# PERSONAL EQUIPMENT

LABCOATS & GARMENTS

GLOVES & OTHER PROTECTION

SHOES & OTHER EARTHING

CONNECTIONS

OTHER EQUIPMENT

-EUR®STAT-



# PROTECTION OF DISCHARGES

### WHAT ARE ELECTROSTATIC DISCHARGES?

All materials are composed of atoms. Each atom is composed of a positive charge, around which gravitate many negative electrons. At rest, positive nucleus charges are equal to the sum of negative charges of the electrons that gravitate around them. The charge is therefore remains neutral. Static electricity is a phenomenon which happens when two surfaces contact each other and are then separated. It's at this moment that an exchange in electrons between both surfaces can occur. At this moment occurs a movement of electrons that creates charges at the surface of both materials.

This exchange of electrons between conductive materials (and man made materials) can occur suddenly, creating an electrostatic discharge with irreversible damage, especially to electrical components.

In order to avoid those damages, it is necessary to implement the protective measures aiming elimination of all static electricity sources and consequently, prevention of the electrostatic discharges. Nevertheless, if the static discharges appear, Eurostat has developed a whole range of materials and products, providing the protection for electrostatic sensitive devices such as PCBs.

### Conductive

Allows a rapid discharge to ground that can have the same effect as an ESD discharge. These materials insure a bond with ground but do not mitigate the energy exchanged during a discharge.

### **Dissipative**

Allows a slower discharge from the charge carrier to the ground, reducing the risk of potential damage.

### **Insulative**

Offer no grounding of electrostatic charges.

Grounding resistance less than  $Rg < 1x10^4 \Omega$ 

Grounding resistance is between 104 < Rq <  $1x10^{11} \Omega$ 

Offer no grounding of electrostatic charges Rg > 1x10 $^{11}$   $\Omega$ 

### **EUROSTAT, ESD EXPERTS**



## PERSONAL EQUIPMENT

As a member of the Dou Yee Group, Asian and World leader in ESD solutions, we offer a high quality wide and complete range of equipment. Equipment that guarantees traceability and conformity to industry standards EN-100015, IEC61340-5-1. With quality approvals for over 13 years, Eurostat are accredited to ISO 9001 - 2015.

Our internal characterization laboratory, allows us to ensure all of our products offer conformity to the highest standard.

We provide equipment dedicated to prevent the possibility of risk to product and personnel, protecting against electrostatic discharge and particle contamination.



### **GLOSSARY**

ABS: Acrylonitrile-Butadiene-Styrene

**APET:** Amorphous Polyethylene Terephthalate

**Carbon Nanotubes:** Two dimensional layers of carbon atoms, providing conductivity or dissapation to PS matrix, depending on concentration in the material

**CPM:** Charge Plate Monitor measures voltages applied to it's sensing plate

**Directive RoHS:** European Directive: Limiting the use of certain dangerous substances in association with electrical and electronic components

**EMI:** Electromagnetic interference

**EPA:** Electrostatic Protected Area (An area of complete ESD protection)

**ESD:** Electro-static Discharge

European Standard IEC 61340-5-1:

Protection of electro static sensitive devices

**LDPE, HDPE:** Low density PolyEthylene, High density PolyEthylene

PC: Polycarbonate

PCB: printed circuit board

PE: PolyEthylene

PP: PolyPropylene

PS: PolyStyrene

PU: Polyurethane

**Rg: volume resistance:** Resistance test between the surfaces of a material tested

**Rpp:** surface resistance: A measurement taken from the surface area of a material

Shielding: Material offering a Faraday cage

**SMD:** Surface Mount Devices

Standards EIA-583 / EIA-541 /EIA-625:

Standards related to the packaging of

humidity sensitive parts

**TPU:** Thermoplastic Polyurethanes

VCI: Vapor Corrosion Inhibitor



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# 1. LABCOATS

### 1.1. EUROSTAT Labcoats 4 x 4 mm grid





- Its 33% cotton fabric provides high comfort and durability
- Dissipative surface
- Button poppers are covered by fabric to avoid metal snaps being exposed
- Snap buttons on the sleeves
- Other colours on request
- Company logo on request
- Customized printing available: embroidery, silkscreen and hot stamped printing

Protective labcoats with a thin conductive grids will prevent an operator holding a charge, dissipating electrostatic charges to ground. Ideal for ESD safe environments with dissipating surfaces.



