

# RIGID PACKAGING



VACUUMFORMED  
TRAYS  
PALLET AND  
PALET PACK  
TOTES AND BOXES  
FOAMS

**-EUROSTAT-**  
A MEMBER OF DOU YEE

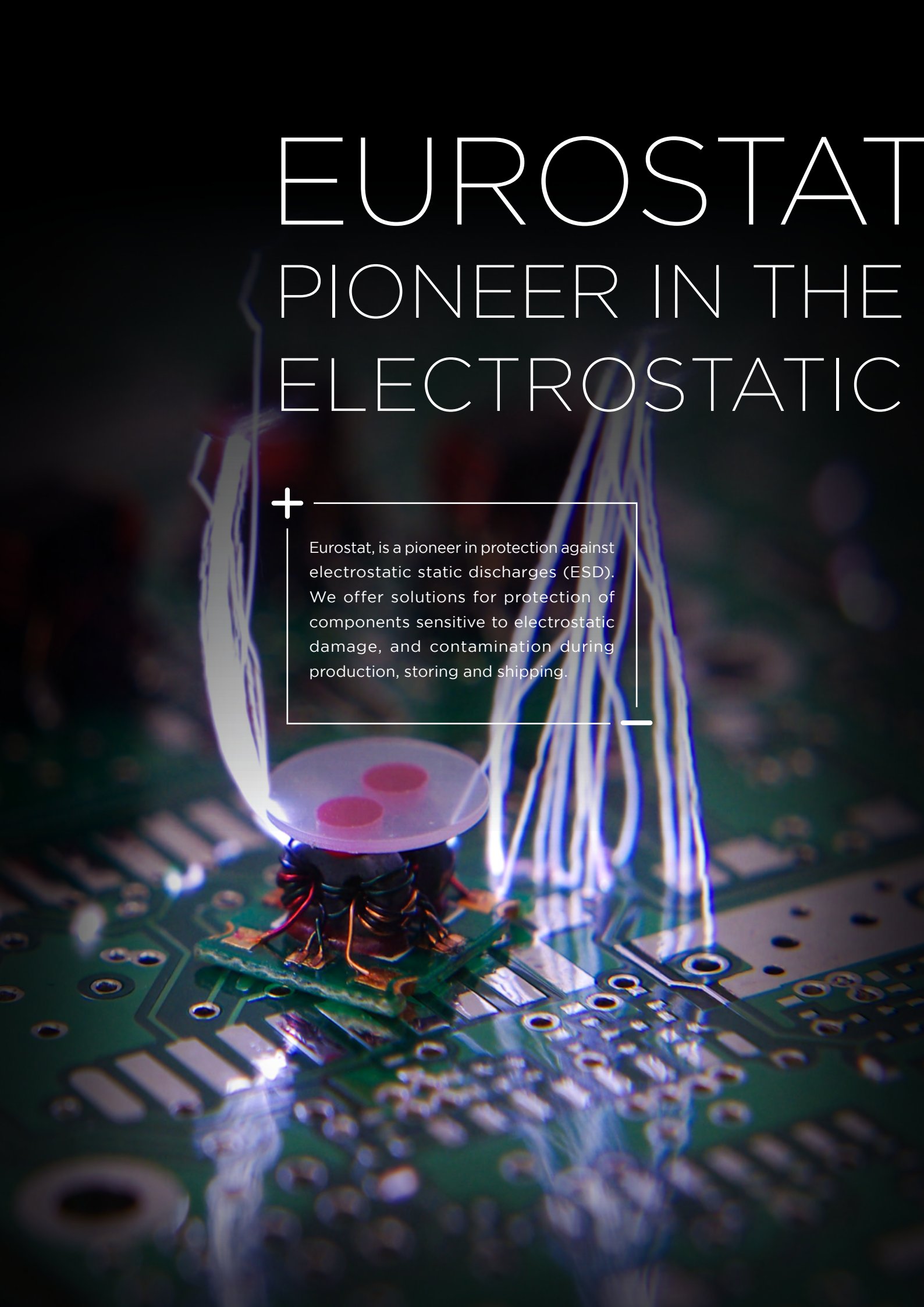
[www.eurostatgroup.com](http://www.eurostatgroup.com)

# EUROSTAT

## PIONEER IN THE ELECTROSTATIC



Eurostat, is a pioneer in protection against electrostatic static discharges (ESD). We offer solutions for protection of components sensitive to electrostatic damage, and contamination during production, storing and shipping.



