

# Static Control Workstation

## TECHNICAL DATASHEET

KSWKS2

### Description

Our static control workstation kit provides a quick and easy way to set up your electronics workbench; giving you full protection against any static generation.

Bondline's static control workstation kit is designed to give full static protection when handling static sensitive devices in a production or test environment. They are designed to keep you grounded when working with static-sensitive devices. This includes printed circuit boards, computer motherboards, hybrid bio-electronic devices and more. Compliant according to IEC-61340-1-5 International Standard and RoHS and REACH standards.



Manufactured in the United Kingdom



### Supplied With

- ⚡ x1 Static Dissipative 2-Layer Bench Mat (KSMLF)
- ⚡ x1 Premium Coil Cord (CCJ)
- ⚡ x1 Straight Grounding Lead (SCJ)
- ⚡ x1 Crocheted Wrist Strap (CA10)
- ⚡ x1 Adaptor Snap (AS10)



### Cleaning

For optimum electrical performance, the bench matting must be cleaned regularly using an ESD-safe mat cleaner. We suggest using our Staticide mat and table top cleaner for best cleaning results. This will maintain the original resistivity of the anti-static matting whilst extending its shelf-life.

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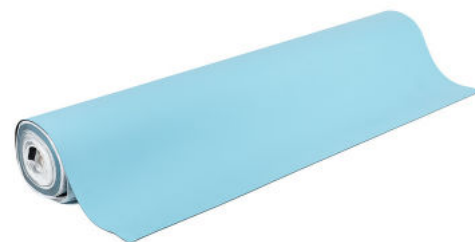
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### Premium Textured Bench Matting (KSMLF)

#### Description

Our great value, protective bench mat is designed to drain static charge from items placed on its surface. This anti static mat is ideal for laying on workbenches in the workshops or laboratories of microelectronic industries. It provides excellent ESD protection for operators working with static-sensitive components in an EPA. The 2-layer bench matting is 2mm thick. Manufactured from a synthetic rubber. The KSMLF matting range's top layer is static-dissipative with a conductive backing giving a typical resistance to ground =  $10^{(6)}-10^{(8)}$  ohms. The surface resistance point-to-point is  $<10^{(9)}$ . The smooth surface allows easy cleaning and maintenance. The textured finish adds extra operator comfort.



#### Description

- ⚡ Durable, 2-layer, synthetic anti static rubber mat.
- ⚡ Material is 2mm thick.
- ⚡ Resistant to solder splash / hot paste and abrasion. The material doesn't melt if in contact with hot metal parts or soldering debris. (Cheaper PVC based rubber mats are not solder proof.)
- ⚡ The surface is scratch-resistant so it prevents sliding of components.
- ⚡ Bench mat is very easy to clean especially with Staticide Mat and Table Top Cleaner.
- ⚡ The top layer is static-dissipative with a conductive backing.
- ⚡ Fully RoHS and REACH compliant.
- ⚡ Meets requirements of EN61340-5-1, US ESD Associations ANSI S4.1 and S20.20 guidelines and conforms to BS IEC 61340-5-1.



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### Premium Textured Bench Matting (KSMLF)

| Physical Properties                             | Typical Values  |
|---|---|
| Thickness                                       | 0.076 (2.00mm)  |
| Hardness - Upper Dissipative Layer              | 70 -5 + 5 shore A (Per ASTM D2240)  |
| Hardness - Lower Conductive Layer               | 75 -5 + 5 shore A (Per ASTM D2240)  |
| Scratch Resistance                              | No clear scratch and well recovery  |
| UV Resistance                                   | No major disc   |
| Stud Force                                      | 6KG/ 59cm (Recommended)   |
| Heat Resistance                                 | Resist holds irons and hot paste, rubber doesn't melt if in contact with hot metal parts and soldering debris |
| 300% Tensile Strength - Upper Dissipative Layer | 3.7Mpa  |
| 300% Tensile Strength - Lower Conductive Layer  | 3.7Mpa  |
| Breaking Strength - Upper Dissipative Layer     | 18.7Mpa   |
| Breaking Strength - Lower Dissipative Layer     | 3.7Mpa  |
| Elongation At Break - Upper Dissipative Layer   | 690Mpa  |
| Elongation At Break - Lower Dissipative Layer   | 250Mpa  |
| Hardness - Upper Dissipative Layer              | 66°   |
| Hardness - Lower Dissipative Layer              | 80°   |

| Electrical Properties | Typical Values                               |
|-----------------------|--|
| Charge Decay          | < 0.1 sec per FTMS 101C, M4046, TB-WINT-0008 |
| Charge Generation     | < 100 volts per ANSI/ ESD STM4.2             |

| Mechanical Properties | Typical Values |
|-----------------------|----------------|
| Room Temperature      | 21°C           |
| Humidity              | 62%            |

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### Premium Coil Cord (CCJ)

#### Description

A high-quality, stud to jack, coiled earth lead that provides a strong connection to ground. This best selling grounding cord can be stretched and recoiled back to it's original length, helping to keep a clear working area for efficiency and comfort. All snaps have 1 meg-ohm safety resistor. Standard colour is blue.