### **Technical Data**

- Fabric: 33 % cotton / 63 % polyester / 4 % carbon
- Conductive grid: 4 x 4 mm
- Durability: 50 washes at 30°C
- Density: 156gr/m<sup>2</sup>
- Surface resistance Rpp:  $< 10^8 \Omega$
- · Colours available: White, light blue, blue,

Size	Length in cm	Part number White	Part number Light Blue	Part number Blue
XS	85	51-100-2010	51-100-2510	51-100-2610
S	90	51-100-2015	51-100-2515	51-100-2615
М	95	51-100-2020	51-100-2520	51-100-2620
L	100	51-100-2025	51-100-2525	51-100-2625
XL	105	51-100-2030	51-100-2530	51-100-2630
XXL	110	51-100-2035	51-100-2535	51-100-2635
3XL	115	51-100-2040	51-100-2540	51-100-2640
4XL	120	51-100-2045	51-100-2545	51-100-2645

Conforms to

IEC 61340-5-1

### 1.2. Labcoats 5 x 5 mm grid



Labcoats suitable for less sensitive environments. Light fabric. High durability. Snaps on sleeves

### **Technical Data**

• Conductive grid: 5 x 5 mm

• Durability: 75 washes at 40°C

• Density: 122gr/m<sup>2</sup>

• Surface resistance Rpp:  $< 10^9 \Omega$ 

• Surface resistance Rpp:  $< 10^8 \Omega$ 

Fabric: 24 % cotton / 74 % polyester / 2 % carbon

• Company logo on request

• Customised printing available: embroidery, silkscreen and hot stamp

• White and blue model

Short Version			Standard Versi	ersion	
Size	Length in cm	Part number	Length in cm	Part number	
XS	77	51-720-5001	97	51-720-0010	
S	78	51-720-5002	98	51-720-0015	
М	79	51-720-5003	99	51-720-0020	
L	82	51-720-5004	102	51-720-0025	
XL	83	51-720-5005	103	51-720-0030	
XXL	84	51-720-5006	104	51-720-0035	
3XL	85	51-720-5007	105	51-720-0040	
4XL	86	51-720-5008	106	51-720-0045	



**1.3. Disposable Garments** Low tribocharging labcoats for ESD protected areas. Ensure protection against dust and particle contamination.

### **Technical Data**

• Fabric: SMS (Spunbonded Meltblown Spunbonded)

• Density: 60 g/m<sup>2</sup>

• Surface resistance Rpp :  $<10^{12} \Omega$ 

• Colour: White • ESD properties

### Disposable low tribocharging labcoats

Size	Part number
S	51-830-0110
М	51-830-0115
L	51-830-0120
XL	51-830-0125



All labcoats come complete with 4 plastic studs, collar and pockets...

# 2. ESD SAFE COVERALLS

Comfortable and durable.
Laundered and packaged for critical environments. Hood and boots can also be attached.



Other colours available on request

### **Tehcnical Data**

• Fabric : polyester

Surface resistance Rpp : 10<sup>6</sup> - 10<sup>9</sup>Ω
 Durability : 80 washes at 60°C
 Cleanliness category: ISO 5

• Cleanroom compatible

Conforms to IEC 61340-5-1

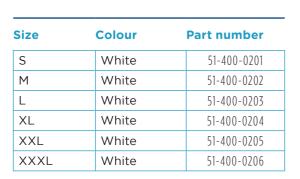
Durability: 80 washes at 60°C







51-400-03xx



Size	Colour	Part number
S	Blue	51-400-0301
М	Blue	51-400-0302
L	Blue	51-400-0303
XL	Blue	51-400-0304
XXL	Blue	51-400-0305
XXXL	Blue	51-400-0306

# 3. POLOS AND T-SHIRTS

### 3.1. Short sleeve polo shirts



**Technical Data** 

Fabric: 48 % cotton / 48 % polyester / 4 % carbon

### **Customized logo's available**

- Embroidery
- Silkscreen
- Flex

Comfortable and light weight garment available in different colours, with the possibilities of customized marking (silkscreen, embroidery, flex).

Size	Part number Grey	Part number Dark blue
XS	51-730-5005	51-730-1005
S	51-730-5010	51-730-1010
М	51-730-5015	51-730-1015
L	51-730-5020	51-730-1020
XL	51-730-5025	51-730-1025
XXL	51-730-5030	51-730-1030
3XL	51-730-5035	51-730-1035
4XL	51-730-5040	51-730-1040

Other colours on request

Conforms to IEC 61340-5-1

**Durability:** 45 washes at 40°C (without chlorine)

### 3.2. Long sleeve polo shirts



**Technical Data** 

Fabric: 48 % cotton / 48 % polyester / 4 % carbon

### **Customized logo's available**

- Embroidery
- Silkscreen
- Flex

Comfortable and light weight garment available in different colours, with the possibilities of customized marking (silkscreen, embroidery, flex).