# 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 therefore remains neutral. Static electricity is a phenomenon which happens when two surfaces are in contact with each other and are then separated. It's at this moment that an exchange in electrons between both surfaces can happen. 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 these 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.

**Grounding resistance less than  $R_g < 1 \times 10^4 \Omega$**

### Dissipative

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

**Grounding resistance is between  $10^4 < R_g < 1 \times 10^{11} \Omega$**

### Insulative

Offer no grounding of electrostatic charges.

**Offer no grounding of electrostatic charges  $R_g > 1 \times 10^{11} \Omega$**

# RIGID PACKAGING

## EUROSTAT PRODUCTION FLOW

Our expertise of complete processing includes; material selection, tooling, conception, prototyping, test validation, and mass production allowing us to completely satisfy our customer needs.

## OUR MATERIAL

### Extrusion

is a manufacturing process where plastic material at high temperature is vacuumed to form the shape of a product. Eurostat for over 40 years, has been a producer of its own raw material. This allows us to be the owner of patented innovative materials, embodying our know-how. These materials are the result of internal development, and collaborations with research facilities and partners world-wide. These materials patented represent advancement for the market of protection against micro nuisances.

### E-STAT®

Made from dissipative PolyStyrene, does not contain any carbon power, therefore leaving the workspace free of any black migration.

### Color-STAT®

Possesses the same dissipative characteristics as the E-STAT®, but with the advantage of being available in many colours.

### Nano-STAT®

Made from PolyStyrene film and carbon Nano tubes, this material can be produced in dissipative or volume conductive forms. The specific nature of Nano-STAT® is to not deposit any graphitic carbon and to avoid particle pollution of the environment.

### Acrylonitrile-Butadiene-Styrene/ Polycarbonate (ABS/PC)

conductive in volume or insulative in volume. Adapted to high temperature application (110° C).

### Clear-STAT®

Transparent dissipative material made of Amorphous PolyEthylene Terephthalate (APET) is available in insulative form or dissipative, adapted for blisters packs and products sensitive to surface defects (scratches, dust etc...). Ideal for barcode identification scanning.

### Black-APET

Black material made of Amorphous PolyEthylene Terephthalate (APET), available in insulative form or dissipative, adapted for delicate surfaces prone to contaminations (scratches, dust etc...).

### Soft-STAT®

Conductive in volume and abrasion resistant, its surface reduces shocks, vibrations and is tear resistant. Depending on the thickness, Eurostat offers 2 options:

- Acrylonitrile-Butadiene-Styrene / Thermoplastic Polyurethane (ABS/TPU) for thick material
- PolyStyrene / PolyEthylene (PS/PE) for small thickness

### PolyStyrene (PS) conductive

Conductive material in volume charged in carbon powder.

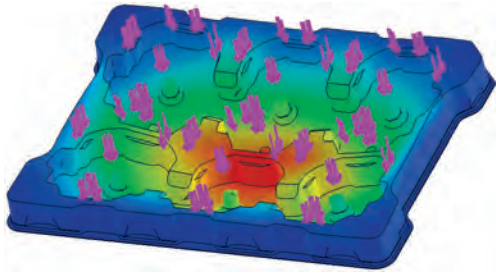
### Other materials

PolyStyrene (PS), PolyEthylene (PE), PolyEthylene Glycol (PETG)...

## OUR DESIGN OFFICE

### RDM simulation, 3D printing, prototype tools

Situated in different countries across Europe and Asia, we offer a complete conception to manufacture for our clients projects.



We offer 3D printing to validate the conception of each cavity and tooling, prototypes, to finished product, before launching the production tooling. We also offer simulations of the charged tray during the conception phase.

