

FLOORSHIELD ESD AQUA EPOXY
Updated Feb'24

FLOORSHIELD ESD AQUA EPOXY is 2-component water-based epoxy dispersion, with conductive (ESD) properties, to prevent the build-up of static charge. It is high mechanical and chemical resistant, designed for areas with light to medium traffic. Ideal for electronic and semi-conducting device area and plant with high risk of explosion.

Product Features:

- Eliminate electrostatic discharge from human body, trolley and vehicles
- Less sensitive to moisture.
- Resistant to wide range of chemical.
- High mechanical and abrasion resistance.
- Low odour & VOC
- Meet British standard BS2050 and BS6920.

Uses:

Military Arsenal, Ammunition Dump, High Power Station, Clean Room, Warehouse, Assembly Automotive Plant, Electronic Plant, Research and Development Lab.

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Water-base Epoxy	Interior	Satin	Concrete floor and wall	Part A: 4 KG; Part B: 1 KG Part A: 16 KG; Part B: 4 KG

Technical Data

Density	: 1.40 kg/L
Viscosity	: 4000 ± 500 cps
Solid Content	: ~78%
Recommended Thickness (DFT)	: 150µm ± 20µm
Number of Coats	: 2 coats
Mixing Ratio	: 4: 1 (by weight)
Pot-life	: 30 min @ 28°C
Consumption	: 0.20 kg/m ² /150µm
Recoating Time	: within 14-24 hours @ 28°C
Shelf-life	: 12 months (store in unopened container at temperature 5°C – 30°C)
Cleaner	: Water

Performance Data

Water Vapor Transmission	: 0.79 g/h.m ² (ASTM E96/E96M-10)
Taber Abrasion	: 31.0 mg @ 1000 revolutions/1kg load (ASTM D4060-10)
ESD standard Compliance	: Complied (ANSI/ESD S-20.20-2007 / BS2050)
Dissolved Oxygen Difference (MDOD)	: < 2.39 mg/L (BS 6920: Part 1:2000)

Application Method

Surface Preparation	: Substrate concrete or screed should be a minimum compressive strength 25N/mm ² , and adhesive pull-off strength of minimum 1.5N/mm ² with concrete failure. The substrate must be clean, dry and free of all contaminants such as dirt, dust, oil, grease, loose material, coating and surface treatment. Concrete substrates must be prepared mechanically using abrasive blast cleaning, or scarifying equipment to remove cement laitance and achieve open textured surface. Crack and hollow should be properly remedied. Rough contaminants and high spots can be removed by grinding. The substrate should be dry and free from ground water pressure. Apply FLOORSHIELD SF Epoxy Mortar if substrate moisture exceeded 4%.
Mixing	: Stir Part A mechanically for 30 seconds, add in Part B and stir for another 1 minutes to achieve homogeneous mixture. While stirring, slowly add in 7% of clean water

	(10% for prime coat) and stir for another 1 minute and 30 seconds until uniform mixture is achieved.
Application	: FLOORSHIELD ESD AQUA EPOXY can be applied by suitable roller, brush or trowel, and overwork with a roller. It should be applied within the pot-life of 30 minutes at 28°C.
Cleaning	: Clean up equipment with water immediately after use.

Recommended Coating System

Conductive System:		
Underlayment/Scratch coat/Primer		
Earthing Connection		
Conductive Primer	: FLOORSHIELD ESD PRIMER WB	: 100 μm
1st Top Coat	: FLOORSHIELD ESD AQUA EPOXY	: 150 μm
2nd Top Coat	: FLOORSHIELD ESD AQUA EPOXY	: 150 μm
Dissipative System:		
Underlayment/Scratch coat/Primer		
Earthing Connection		
1st Top Coat	: FLOORSHIELD ESD AQUA EPOXY	: 150 μm
2nd Top Coat	: FLOORSHIELD ESD AQUA EPOXY	: 150 μm

ESD FLOOR MAIN CHECKING CRITERIA & SPECIFICATION

Conductive (with FLOORSHIELD ESD PRIMER WB):	
Surface to Ground (Earth) Rg Spec (BS2050)	: 1E+4 Ω ~ 9E+6 Ω (1 x 10 ⁴ ohm to 9 x 10 ⁶ ohm)
Surface to Surface (Earth) Rs Spec (BS2050)	: 1E+4 Ω ~ 9E+6 Ω (1 x 10 ⁴ ohm to 9 x 10 ⁶ ohm)
Dissipative: (without FLOORSHIELD ESD PRIMER WB):	
Surface to Ground (Earth) Rg Spec (BS2050)	: 1E+6 Ω ~ 9E+9 Ω (1 x 10 ⁶ ohm to 9 x 10 ⁹ ohm)
Surface to Surface (Earth) Rs Spec (BS2050)	: 1E+6 Ω ~ 9E+9 Ω (1 x 10 ⁶ ohm to 9 x 10 ⁹ ohm)

Environmental Condition During Application

- Do not apply when the relative humidity exceeds 90%.
- Surface to be coated less than 5% above the dew point.
- Do not apply temperature below 5°C and temperatures above 40°C.

Safety Precautions

- Keep container tightly closed and keep out of reach children or away from food and drink.
- Ensure good ventilation during application and drying.
- When applying paint, it is advisable to wear eye protection.
- In case of contact with eye, rinse with plenty of water immediately and seek medical advice.
- Paint must always be stored in a cool place.
- When transporting paint, care must be taken. Always keep container in a secure upright position.
- Dispose off any paint waste in accordance with the appropriate Environment Quality Regulations.

Note

* Theoretical Coverage is based on a mathematical formula

$$\left[\frac{\text{Volume Solid \%} \times 10}{\text{Dry Film Thickness}} \right] = \text{m}^2/\text{lit}/\text{coat}$$

and does not consider LOSS FACTORS.
 Variables like porosity of substrate, application method, dilution ratio, dry film thickness, opacity and so on will affect the loss factor and can vary from 30% - 50% or even more.

The above information is given to the best of our knowledge based on laboratory tests and practical experience. However, since we cannot anticipate or control the many conditions under which our products may be used, we can only guarantee the quality of the product itself.
We reserve the right to alter the given without prior notice.