Size	Part number Grey	Part number Dark Blue
XS	51-735-5005	51-735-3005
S	51-735-5010	51-735-3010
М	51-735-5015	51-735-3015
L	51-735-5020	51-735-3020
XL	51-735-5025	51-735-3025
XXL	51-735-5030	51-735-3030
3XL	51-735-5035	51-735-3035
4XL	51-735-5040	51-735-3040

Other colours on request

Conforms to IEC 61340-5-1

**Durability:** 45 washes at 40°C (without chlorine)

### 3.3. Crew neck T-shirts



Comfortable and light weight garment with static dissipative surface.

Size	Part number Blue	Part number White	Part number Black
XS	51-731-0005	51-732-0000	51-732-1000
S	51-731-0010	51-732-0005	51-732-1005
М	51-731-0015	51-732-0010	51-732-1010
L	51-731-0020	51-732-0015	51-732-1015
XL	51-731-0025	51-732-0020	51-732-1020
XXL	51-731-0030	51-732-0025	51-732-1025
3XL	51-731-0035	51-732-0030	51-732-1030
4XL	51-731-0040	51-732-0035	51-732-1035

Conforms to IEC 61340-5-1

Durability: 45 washes at 40°C



### **Technical Data**

Fabric: 96 % cotton / 4 % carbon

### **Customised logo's available**

- Embroidery
- Silkscreen
- Flex

+

Other colours on request

# 4. JACKETS

### 4.1. Sweatshirts



Dissipative jacket with central zipper, two pockets and ESD logo.

Taille	Référence
XS	51-761-0005
S	51-761-0010
М	51-761-0015
L	51-761-0020
XL	51-761-0025
XXL	51-761-0030

Conforms to IEC 61340-5-1

Washing temperature: 40°C

### **Technical Data**

- 48 % cotton / 48 % polyester / 4 % carbon
- Colour: Blue

### **Customised logo's available**

- Embroidery
- Silkscreen
- Flex

### 4.2. Fleeces



Dissipative fleece jacket with central zipper, two pockets and ESD logo.

Size	Part number	
XS	51-761-0205	
S	51-761-0210	
М	51-761-0215	
L	51-761-0220	
XL	51-761-0225	
XXL	51-761-0230	

Conforms to IEC 61340-5-1

Washing temperature: 30°C

- Technical Data
- Fabric: 97% polyester / 3% carbon
- · Colour: Light grey

### **Customised logo's available**

• Embroidery



- Fleece available without sleeves
- Available in dark blue version on request

# 5. MARKINGS

# Silkscreen printing



- Position anywhere on the garment
- Costs related to the number of colours
- Advantageous for medium and large quantities

# FOR CUSTOMISED LOGO'S

### Please send us:

- Your logo artwork
- Dimension and desired location
- Type face of text
- Quantity

# Printable transparent Flex



- Ideal for complex logo design
- Excellent value compared to stamp printing
- Advantageous for small and medium quantities

### Flex cutting



- Great quality at a competitive price
- Advantageous for small quantities

### **Embroidery**



- Not recommended for large quantities
- Longer lead times on pocket
- Excellent durability

# 6. BADGE HOLDER



### **Technical Data**

- Flexible and transparent plastic
- Complete with metal clip
- Dissipative surface.
- External dimensions: 75 x 100 mm
- Internal dimensions: 56 x 92 mm

Part number: 41-093-0061

Conforms to : IEC 61340-5-1



# 1. GLOVES

### 1.1. Light dissipative gloves



We offer polyurethane coated fingers or palms, to increase protection and grip Thin gloves to preserve sensitivity. Made of textured nylon with other additives to provide ESD protection with elasticated wrist.

Conforms to IEC 61340-5-1

### **Technical Data**

• Rpp <  $1 \times 10^{9} \Omega$ 







51-690-01xx 51-690-02xx 51-690-03xx

Versions	Size	Part number White	Part number Grey	Length
	S	51-690-0100	51-690-1100	200 mm +/-20mm
	М	51-690-0105	51-690-1105	210 mm +/-20mm
NO COATING	L	51-690-0110	51-690-1110	220 mm +/-20mm
	XL	51-690-0115	51-690-1115	230 mm +/-20mm
	XXL	51-690-0120	51-690-1120	240 mm +/-20mm
	S	51-690-0200	51-690-1200	190 mm +/-20mm
EINIGED TIDS	М	51-690-0205	51-690-1205	200 mm +/-20mm
FINGER TIPS PU COATED	L	51-690-0210	51-690-1210	210 mm +/-20mm
PO COATED	XL	51-690-0215	51-690-1215	220 mm +/-20mm
	XXL	51-690-0220	51-690-1220	230 mm +/-20mm
	S	51-690-0300	51-690-1300	220 mm +/-20mm
PALM PU COATED	М	51-690-0305	51-690-1305	230 mm +/-20mm
	L	51-690-0310	51-690-1310	240 mm +/-20mm
COATED	XL	51-690-0315	51-690-1315	250 mm +/-20mm
	XXL	51-690-0320	51-690-1320	260 mm +/-20mm