## PRODUCTION

### Optical control on a patented line to guarantee all product parts

Our production units are equipped with a patented automatic optic control process (patent N. FR 15/58305) guaranteeing quality control over the dimensions of all surfaces.

Thermoforming lines are in a controlled environment preserving the trays from any kind of foreign element generated in an industrial environment.

## GLOSSARY

**ABS:** Acrylonitrile-Butadiene-Styrene

**APET:** Amorphous Polyethylene Terephthalate

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

**CMS:** SMD Surface Mount Devices

**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

**Standards EIA-583 / EIA-541 /EIA-625:** Standards related to the packaging of humidity sensitive parts

**Shielding:** Material offering a Faraday cage

**TPU:** Thermoplastic Polyurethanes

**VCI:** Vapor Corrosion Inhibitor

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# 01

## VACUUM- FORMED TRAYS

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Eurostat's Vacuumformed trays cover all needs of our market place with conductive, dissipative and insulative materials. We can offer dimensions up to 800 x 600 mm with a thickness of between 0.6 - 6 mm. The resistance values indicated are tested before vacuum forming.

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# 1. DISSIPATIVE TRAYS

## 1.1. E-STAT®



Dissipative PolyStyrene doesn't contain any carbon powder and therefore doesn't leave any black residue or contaminate the workbench/EPA.

IEC 61340  
Compliant

**Thickness mm (before vacuumforming)**

0.6 0.8 1.2 1.5 2.2 3 Other thicknesses on request



- No heavy metal content (<100 ppm, directive RoHS)
- No particular emission due to the absence of carbon powder

### Technical Data

- Surface resistance  $1 \times 10^7 \leq R_{pp} \leq 1 \times 10^{10} \Omega$
- Volume resistance  $1 \times 10^7 \leq R_g \leq 1 \times 10^{10} \Omega$
- Decay time: < 0.4s
- Electrostatic features: dissipative
- Clean room compatible
- Colour: black with coloured bands (optional)

## 1.2. COLOR-STAT®



Color-Stat® trays are made of Dissipative Polystyrene and have the same characteristics as E-STAT®.

IEC 61340  
Compliant

**Thickness mm (before vacuumforming)**

0.8 1.5 2 3 Other thicknesses on request



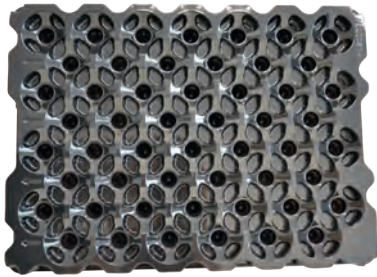
- Other colours available
- No particular emission due to the absence of carbon powder

### Technical Data

- Surface resistance  $1 \times 10^7 \leq R_{pp} \leq 1 \times 10^{10} \Omega$
- Volume resistance  $1 \times 10^7 \leq R_g \leq 1 \times 10^{10} \Omega$
- Decay time: < 0.4s
- Electrostatic features: dissipative
- Clean room compatible
- Standard Colours: Yellow, Red, Grey and Green (other colours available on request)



### 1.3. BLACK-APET



- Ideal for easily contaminated surfaces (scratches, dust etc...)
- No heavy metal content (<100 ppm, directive RoHS)

Black material made of Amorphous PolyEthylene Terephthalate (APET), available in insulative and dissipative material

IEC 61340  
Compliant

**Thickness mm (before vacuumforming)**

0.6 0.8 1.2 Other thicknesses on request

#### Technical Data

- Surface resistance  $1 \times 10^7 \leq R_{pp} \leq 1 \times 10^{10} \Omega$
- Volume resistance  $1 \times 10^7 \leq R_g \leq 1 \times 10^{10} \Omega$
- Decay time: < 0.4s
- Electrostatic features: dissipative
- Colour: black

### 1.4. CLEAR-STAT®



Designed for making blister packs and for products prone to contamination (scratches, dust etc...)

