



ESD Smooth Bench Matting

KSMLFS

Description

Great value, low cost ESD bench matting with a smooth finish. This 2-layer static dissipative rubber mat makes a highly durable work surface for ESD sensitive environments. Ideal for laying onto workbenches in places such as laboratories of microelectronic industries or workshops. Material is 2mm thick and available in blue and grey colours. An excellent cost-effective matting solution for your ESD needs.

The dissipative top layer is resistant to abrasion, heat, solders, flux and most commonly used solvents. The black conductive bottom layer provides a superior and consistent ground path to Earth. The user can be easily grounded to the mat with a 10mm press stud and Earth point. This matting meets the requirements of US ESD Associations ANSI S4.1 and S20.20 guidelines. The smooth finish can be easily cleaned and maintained. Very scratch resistant and prevents sliding of components. Certified for RoHS and REACH regulations.

Features

- The top layer is static-dissipative with a conductive backing giving a typical resistance to ground = $10^{(6)} - 10^{(8)}$.
- Resistant to solder splash / hot paste and abrasion.
- Surface is smooth and very easy to clean with Staticide Mat and Table Top Cleaner.
- Material is 2mm thick.
- Excellent lay-flat properties.
- Colours - Grey or blue, others on request (minimal variation between batches).
- Very scratch-resistant.
- Fully RoHS and REACH compliant meeting requirements of IEC-61340-1-5 International Standard and US ESD Associations ANSI S4.1 and S20.20 guidelines.
- Custom sizes available to suit any requirements.



The images are shown for illustration only, the colour may differ slightly to the image shown.

Cleaning

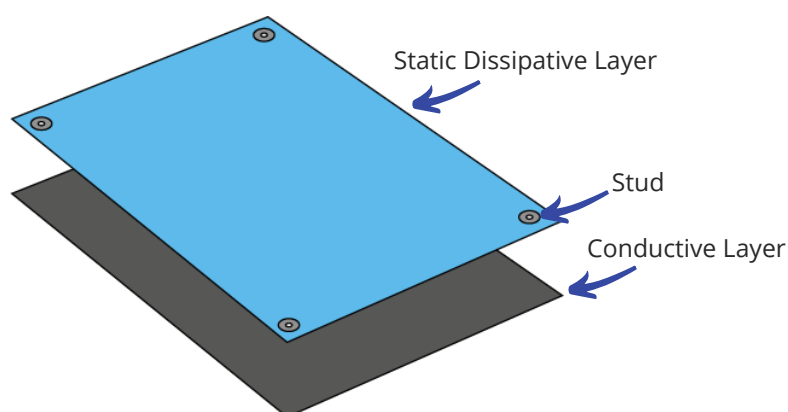
For optimum electrical performance, the surface must be cleaned regularly using an ESD safe mat cleaner. We suggest using a Staticide Mat and Table Top Cleaner for best cleaning results. This will maintain the original resistivity of the anti-static mat whilst extending its shelf-life.





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Construction

The matting is made up of two layers - a static dissipative top layer and a black conductive bottom layer.

Static dissipative top surface - resistant to abrasion, heat, solders, flux and most commonly used solvents.

Black conductive bottom layer - provides a superior and consistent ground path to Earth.

Standard Product	Description Size	Colour
KSMLF4SB	Smooth ESD Bench Material 1.2 x10m	Blue
KSMLF4SG	Smooth ESD Bench Material 1.2 x10m	Grey

General Specifications	Typical Values
Material	NBR rubber
Construction	Two layer
Static dissipative top surface	$10^{(6)} - 10^{(9)}$
Black conductive bottom layer	$10^{(3)} - 10^{(5)}$
Volume resistance	$10^{(5)} - 10^{(8)}$
Wear rate	$0.02\text{g/cm}^{(2)}$
Electrostatic dissipation time	$<0.1\text{s}$
Surface treatment	Smooth
Thickness	2.00mm
Colours	Grey or blue, others on request (minimal variation between batches)





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Physical Properties	Typical Values
Tensile strength	4-6 Mpa
Elongation at break	250%
Tear strength	(Right angle type) 20.6KN/m
Resilience	Samples by six layer rubber sheet laminated. 0.14
Impact brittleness temperature	(no incision – 250°C without destruction)
Set compression	700°C x 22h: 25% MAX
Scratch resistance	No clear scratch
Heat resistance	Resists solder splash and hot paste, rubber doesn't melt if in contact with hot metal parts and soldering debris. Up to 120OC.
UV resistance	No major discolouration
Charge decay	< 0.1 sec per FTMS 101C, M4046

Mechanical Properties	Typical Values
Room temperature	21°C
Elongation at break	250%
Humidity	62% TB-WINT-0008
Charge generation	< 100 volts per ANSI/ ESD STM4.2 Others: no curling, no pin holes, no irritant odor.
Stud force	6KG/ cm ² (Recommended)
Cleaning	For optimum electrical performance, surface must be cleaned regularly using an ESD safe mat cleaner. We suggest using Staticide mat and table top cleaner for best cleaning results.