### 1.2. Lint-free gloves



51-690-05xx



• Cleanroom compatible

Conforms to IEC 61340-5-1

### **Technical Data**

- Fabric: 100 % polyester
- Surface resistance: Rpp  $< 10^9 \Omega$



51-690-06xx

	> / 605		

51-695-00xx

Versions	Size	Part number	Length		
	S	51-690-0500	210 mm +/-5mm		
NO COATING	М	51-690-0505	220 mm +/-5mm		
	L	51-690-0510	228 mm +/-5mm		
	XL	51-690-0515	235 mm +/-5mm		
	S	51-690-0600	210 mm +/-5mm		
PALM PU	М	51-690-0605	220 mm +/-5mm		
COATED	L	51-690-0610	228 mm +/-5mm		
	XL	51-690-0615	235 mm +/-5mm		
	S	51-695-0011	210 mm +/-5mm		
PVC DOTS	М	51-695-0012	220 mm +/-5mm		

51-695-0013

51-695-0014

### 1.3. Cotton gloves



Cotton, provides a naturally dissipative glove and remains an economic and hypoallergenic solution.

L

XL

Conforms to IEC 61340-5-1

230 mm +/-5mm

240 mm +/-5mm

### **Technical Data**

ON PALM

- Fabric: Cotton / Polyester
- Dissipative characteristics
- Rpp <  $1 \times 10^{9} \Omega$

Size	Length	Part number
S	9" (230 mm)	51-675-6061
М	9" (230 mm)	51-675-6062
L	9" (230 mm)	51-675-6063

### 1.4. Anti-cut gloves



Grey Dyneema fiber with Polyurethane palm coating.

Conforms to IEC 61340-5-1

### **Technical Data**

- Fabric: Grey Dyneema fibre (13 gauges), palm PU coated
- Cut Resistivity Degree: 5 (according to EN 388) (level 3 available on request)
- Surface resistance Rpp: 1 x 10<sup>7</sup> 1 x 10<sup>9</sup> Ω

Size	Length	Wrist Colour	Part number
S	178 mm +/-2mm	Pink	51-695-1005
М	203 mm +/-2mm	Green	51-695-1010
L	229 mm +/-2mm	Grey	51-695-1015
XL	254 mm +/-2mm	Yellow	51-695-1020
XXL	279 mm +/-2mm	Brown	51-695-1025

### 1.5. High temperature gloves

Eurostat offers dissipative high temperature resistant on request: 150°C, 200°C, 300°C.

# 2. DISPOSABLE GLOVES

### 2.1. Disposable vinyl gloves



Size	Length	Part number
S	9" (23 cm)	51-675-0030
М	9" (23 cm)	51-675-0031
L	9" (23 cm)	51-675-0032
S	12" (30 cm)	51-675-0040
М	12" (30 cm)	51-675-0041
L	12" (30 cm)	51-675-0042

Tear resistant and hypoallergenic.

Protect against contamination.

Contamination protection for semiconductor, electronics, aerospace, pharmaceutical, optics and biotech industries.

Conforms to IEC 61340-5-1

### **Technical Data**

- Surface resistance Rpp:  $< 1 \times 10^{11} \Omega$
- Cleanroom compatible
- ESD properties
- Surface resistance Rpp:  $1 \times 10^7 1 \times 10^9 \Omega$

### 2.2. Disposable nitrile gloves



Comfort and hypoallergenic. Contamination protection for semiconductor, electronics, aerospace, pharmaceutical, optics and biotech industries.

Conforms to IEC 61340-5-1

Size	Length	Part number
S	9" (23 cm)	51-690-0701
М	9" (23 cm)	51-690-0702
L	9" (23 cm)	51-690-0703
S	12" (30 cm)	51-690-0704
М	12" (30 cm)	51-690-0705
L	12" (30 cm)	51-690-0706

### **Technical Data**

- Surface resistance Rpp:  $< 1 \times 10^{11} \Omega$
- · Cleanroom compatible.
- ESD properties

# 3. FINGER COTS

### 3.1. Conductive finger cots



Size	Part number	
S	51-675-0095	
М	51-675-0100	
L	51-675-0101	

### 3.2. Rolled finger cots



Size	Part number	
S	51-675-0096	
М	51-675-0097	
L	51-675-0098	

Ultra-low level of extractable / residual ions.

Powder-free design with special packaging to prevent particle contamination and ensure cleanroom compatibility.

Carbon black compound used in the manufacturing process will not Leave a residue, migrate or contaminate.

