

# Work Station Kit

## TECHNICAL DATASHEET

KSWKS 3/4/5/6

### Description

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







Bondline's work station 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 Rubber Bench Mat (KSMLF)
-  x1 Premium Coil Cord (CCS)
-  x1 Straight Grounding Lead (SCJ)
-  x1 Premium Wrist Strap (HCA10)
-  x1 Earth Bonding Plug (BP)
-  x1 Rigid ESD Awareness Sign



| Part Code | Bench Mat Size |
|-----------|----------------|
| KSWKS3    | 900 x 600mm    |
| KSWKS4    | 1200 x 600mm   |
| KSWKS5    | 1500 x 600mm   |
| KSWKS6    | 1800 x 600mm   |



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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 (CCS)

#### Description

A high-quality, stud to stud, coiled Earth lead that provides a strong connection to ground. This cord can be stretched and recoiled back to its 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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### Premium Wrist-Strap (HCA10)

#### Description

Premium high comfort, fully adjustable wrist-strap with silver conductive fibres. This wrist-strap is woven and has a curved buckle for added comfort. Double thickness material ensures outer layer insulation for complete operator safety. Supplied with a 10mm stud as standard.



| Properties               | Typical Values  |
|--------------------------|---|
| Band Construction        | R-10 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 conductive 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, non-curved and half-metal back, With flap and male snap available in sizes 4mm, 7mm and 10mm. The half-metal back is covered with anti-allergenic plastic buckle cap |
| Dimension                | For free-sized wrist band, total length of exposed band shall not be less than 200.0mm. Or the flattened length must be 4 to 4.5 inches   |
| 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   |
| Plastic Parts            | Made of static dissipative nylon material   |



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## Earth Bonding Plug - UK, 1 x 10mm stud, no resistor (BP)

### Description

Earth Bonding Point (EBP) plugs are a simple method of grounding. They are designed to provide a common ground point for grounding using protective earth in an ESD protected area (EPA). UK plug. BP has a 1 x 10mm stud. No resistor.



## Rigid ESD Awareness Sign (S315 / S630)

### Description

A simple yet effective way of reminding everyone of the problems and related procedures required to help eliminate ESD. Help workers stay informed of the static grounding policies at your facility with warning signs. These signs are designed for the attention of entering an ESD Protected Area. An essential sign for chemical storage and electrical areas. Warning signs are available in rigid or flexible material with self-adhesive backing. They are made from a PVC plastic board. The signs are printed in yellow and black as standard and feature the ESD cautionary symbol. These signs do not have any ESD properties and are therefore to be used outside of the EPA (EPA's entrance door, for example).



## Stud Position

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

