

# EPA Working Mat

## Mat

Ideal for workbenches needing static-erasing measures

## EPS-5 NEW

Anti-Static Wrist Strap

## EPS-GK NEW

ESD Mat Grounding Kit

## Anti-Fatigue Mat

Alleviate fatigue caused by standing for a long time

## Surface Resistance Checker

Easy checking of surface resistance on floor or mat

## Electrostatic Field Meter

Essential item for static electricity measurement  
Visualize the static charge and discharge state

Why is VESSEL's EPA Working Mat our customer's top choice?

1

Creating an optimum EPA environment from a working table, a floor, to a human body with one-stop solution.

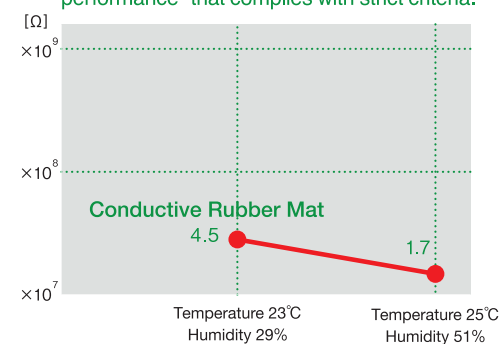
Our IEC61340-5-1 compliant products include the ESD protection items, the EPA working mats for workbenches, storage shelves, or trolleys, the EPA floor material for vinyl or painted floors, and the anti-static wrist straps.



2

Stable conductivity performance

Conductivity rates fluctuate frequently according to changes in humidity in the working environments. VESSEL's conductive rubber mats realize a "conductive performance" that complies with strict criteria.



3

# RoHS

Environmental Measures

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances).

Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.

Fan Type

Nozzle Type

Gun Type

Bar Type

Ion Parts Cleaner

EPA Working Mat

Clean Walker

Options

EPA Working Mat · Conductive Rubber Mat

Controlling electroconductivity between  $10^6\Omega$  and  $10^7\Omega$ , unsusceptible to the working environment. Ideal for workbenches requiring anti-static measures.



# RoHS

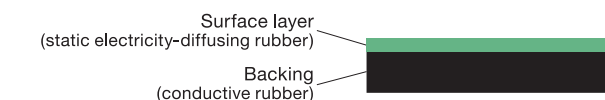
10m ROLL LG-100 EDP No. 621464  
SG-100 EDP No. 621461



Applications	Conductivity	Material	Directive
Work benches	$10^6 \leq R \leq 10^7 \Omega$	NBR+SBR	EPA RoHS

- Offers uniform, consistent conductive performance.
- Features a matte surface finish, reducing reflections and preventing eye fatigue.
- Heat resistant to solder drops.

Structure



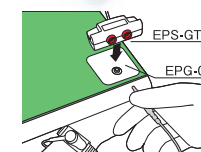
Common Specifications

Model No.	LG-100	SG-100
Color	Light green	Green
Size	W1.0m×L10m×t2.0mm	W1.0m×L10m×t2.0mm
Conductivity	$10^6 \leq R \leq 10^7 \Omega$	$10^6 \leq R \leq 10^7 \Omega$
Weight	29kg/roll	29kg/roll
Material	NBR+SBR	NBR+SBR

Grounding Tap

Neatly wire the grounding cords around your workbench

# EPS-GT2



Model No.	EPS-GT2
Size	Approx. 3.0 m (with round jack)
Resistance value	1MΩ
Material	ABS

Grounding Cord

Connect to mat-connecting gel with a single touch

# EPC-18



Model No.	EPC-18
Size	max. length of 1.8m (max. length 0.5m)
Resistance value	1MΩ
Accessories	Alligator clip

Wrist strap

Anti-Static Wrist Strap (10pcs/box)

# EPS-05

# RoHS

EDP No. 621471

- Anti-static product, complying with JIS C 61340-4-6: 2016
- Contractile band with rubber woven, adjustable to the wrist
- Ground cord with 1M ohm current-limiting resistor

Specifications

Model No.	EPS-05
Weight (g)	38 per piece, including alligator clip
Band length (mm)	Approx.190
Cord length (m)	Max.2.5 (0.72 when shrunken)
Resistance (Ω)	Approx. 1M between the body and the ground cord
Contents	Wrist strap, Ground cord, Alligator clip, Instruction manual