### **Technical Data**

• Material: 100 % pure latex

• Surface resistance Rpp: 1 x 10  $^{4}\Omega$  - 1 x 10  $^{11}\Omega$ 

• Cleanliness category: ISO 6

• ESD properties

• Cleanroom compatible

• Colour: black

Washed under a controlled process to remove particles and reactive ions (Na+, K+, Ca2 etc...)
Ultra-low powder cot surface minimises particle contamination
Ultra-low levels of extractable and residual ions prevent product failure Packed in a clean environment.

Conforms to IEC 61340-5-1

### **Technical Data**

- Material: 100 % pure latex
- Surface resistance Rpp: 1 x 10  $^4\Omega$  to 1 x 10  $^1\Omega$  suitable for handling of class II, category B (100V) E.S.D
- Colour: Pink
- Cleanliness category: ISO 6
- Cleanroom compatible
- ESD properties

# 4. BOUFFANT CAPS



### **Technical Datas**

- · Colour: White
- Size: 53 cm
- ESD properties

Lightweight solution to protect workers in dirty, non-toxic and non-hazardous environments, avoids hair loss contamination in clean environments..

Description	Material	Part number	
Bouffant Caps	SMS 20g. 21" (Spunbonded Meltblown Spunbonded)	52-100-0001	



# 1. ESD SAFE & SECURITY

### -EUR®STAT-



Size	Caracteristics	Part number
37 to 47	<ul> <li>Black leather</li> <li>Steel toe cap</li> <li>Resistant to oil and most chemicals</li> <li>Anti-fatigue</li> <li>PU insole and outsole</li> </ul>	50-501-02xx

### -EUR®STAT-



Size	Caratheristics	Part number
36 to 48	<ul><li>Black/grey Nubuck leather</li><li>Composite cap toe</li><li>Energy absorbency and slip resistant</li><li>PU insole and outsole</li></ul>	50-520-02xx

### -EUR@STAT-



Size	Carateristics	Part number
	PU Microfiber dark blue or white	
	Composite cap toe	Dark blue
	Light weight	50-520-06xx
36 to 47	PU insole and outsole	
	Non-marking outsole	White
	and slip resistant	50-520-07xx
	<ul> <li>Resistant to oil and most chemicals</li> </ul>	

### -EUR®STAT-



Size	Carateristics	Part number
36 to 47	<ul> <li>Black leather</li> <li>Steel toe cap</li> <li>PU Midsole</li> <li>Grey PU outsole</li> <li>Non-marking outsole and slip resistant</li> <li>Water resistant</li> <li>Resistant to oil and most chemicals</li> </ul>	50-520-10xx

### -EUR @ STAT-



Size	Carateristics	Part number
37 to 47	<ul> <li>Leather</li> <li>Composite toe cap, metal free</li> <li>PU insole and outsole</li> <li>Non-marking outsole and slip resistant</li> <li>Water resistant</li> <li>Resistant to oil and most chemicals</li> </ul>	50-501-11xx

### **SHOES & OTHER EARTHING CONNECTIONS** .03





Size	Carateristics	Part number
35 to 47	<ul> <li>Microfiber</li> <li>PU/TPU outsole</li> <li>Composite toe cap</li> <li>Resistant to oil and most chemicals water resistant</li> <li>Energy absorbency and slip resistant</li> <li>Puncture resistant</li> <li>Boa® system lacing with adjustment wheel</li> </ul>	50-313-65xx





Size	Carateristics	Part number
39 to 47	<ul> <li>Leather and microfiber</li> <li>Large width</li> <li>PU outsole</li> <li>Composite toe cap</li> <li>Facilitate air flow</li> <li>Resistant to oil and most chemicals</li> <li>Slip resistant</li> <li>Boa® system lacing with adjustment wheel</li> </ul>	50-313-63xx





Size	Carateristics	Part number
35 to 48	<ul> <li>Leather and microfiber</li> <li>PU outsole</li> <li>Steel toe cap</li> <li>Puncture resistant</li> <li>Resistant to oil and most chemicals</li> <li>Water resistant</li> </ul>	50-300-61xx



ABEBP~

Size	Caracteristics	Part number
36 to 47	<ul> <li>Black leather</li> <li>Composite cap toe</li> <li>PU Midsole</li> <li>Removable insole</li> <li>Reflective stripes</li> </ul>	50-800-13xx





Size	Carateristics	Part number
36 to 48	<ul><li>Black leather</li><li>Steel toe cap</li><li>Leather lining</li></ul>	50-800-09xx