Permanent dissipative and transparent made of Amorphous PolyEthylene Terephthalate (APET)

IEC 61340  
Compliant

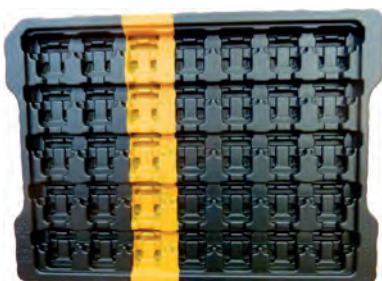
**Thickness mm (before vacuumforming)**

0.6 0.8 1.2 Other thicknesses on request

#### Technical Data

- Surface resistance  $R_{pp} \leq 1 \times 10^6 \Omega$
- Decay time: < 0.2s
- Electrostatic features: dissipative
- Clean room compatible
- Colour: transparent

### 1.5. NANO-STAT®



- No heavy metal content (<100 ppm, directive RoHS)
- Does not slough any graphitic carbon
- Avoids particle pollution

PolyStyrene film and carbon Nano tubes, this material can be manufactured in dissipative or conductive formats

IEC 61340  
Compliant

**Thickness mm (before vacuumforming)**

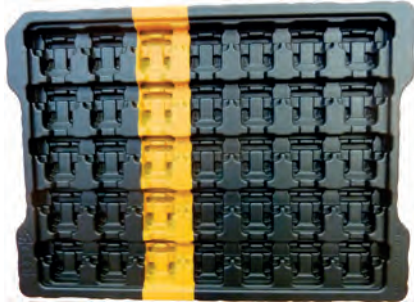
0.8 1.5 2 3 Other thicknesses on request

#### Technical Data

- Surface resistance  $1 \times 10^7 \leq R_{pp} \leq 1 \times 10^{10} \Omega$
- Volume resistance  $1 \times 10^7 \leq R_g \leq 1 \times 10^{10} \Omega$
- Decay time: < 0.4s
- Electrostatic features: dissipative
- Colour: black with colour bands (optional)

## 2. CONDUCTIVE TRAYS

### 2.1. NANO-STAT®



PolyStyrene film and carbon Nano tubes, this material can be manufactured in dissipative or conductive formats.

IEC 61340  
Compliant

Thickness mm (before vacuumforming)

0.8 1.5 2 3 Other thicknesses on request



- No heavy metal content (<100 ppm, directive RoHS)
- Does not slough any graphitic carbon
- Avoids particle pollution

#### Technical Data

- Surface resistance  $R_{pp} \leq 1 \times 10^4 \Omega$
- Volume resistance  $R_g \leq 1 \times 10^4 \Omega$
- Decay time: < 0.2s
- Colour: black with colour bands (optional)

### 2.2. CONDUCTIVE POLYSTYRENE (PS-C)



Conductive material in volume, charged in carbon powder. Standard material for the creation of conductive wrapping

#### Technical Data

- Surface resistance  $R_{pp} \leq 1 \times 10^4 \Omega$
- Volume resistance  $R_g \leq 1 \times 10^4 \Omega$
- Decay time: < 0.2s
- Electrostatic features: conductive
- Colour: black

IEC 61340  
Compliant

Thickness mm (before vacuumforming)

0.6 0.8 1.2 1.5 1.8 2 2.2 3 4 5

### 2.3. ABS/PC CONDUCTOR (ACRYLONITRILE BUTADIENE STYRENE/ POLYCARBONATE)



Conductive in volume and adapted to high temperature applications. Manufactured for applications that require high mechanical charge resistance

max. temp.  
110°C

IEC 61340  
Compliant

#### Technical Data

- Surface resistance  $R_{pp} \leq 1 \times 10^4 \Omega$
- Volume resistance  $R_g \leq 1 \times 10^4 \Omega$
- Decay time: < 0.2s
- Electrostatic features: conductive
- Colour: black

Thickness mm (before vacuumforming)

2.2 3 4 5

## 2.4. SOFT-STAT®

Soft-Stat® offers a surface that cushions vibrations and mechanical shocks and is tear resistant. Depending on the thickness, Eurostat offers 2 families of products.