| Properties                | Typical Values  |
|---------------------------|---|
| Conductor                 | Diameter is 2.5mm with 7 tinsel wires   |
| Insulation                | Coil cord is insulated with PU material   |
| Electrical Properties     | The cord conductor shall have an end to end resistance not greater than 50 ohms   |
| Resistivity               | Current limiting resistance = 1 meg ohm + 20%   |
| Breakaway Force           | 1 to 5lbs of pull away force is required to disconnect the snap in a normal disconnect direction  |
| Ground Lead Extendibility | Cord should return back to at least 85% of its original length in less than 10 minutes after hanging for 24 hours, with 1KG weight on the other end                             |
| Plastic Parts             | Anti-static nylon materials   |
| Connection Integrity      | The tensile strength of the end connections shall be not less than 66% of the tensile strength of the wire, and in no case shall it be less than 5 lbs                          |
| Hardware                  | All metal parts shall show no evidence of corrosion and rust after 24 hours submersion to salt solution. Preferably made from stainless steel or brass alloy plated with nickel |
| Markings                  | With logo and resistance value  |
| Dimensions                | Cord is available 6ft and 12ft. (6ft standard)  |
| Colour                    | Blue  |

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### Straight Grounding Lead (SCJ)

#### Description

A range of high quality straight grounding cords that provides a strong connection to ground. Premium, durability ESD cords designed to be worn in an ESD working area. To ensure a path to ground, essential when handling components or assembling parts in an EPA. Straight leads are 3 meters (10ft) long as standard. The SCJ has a 10mm snap to jack / croc clip.



| Properties            | Typical Values   |
|-----------------------|--|
| Conductor             | Diameter is 2.5mm, with 7 tinsel wires   |
| Insulation            | Straight cord is insulated with PU material  |
| Electrical Properties | The cord conductor shall have an end to end resistance not greater than 50 ohms  |
| Resistivity           | Current limiting resistance = 1 meg ohm $\pm$ 20%  |
| Bending Life Test     | Exceeds 20,000 cycles of bending life test without any physical damage on the strain relief  |
| Breakaway Force       | 1 to 5 lbs. of pull away force is required to disconnect the snap in a normal disconnect direction   |
| Connection Integrity  | The tensile strength of the end connections shall be not less than 66% of the tensile strength of the wire, and in no case shall it be less than 5 lbs                           |
| Markings              | With customer identification logo, resistance value, and date code   |
| Colour                | Standard is blue. Other colours available on request   |
| Dimensions            | Cord's length available upon request   |
| Hardware              | All metal parts shall show no evidence of corrosion and rust after 24 hours submersion to salt solution. Preferably made from stainless steel or brass alloy plated with nickel. |
| Plastic Parts         | Made of static dissipative plastic material  |

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### Crocheted Wrist-Strap (CA10)

#### Description

Crocheted lightweight design for maximum skin contact and comfort. The conductive woven fibres are silver for maximum conductivity and minimum skin irritation. The metal back plate is made of hypoallergenic jewellery grade stainless-steel as standard to prevent any metal allergy problems. All wrist straps are supplied as standard with 10mm stud; 4mm and 7mm studs are available on request.



| Properties               | Typical Values  |
|--------------------------|---|
| Band Construction        | Constructed using premium crochet fabric band with elastic ratio of 1:2.5" to 1:3". Outer surface is non-conductive and inner surface of the strap shall be conductive, lined with 5-rows of double-ply silver yarn |
| Interior Cuff Resistance | ≤ 100 kilo ohms at 7 to 30 volts dc open circuit  |
| Exterior Cuff Resistance | ≥ 10 meg ohms at 7 to 30 volts dc open circuit  |
| Wrist-Strap Life Test    | When stretched to 200%, band returns to its normal length after 20,000 cycles   |
| Breakaway Force          | 1 to 5 lbs. of pull away force is required to disconnect snap into normal direction   |
| Termination              | Fabric band assembled to GO2 buckle, with flap and grip, and male snap connector available in 10mm  |
| Dimension                | For free-sized wrist band, the flattened length must be 95 to 105mm   |
| Hardware                 | All metal parts shall show no evidence of corrosion and rust after 24 hours submersion to salt solution. Preferably made from stainless steel or brass alloy plated with nickel                                     |
| Markings                 | With customer identification logo and date code (Killstat)  |
| Plastic Parts            | Made of static dissipative plastic material   |

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### Adaptor Snap (AS10)

#### Description

A simple and effective grounding accessory. The adaptor snap monitors/eliminates the build-up of static discharge that may pose a risk to static sensitive components or devices. It can be added to bonding plugs or snaps for a secure connection. AS10 Adaptor Snap is an insulated adaptor with a banana receptacle and 10mm male/10mm female snaps.



| Properties                | Typical Values  |
|---------------------------|---|
| Construction And Material | Brass insert assembled to 10mm female and male snaps then moulded with plastic material   |
| Hardware                  | All metal parts shall show no evidence of corrosion and rust after 24 hours submersion to salt solution. Preferably made from stainless steel or brass alloy plated with nickel |
| Breakaway Force           | 1 to 5 lbs. of pull away force is required to disconnect the snap in a normal disconnect direction  |
| Colour                    | Standard colour is blue with white rim  |
| Plastic Parts             | Made of static dissipative plastic material   |
| Other Accessories         | We offer a range of accessories, including, bananagator heavy duty crocodile clip, stack snap and terminal lug  |

#### Stud Position

|     |     |     |     |      |
|-----|-----|-----|-----|------|
| SP1 | SP2 | SP3 | SP4 | SP5  |
| SP6 | SP7 | SP8 | SP9 | SP10 |