# 2. ESD SAFE SHOES

# FOR AREAS WHERE SAFETY SHOES ARE NOT REQUIRED

### **2.1. SHOES**





Size	Carateristics	Part number
40 to 48	<ul><li>Black leather</li><li>PU outsole</li><li>Resistant to oil and most chemicals</li><li>Energy absorbency</li></ul>	50-328-61xx





Size	Caracteristics	Part number
39 to 47	<ul><li>Black leather</li><li>PU outsole</li><li>Resistant to oil and most chemicals</li><li>Energy absorbency</li><li>Water resistant</li></ul>	50-319-60xx





Size	Caracteristics	Part number
39 to 46	<ul><li>Black leather</li><li>PU outsole</li><li>Leather lining</li></ul>	50-801-06xx





Size	Caracteristics	Part number
36 to 47	<ul> <li>Perforated white leather</li> <li>PU Midsole</li> <li>Slip resistant rubber sole</li> <li>Heel strap foldable, adjustable</li> </ul>	50-802-08xx

### 2.2. ESD Booties



This one-piece sole design allows human body static charges to dissipate via the insole to the floor. Washable, and can be used with garments for specific environments like cleanrooms.

### **Technical Data**

Material:

Micro Fiber Synthetic PU (top) Static Dissipative PU (sole) Static Dissipative Polyester (fabric)

- Resistance to ground Rg:  $< 10^8 \,\Omega$
- · Colour: White

Size	Part number
35	50-530-0035
36	50-530-0036
37	50-530-0037
38	50-530-0038
39	50-530-0039
40	50-530-0040
41	50-530-0041
42	50-530-0042
43	50-530-0043
44	50-530-0044
45	50-530-0045
46	50-530-0046

# 3. REMOVABLE TOE CAP



Immediate protection against foot damage/injury Simple to slip on over the shoe with left/right markings Reusable: multi-users and casual wearing (ideal for visitors).

### **Technical Data**

- High resistance to abrasion and wear
- Fits any kind of shoe
- No direct contact with the foot, washable and durable material

Weights: 1 pair: 590 grSteel toe cap: 200 JNon ESD safe

Reference : 50-900-0004

### Kit comprises of:

- 1 size S (35-38)
- 2 pairs size M (39-44)
- 2 pairs size L (45-48)

# 4. ESD OVERSHOES

### 4.1. ESD Safe overshoes

# a. Overshoes with conductive band



Easy and safe solution for EPA visitors Not adaptable to the overshoe dispenser 30-551-5000.

Description	Part number
Non-woven blue overshoes MOQ 500 pairs	30-551-0005

### **Technical Data**

• Material: Polypropylene

• Resistance to ground Rg < 1 x  $10^5 \Omega$ 

· Colour: Blue

### b. Dissipative overshoes



Ideal ESD safe solution to protect workers in dirty, non-toxic and non-hazardous environments. Comfortable, strong, durable, preventing and stopping dust and dirt particles.

Density	Dimensions	Part number
50 g	17 x 41 cm	52-100-0014

### **Technical Data**

- Material: Polypropylene SMS (Spunbonded Meltblown Spunbonded)
- · Colour: white
- Resistance to ground Rg < 1 x  $10^9 \Omega$

### 4.2. Automatic Overshoe dispenser



Especially developed for visitors of ESD protected areas and cleanrooms.

Description	Part number
Automatic overshoe dispenser (without overshoes)	30-551-5000
Conductive overshoes for automatic dispenser MOQ 1000 pairs	30-551-5001

### **Technical Data**

- Overshoe easily applied in seconds
- Contains 40 to 50 pairs
- Overshoes resistance to ground Rg < 1 x  $10^5 \Omega$

# 5. SHOES STRAP GROUNDING

### 5.1. For flat shoes



### **Technical Data**

- Contact ribbon inserted in shoe or sock
- To be worn on both feet
- Safety resistance Rg: 1M  $\Omega$

Caracteristics	Part number
Blue red heel strap with	30-560-0040
velcro, designed for men	30-300-0040



### **SHOES & OTHER EARTHING CONNECTIONS .03**



### **Technical Data**

- Slip resistant
- Easy fastening black plastic buckle
- Contact ribbon inserted in shoe or sock
- To be worn on both feet
- Safety resistance Rg: 1,5 M  $\Omega$

Contact ribbon length in cm	Part number
57	30-560-0044
90	30-560-0043

### 5.2. For shoes with heel





### **Technical Data**

- Contact ribbon inserted in shoe
- To be worn on both feet
- Safety resistance: Rg: 1M  $\Omega$

Description	Part number
Blue red toe grounder with a black	30-560-0041
plastic buckle, designed for women	30-300-0041



### **Technical Data**

- Conductive non-slip outer sole provides reliable contact to ground for high heel shoes
- Contact ribbon inserted in shoe
- To be worn on both feet
- Safety resistance Rg: 1,5 M  $\Omega$