Conductive in volume and abrasion resistant

### a. Soft-STAT® ABS-TPU: Thick trays

Made of Acrylonitrile-Butadiene-Styrene (ABS) and Thermoplastic Polyurethane (TPU).



#### Technical Data

- Surface resistance  $R_{pp} \leq 1 \times 10^4 \Omega$
- Volume resistance  $R_g \leq 1 \times 10^4 \Omega$
- Decay time:  $< 0.2s$
- Electrostatic features: conductive
- Colour: black

#### Thickness mm

(before vacuumforming)

2 3 4 5 6

### b. Soft-STAT® PS-PE: Thin trays

Made of PolyStyrene and PolyEthylene



#### Technical Data

- Surface resistance  $R_{pp} \leq 1 \times 10^4 \Omega$
- Volume resistance  $R_g \leq 1 \times 10^4 \Omega$
- Decay time:  $< 0.2s$
- Electrostatic features: conductive
- Colour: black

#### Thickness mm

(before vacuumforming)

1.5 2 3

## 3. INSULANT TRAYS

Eurostat provides insulative materials that do not prevent electrostatic discharges.

From these materials, we design the trays to store and ship the parts that are not sensitive to electrostatic discharges.

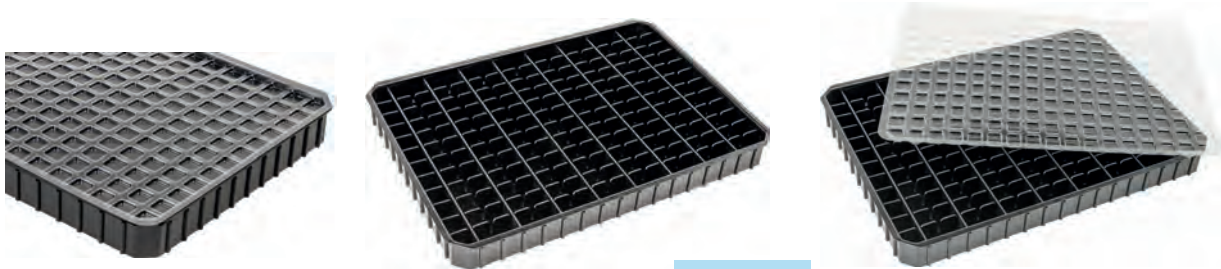


We offer a different variety of materials and dimensions, please contact us.

- PolyStyrene PS
- PolyEthylene Terephthalate Glycoses PETG
- PolyStyrene/PolyEthylene PS/PE
- Black and Transparent APET
- Acrylonitrile Butadiene Styrene ABS

**Contact us**

# 4. TRAYS WITH DIVIDERS



IEC 61340  
Compliant



- This range will answer all needs for storing and transportation on sensitive components without needing to design specific trays
- The design allows you to clip the lids and the dividers together
- The trays are stackable with the lids

EUROSTAT has developed a standard range of trays made of dissipative E-STAT® material with a set of modular dividers to create as many compartments as required. This new item will answer your needs for storing and transporting small PCB's or sensitive components. All 3 elements (trays, dividers, lids) can be bought separately.

**Standard Small Model (355 x 255 x 36 mm) - Useful Height:** 35,5 mm without lid  
28 mm with Lid

Electrostatic features	Thickness mm	Technical Data	Reference
Dissipative Trays	1.5	<ul style="list-style-type: none"> <li>• Surface resistance <math>1 \times 10^7 \leq R_{pp} \leq 1 \times 10^{10} \Omega</math></li> <li>• Volume resistance <math>1 \times 10^7 \leq R_g \leq 1 \times 10^{10} \Omega</math></li> <li>• Decay time: <math>&lt; 0.4s</math></li> <li>• No heavy metal content (<math>&lt; 100</math> ppm, directive RoHS)</li> <li>• No particular emission due to the absence of carbon powder</li> <li>• Colour: black</li> </ul>	24-401-9428
Conductive Dividers	1.8	<ul style="list-style-type: none"> <li>• Surface resistance <math>R_{pp} \leq 1 \times 10^4 \Omega</math></li> <li>• Volume resistance <math>R_g \leq 1 \times 10^4 \Omega</math></li> <li>• Decay time: <math>&lt; 0.2s</math></li> <li>• Colour: black</li> </ul>	Small 23-177-9431 Big 23-177-9430
Clipped dissipative lid	0.8	<ul style="list-style-type: none"> <li>• Surface resistance <math>R_{pp} \leq 1 \times 10^6 \Omega</math></li> <li>• Decay time: <math>&lt; 0.2s</math></li> <li>• Maximum temperature <math>60^\circ C</math></li> <li>• Colour: transparent</li> </ul>	24-213-9429

