

ESD CONTROL MAT

- ▶ Test report is provided upon request
- ▶ All mats can be cut and tailored to suit the customer requirements (Cutting mats have $\pm 10\%$ size tolerance)

Product

ESD mats are designed to prevent electrostatic discharge and protect sensitive electronic parts or devices from damage. They offer excellent durability and flexibility for easy processing into various forms.

Features

- Two-layer and single-layer structures control the discharge rate to remove static charge within a second.
- The colored static dissipative layer maintains a surface resistance in the range of 10^6 – $10^9 \Omega$, slowly dissipating static charges to the ground. Various colors are available to meet both functional and aesthetic requirements in the workplace.
- The black conductive layer has very low electrical resistance, which allows the static charge to move to the ground quickly.

Color: $1E8 \pm 1$ ohms →  ← Black: $1E4 \pm 1$ ohms

Options

1) Halogen Free ESD Mat

- Eco-friendly, halogen-free rubber
- No toxic gas release when burned
- Safe for humans & environment

2) Fire Retardant Antistatic Mat

- UL94: V-0 certified
- Extinguishes within 10 seconds without dripping
- Suitable for high fire-risk areas

3) Anti-Fatigue ESD Mat

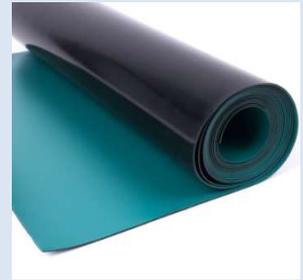
- Absorbs shock & reduces worker fatigue
- Improves comfort during long standing
- Protects flooring & equipment

4) Low-Resistance ESD Mat

- Highly durable
- Longer usage period

5) 3 Layer ESD Mat

Color: $1E8 \pm 1$ ohms →  ← Black: $1E4 \pm 1$ ohms



Applications

- ✓ Cleanroom
- ✓ Electronic equipment production lines
- ✓ Facilities handling microchips or other sensitive equipment
- ✓ Semiconductor manufacturing lines

Information

- ✓ Width x Length x Thickness
[Width: 0.6 ~ 1.2 (m)]
[Length: 10 ~ 20 (m)]
[Thickness: 1.5 ~ 3.0 (mm)]
- ✓ Color – green / blue / grey / ivory / brown / etc.
[only conductive layer available (black)]
- ✓ Finish – dull / shiny / textured

Options

- ✓ Halogen-Free
- ✓ Fire retardant function
- ✓ Anti-Fatigue function
- ✓ Low-resistance ($1E7 \Omega$)
- ✓ 3 layer

RoHS 2, REACH Compliant



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+82 51 463 5351
info@samikgroup.co.kr

 SAMIK Corporation

Guidance

- The anti-static property can degrade when the mat surface is exposed to an acid or alkaline solvent(ex. Benzene, alcohol, etc.). For cleaning, wipe with a cloth in a neutral solution(ex. water).
- When cutting, spread the mat out and allow it to relax for at least 4 hours.
- When measuring the surface resistance, space the electrodes more than 250mm apart to ensure accuracy.

Safety Instruction

- Do not use hand creams at the ESD workstation. These could contaminate and increase the resistance.
 - Do not use the product in an atmosphere containing flammable or combustible substances.
 - Do not use the product in an environment with rapid temperature changes or condensation.
 - Do not use the product where it is exposed to water, solvents, oil, or in a high-humidity environments.
 - RoHS2 Compliance
- None of the following materials are intentionally added in manufacturing this product as outlined in the Directive 2011/65/EU: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls(PBB), and Polybrominated diphenyl ethers(PBDE) + newly added four phthalates.

Product Specifications

Electrical Properties	Test Results
RTT (Point to Point)	1E7 to 9E8 ohms
RTG (Point to Ground)	1E7 to 9E8 ohms
Surface Resistance	Top layer: 1E8 \pm 1 ohms Bottom layer: 1E4 \pm 1 ohms
Decay Rate	5kV to 50V in less than 1 second

Test Results (Recommended Environment)

Result	Value
Temperature	20-26 °C
Relative Humidity	40-65 %