Description	Part number
Strap for shoes with heels	30-560-0053

### 5.3. Disposable shoe straps



### **Technical data**

- Reliable static charge dissipation to ground
- To be worn on both feet
- Resistante to ground Rg: 1 x  $10^6\,\Omega$

Length in cm	Part number
30	30-560-0045
60	30-560-0046

### 5.4. Dispenser for disposable shoe straps



### **Technical Data**

- Dispenses approximately 100 pairs of 30-560-0045
- · Can be easily wall-mounted
- Material: Yellow dissipative PS

30-560-0047

# 6. GROUNDING ACCESSORIES







Metal wrist strap



Plastic wrist strap



Dark red colour, hypoallergenic material, connect

operator to ground avoiding electrostatic

discharges to sensitive components.



### 6.1. Fabric wrist strap



- Both sides are conductive
- Adjustable to any wrist size

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### **Connection** Part number

Stud 4 mm	30-560-0004
Stud 7 mm	30-560-0007
Stud 10 mm	30-560-0010

### **Technical Data**

- Non allergenic material
- Rg < 1 x  $10^5 \Omega$
- Male stud connection
- Washables
- Dark red colour



### 6.2. Metal wrist strap

+

- Insulative external side and conductive internal side
- Adjustable to any wrist size

**Connection** Part number

Stud 4 mm	30-560-4004
Stud 7 mm	30-560-4007
Stud 10 mm	30-560-4010

High reliability of operator connection to the earth.

### **Technical Data**

- Conductive wrist band
- Rg < 1 x  $10^{5}\Omega$
- Superior reliability
- · Nickel free
- Male stud connection

Conforms to IEC 61340

### 6.3. Plastic wrist strap



- Hygienic and washable
- Insulative external side and conductive internal side

Cleanroom compatible.

### **Technical Data**

- Thermoplastic material
- Rg < 1 x  $10^{5}\Omega$
- Male stud connection
- Colour: blue

Conforms to IEC 61340-5-1

### **Connection** Part number

Stud 4 mm	30-560-0104
Stud 7 mm	30-560-0107
Stud 10 mm	30-560-0110

### 6.4. Dual Cord wrist strap

Designed to be used with work station monitor.

Conforms to IEC 61340-5-1

### a. Polyester Fabric



- Both sizes are conductive
- Adjustable to any wrist size

Part number : 30-560-3004

### **Technical Data**

- · Non allergenic material
- Rg <  $1 \times 10^{5} \Omega$
- Male stud connection
- Washables
- · Colour: Blue, brown, polyester

### b. Metal



- Insulative external side and conductive internal side
- Conductive wrist band

Size S: 30-560-3010 Size L: 30-560-3011

### **Technical Data**

- Nickel Free
- Rg <  $1 \times 10^5 \Omega$
- Male stud connection

### **03. SHOES & OTHER EARTHING CONNECTIONS**

### **6.5.** Cords

### **Coil Cords**

• Resistance:  $1 M\Omega$ 

• Female Stud Connection

· Colour: black



- Other lengths and connections on request
- Connections to fit most grounding systems worldwide





### **Coil Cords**

Connections in mm	Length in m	Part number
4 mm / banana	1,80	30-560-0604
4 mm / banana	3,00	30-560-1004
7 mm / banana	1,80	30-560-0607
7 mm / banana	3,00	30-560-1007
10 mm / banana	1,80	30-560-0610
10 mm / banana	3,00	30-560-1010
Studs 4 mm / 10 mm	1,80	30-560-0641
Studs 7 mm / 7 mm	1,80	30-560-0677
Studs 10 mm / 10 mm	1,80	30-560-0611
Studs 7 mm / 10 mm	1,80	30-560-0671
4 mm / GSGS	1,80	30-560-0614
4 mm / GSGS	3,00	30-560-1014
4 mm / eyelet	3,60	30-560-1214

### **Dual conductor coiled cords**

• Designed to be used with workstation monitor

• Resistance:  $1 M\Omega$ • Length: 1,80 m

Reference: 30-560-0600



### Straight grounding cord

 Connection to the mat: 10 mm female stud (coil cord)

• Ground connection: Plug (Euro)

• Length: 1,50 m

Reference: 30-552-5005



# 7. HAND LOTION

Keeps skin moist for better contact between the wrist band and skin.