Replacement

Wrist Strap Cord  
No.EPS-05-C  
EDP No.621472



Weight (g)	24 including alligator clip
Embedded resistor (Ω)	1M
Cord length (m)	Max.2.5 (0.72 when shrunken)

Mat-connecting gel

Made from medical-grade conductive gel, with no need for time-consuming eyelet setting

# EPG-01/EPG-02



EPG-01 EDP No. 621481  
EPG-02 EDP No. 621482

Common Specifications

Model No.	EPG-01	EPG-02
Size	50×50mm	
Conductivity	104Ω or less	
Operating environment temperature and humidity	5°C to 30°C / 60% RH or less	
Material	Conductive polyurethane, SUS, carbon film, PET	Conductive polyurethane, carbon film, PET

ESD Mat Grounding Kit

From the floor or mat to the working bench, provides an optimal EPA environment

# EPS-GK

# RoHS



- Grounding kit for a conductive rubber mat.

EDP No. 621484

Specifications

Model No.	EPS-GK
Ground cord	Wires : Stranded wire 0.5mm2(AWG20 Length 2.4m) Snap dia. : 10mm
Weight (g)	45g
Resistance (Ω)	1M (built in the ground cord)
Contents	Ground cord with snap Snap hardware/Screw, Single-use punch, Instruction manual

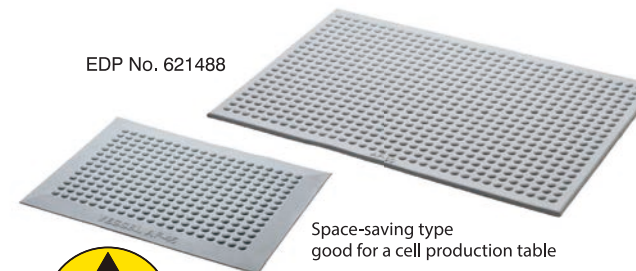


Conductive Anti-Fatigue Mat

Alleviate Fatigue caused by standing for a long time


AF-90/ AF-45

EDP No. 621488



Space-saving type good for a cell production table

EDP No.621489



RoHS

Applications	Conductivity	Material	Directive
Cell production, line work, assembly process	$R \leq 1.0 \times 10^9 \Omega$	NBR	EPA RoHS

- ▶ Conductive mat for fatigue alleviation from long standing work.
- ▶ Non-slip mat with embossments on the surface.
- ▶ Air pockets on the reverse side for spreading the body weight to alleviate fatigue.
- ▶ Light gray mat for easy detection of dirt, which may cause the conductive failure.
- ▶ 900mm x 600mm convenient size for the working stand for cell production.
- ▶ Space-saving 600x477mm good for one person. (AF-45)
- ▶ Inclined marginal area prevents workers from stumbling or falling. (AF-45)



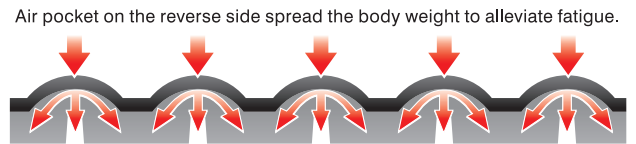
Fall Prevention

The inclined marginal area prevents workers from stumbling or falling. (AF-45 only)

AF-45 sectional view

Comfortable and which make you feel like jumping up





Specifications

Model No.	AF-90	AF-45
Size	W900mm × L600mm × t15mm	W600mm × L447mm × t15mm
Color	Gray	Gray
Conductivity	$R \leq 1.0 \times 10^9 \Omega$	$R \leq 1.0 \times 10^9 \Omega$
Weight	4.2kg	2.0kg
Material	NBR	NBR

※Grounding wire is not attached.

Surface Resistance Checker

Easy measurement of surface resistance on a floor or mat

SRC-01



EDP No. 621604

Measurement
4 types


- One 9V battery
- With probes
- With a carrying case
- Auto-off

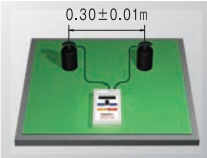
- ▶ All necessary for 4 types of measurement in one package.
- ▶ This can also measure temperature and humidity. (The values are for reference)
- ▶ Applied voltage selector switch enables to measure either the range from  $1.0 \times 10^3 \sim 10^5 \Omega$  or from  $1.0 \times 10^6 \sim 10^{12} \Omega$ .

