent (Jet fuel ,Tarbin oil , Resins)
Light Traffic Load	Aprox 3 days
Full Chemical Cure	Aprox 7 days

SHELF LIFE & STORAGE

PC-Floor® ESD A should be stored in its original unopened packaging in dry and well-ventilated indoor conditions away from direct sunlight, moisture, and excessive heat. Recommended storage temperature is between +5°C and +30°C. Exposure to very low temperatures may result in crystallization of certain components. Under proper storage conditions, the product has a shelf life of 12 months from the date of manufacture in unopened original packaging.

SAFTY

Use appropriate personal protective equipment (PPE) including gloves, safety goggles, protective clothing, and respiratory protection during handling and application. Ensure adequate ventilation in enclosed areas during mixing and application. Avoid contact with skin, eyes, and inhalation of vapors. Keep away from sparks, open flames, and sources of ignition. Refer to the relevant Safety Data Sheet (SDS) before use for complete health and safety information.

REMARKS

All technical values stated are based on laboratory tests and practical experience under controlled conditions. Actual performance may vary depending on substrate condition, application method, environmental factors, and site conditions. Users are advised to conduct suitability tests before full-scale application. Proper surface preparation and application procedures are essential for optimum performance.

PC-WC GLOBAL FZ-LLC

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