### **Technical Data**

- Is absorbed immediately
- Does not interfere with grip or dexterity

Bottle characteristi	<b>Capacity</b>	Part number
Non ESD	230 ml	41-097-0005
ESD	450 ml	41-097-0010
Non ESD	900 ml	41-097-0015
Non ESD	3,75 L	41-097-0020
ESD	230 ml	41-097-6000



51-910-7003

# 1. HIGH VISIBILITY WAISTCOAT



### **Properties**

- Colour: fluorescent yellow (also available in orange)
- Material: 98% polyester, 2% conductive fibres

XXL

• ESD properties



Size	Part number		
S	51-910-7004		
М	51-910-7000		
L	51-910-7001		
XL	51-910-7002		

- +
  - Reflective: 50 mm reflective bands
  - Fastening: Plastic studs on the front
  - Customized logo's on request

# 2. FIELD SERVICE KIT



Reference: 31-560-0502

- Provides effective static protection in a compact package that fits easily into most tool cases
- Two pockets sewn onto the work surface for cords storage

Intended for service engineers working on site.

### Kit includes

- High quality static dissipative work surface 54 x 61 cm
- Adjustable fabric 10mm stud wrist band
- Grounding connection for wrist strap/mat

### **Technical Data**

Size: 540 x 610 mmThickness: 0.8 mm

• Surface resistance:  $< 1 \times 10^9 \Omega$ • Resistance to ground:  $< 1 \times 10^9 \Omega$ 

Length: 1,80 mColour: red



# 1. TRAINING YOUR EMPLOYEES



As ESD sensitivity of products increases the production operators and production coordinators need to adapt to a very demanding technical environment. In order to make sure that the operators follow proper procedures, it is advised and required to provide professional ESD training.

Eurostat is a certified training institute (agreement number: 43390015239) and provides training with experts supervised by the French President of TC 101.

The training can be offered in English or in French, 3 training levels are available.

### Level 1

Attendees	Goals	Sessions
<ul><li>Operators</li><li>Manufacturing support</li><li>Management</li></ul>	<ul> <li>To understand why and how damages and defects, due to static electricity occur</li> <li>To have a clear view of the wide spectrum of risks, damages and defects in case of no-adherence or drift from the rules and means of prevention</li> </ul>	Approx 3h30 (recommanded period)

### Level 2

Attendees	Goals	Sessions
<ul><li>Engineers</li><li>Technicians</li><li>Management with engineering backgroundt</li></ul>	<ul> <li>To take care that all prevention rules are implemented and respected by all personnel working within or entering an EPA</li> <li>To be aware of the basic methods and tools currently used to make measurements into an EPA</li> </ul>	Approx 4h30 (recommanded period)

### Niveau 3

Attendees	Goals	Sessions
<ul><li>ESD coordinators</li><li>Supervisors</li><li>Instructors</li></ul>	<ul> <li>To establish a complete Prevention and Control Plan preventing from static electricity</li> <li>To propose progress axis and fitted preventive or corrective actions</li> <li>To prepare in-house audits thanks to punctual help of third-part ESD experts</li> </ul>	Approx. 3h00 (recommended period)



Our training programs, which are continuously improved and updated, can be adapted to companies individual needs and tailored to suit your company and the ESD experience of your employees.

After each training session, a personalised certificate is presented to each attendee.

# 2. AUDIT

### **REPORTS**

ESD Expert and voting member of the IEC/TC101 "electrostatics", Eurostat offers on site audits and product caracerisation...

### 2.1. Site Audit

### **GOALS**

To highlight existing in-situ gaps

with what is recommended through IEC 61340-5-1/2 international standard

### The site visit - Approx. 1 day

The site visit is a fact-finding visit in which our consultant surveys key parts of the site and the customer's processes and procedures.

It is also an opportunity for you to highlight and discuss any particular areas of concern you may have.

### To analyse and understand

any electrostatic issues in discussion with your technical representative

For these reasons it is essential to make your on-site technical representative available to act as a guide and to be a technical support.

Electrostatic related measurements such as electrostatic field potential and resistance measurements are made where it is appropriate to check the status of equipment, processes, floors and other relevant items.

### 2.2. Caracterisation

### **GOALS**

### **Define the Electrostatic features of your products**

with measurements performed in our laboratory to IEC standards.



### **Progress** - delays on request

After estimating the time nessessary to achieve your study (depends on the quantities and objectives of your demands), we will do some testing in our caracterisation laboratory.

### 2.3. Report

The report gives some relevant electrostatic information and explanation of key aspects where possible. It typically records: details of our consultant's findings including the results of any measurements, conclusions and specific recommendations and a list of literature and relevant standards that might be required for reference and further reading material if applicable.



# 3. TECHNICAL SERVICE AND INSTALLATIONS



Our technical service center ensures installation, maintenance and calibration of equipment, together with repairs during the guarantee period.

Range verification and calibration of electronic equipment can also be carried out.

**INSTALLATION** 

**MAINTENANCE** 

REPAIR

**CALIBRATION** 

**VERIFICATION** 



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