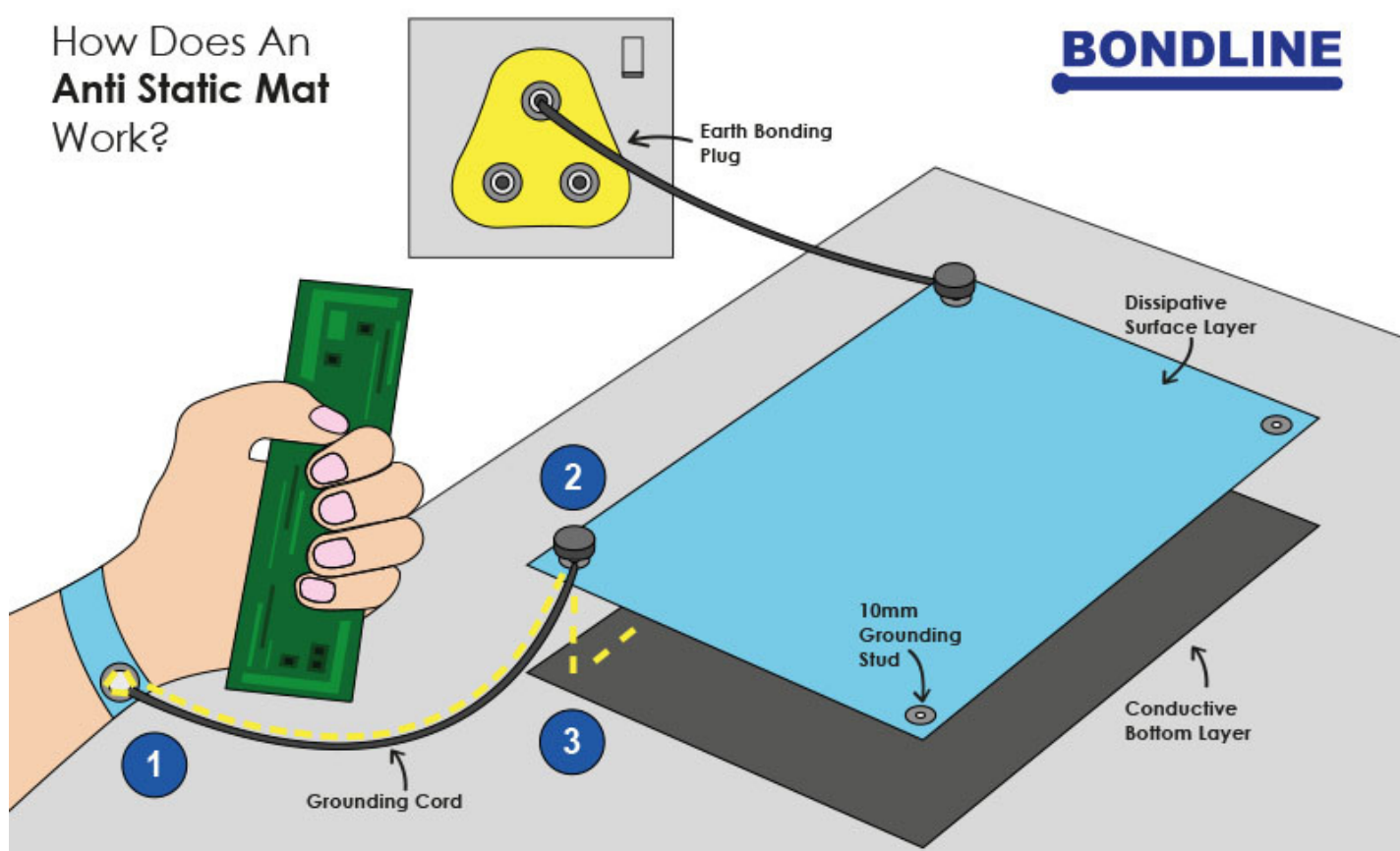




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How Does An
Anti Static Mat
Work?



- 1 Operator is grounded as charge passes through the wrist strap into the coil cord.
- 2 Coil cord is connected to the 10mm grounding stud.
- 3 The static charge passes through the mat, through the grounding lead to earth.





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Customised Matting Process

We provide a premium service of bespoke custom sizing and studding for our bench matting to suit all customer requirements. If you would like bespoke customisation, please make an enquiry to us.



Stud Position

<div>SP1</div> <div></div>	<div>SP2</div> <div></div>	<div>SP3</div> <div></div>	<div>SP4</div> <div></div>	<div>SP5</div> <div></div>
<div>SP6</div> <div></div>	<div>SP7</div> <div></div>	<div>SP8</div> <div></div>	<div>SP9</div> <div></div>	<div>SP10</div> <div></div>



Important Notice: The information contained within this spec sheet is for guidance only. We make no warranties expressed or implied and assume no liability regarding any use of this information. ESD Smooth Bench Matting, May 17th 2021.