4 types of measurment


With a carrying case

Useful to carry all necessary items for measurement







Resistance between 2 points on a surface



Resistance between a ground and a connecting point by a probe on a surface



Surface resistivity



Volume resistance

Specifications	Conformity standards IEC61340-4-1, JIS-C2170
Measurement range	$10^3 \sim 10^{12} \Omega (\Omega/\text{sq})$
Applied voltage	10V ( $R < 1.0 \times 10^6 \Omega$ or $\Omega/\text{sq}$ ), 100V ( $R \geq 1.0 \times 10^6 \Omega$ or $\Omega/\text{sq}$ )
Display	Triple-digit LCD (□□□ e□□) ex.: 3.14 e10 → 3.14×10 <sup>10</sup>
Power source	9 V battery × 1 (Type: 006P, recommended alkaline battery)
L × W × Dmm	L190 × W101.5 × D54.7mm
Weight	Body: around 340 g (including a battery); gross weight: around 6.2 kg (including the carrying case)
Operating temperature and humidity	0°C ~ 37°C 10% ~ 90%RH
Material	Body case: ABS resin
	Probe (outer diameter: about Φ66 mm, about 2.3 kg): 2
	Curled cord for a body earth (banana plugs at both ends): 1
	Curled cord for measurement for the point-to-point resistance and resistance to ground (banana plug/mono plug): 2
	Crocodile clip: 1, Large crocodile clip: 1, Stainless plate (142mm×67mm): 1
	Carrying case: 1, 9 V battery (006P type: manganese dry battery): 1
	Manuals
Accessories	

※An inspection report and a calibration certificate available as option. Please consult us for more detail.

Electrostatic Field Meter

Visualizing invisible static electricity

Peak hold supports long-time measurements

Eye-02



EDP No. 621603

Measurement	Measurement	LCD display
Charge potential	Ion balance	Bar graph+3 digits

One 9V battery

Ion balance measurement plate

Measuring distance 25 mm

Auto power off

Out of measuring range alarm

Peak hold function

Battery level display

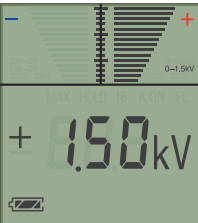
Anti-Drop strap

- ▶ Easily establish measurement distance with cross mark LED.
- ▶ Color LCD clearly shows the polarity.
- ▶ Mountable onto a tripod.




Wide Display

The measured potential is displayed with a bar graph and values for quick confirmation



Red Cross-mark

Guide for 25mm measurement distance.



NG (Too Far)

GOOD

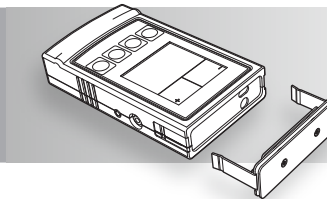
NG (Too Close)

Specifications

Model No.	EYE-02
Charge potential measurement	±0 to ±1.50 kV (LO range) / ±1.0 to ±20.0 kV (HI range)
Ion balance measurement	0 to ±200 V
Response time	within 1sec
Accuracy	±10%
Power	One 9V battery (006P)
Charged potential measurement distance	25mm±0.5mm
L×W×Dmm	L123×W70×D25mm
Weight	170 g / ion balance measurement plate 30g
Operating environment temperature and humidity	10°C to 50°C / 80% RH or less
Accessories	Ion balance measurement plate, Grounding cord, alligator clip, Soft case

◆Complies with ISO 9000 traceability standards. Calibration tables and certificates can be issued for this instrument. (Option)







Ion Balance Plate

Mount the enclosed plate to measure ion balance.

Maximum (peak) value display




This function is efficient for measurement of the "charge of workpieces traveling at a high speed", in which the value changes rapidly, and also efficient for "continuous" measurement, in which changes are monitored over time.




HOLD

temporarily stops the measurement. Use this when checking the value at a difference place.


Automatic power OFF / continuous measurement




The power turns OFF in five minutes to save the battery (default). This automatic power OFF function can be disabled during "continuous" measurement.




Hold down






Backlight



Illuminate the display to see clearly even in a dark place. Hold down the power button to switch the modes (EL/A.ON).



Hold down