**Standard Big Model (555 x 355 x 63 mm) - Useful Height: 61,5 mm without lid  
52,7 mm with lid**

Electrostatic features	Thickness mm	Technical Data	Reference
Dissipative Trays	3	<ul style="list-style-type: none"> <li>• Surface resistance <math>1 \times 10^7 \leq R_{pp} \leq 1 \times 10^{10} \Omega</math></li> <li>• Volume resistance <math>1 \times 10^7 \leq R_g \leq 1 \times 10^{10} \Omega</math></li> <li>• Decay time: &lt; 0.4s</li> <li>• No heavy metal content (&lt; 100 ppm, directive RoHS)</li> <li>• No particular emission due to the absence of carbon powder</li> <li>• Colour: black</li> </ul>	24-401-9455
Conductive dividers	1.8	<ul style="list-style-type: none"> <li>• Surface resistance <math>R_{pp} \leq 1 \times 10^4 \Omega</math></li> <li>• Volume resistance <math>R_g \leq 1 \times 10^4 \Omega</math></li> <li>• Decay time: &lt; 0.2s</li> <li>• Colour: black</li> </ul>	Small 23-177-9458 Big 23-177-9457
Clipped dissipative lid	0.8	<ul style="list-style-type: none"> <li>• Surface resistance <math>R_{pp} \leq 1 \times 10^6 \Omega</math></li> <li>• Decay time: &lt; 0.2s</li> <li>• Maximum temperature : 60°C</li> <li>• Colour: transparent</li> </ul>	24-213-9456



# 02

## PALLET PACK & PALLETS

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To allow transportation and storage of components, Eurostat has developed a set of custom made solutions helping stack pallets.

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# 1. PALLETS & PALLET PACK

## KIT FOR TRAY TRANSPORTATION



For conductive trays, Eurostat offers a unique concept for storing and shipping. Made from a pallet base, a belt and a lid, the Pallet pack allows optimized use of space, minimizing the volume and the cost of transporting while empty and offering an extra measure of protection for the trays. Pallet-Pack guarantees and optimal ESD protection during shipping. All three elements are connected, ensuring electric continuity between them.



Optimise space for storage and shipping

### Technical Data

- Interior dimensions : 1165 x 765 x 805 mm
- Exterior dimensions : 1200 x 800 x 991 mm
- Weight (empty): 22 kg - Static charge capacity: 450 kg
- Volume: 720 liters

### Reference 25-100-1002

Element	Electrostatic features	Thickness mm	Features
Pallet	High density Polyethylene Conductive	-	<ul style="list-style-type: none"> <li>• Surface resistance: <math>R_{pp} \leq 1 \times 10^5 \Omega</math></li> <li>• Volume resistance : <math>R_g \leq 2 \times 10^5 \Omega</math></li> </ul>
Belt	Alveolar PolyPropylene Conductive	10	<ul style="list-style-type: none"> <li>• Surface resistance: <math>R_{pp} \leq 1 \times 10^4 \Omega</math></li> <li>• Volume resistance : <math>R_g \leq 2 \times 10^4 \Omega</math></li> </ul>
Lid <small>IEC 61340 Compliant</small>	Polystyrene PS Conductive	4	<ul style="list-style-type: none"> <li>• Surface resistance: <math>R_{pp} \leq 1 \times 10^5 \Omega</math></li> <li>• Volume resistance : <math>R_g \leq 2 \times 10^5 \Omega</math></li> </ul>

## 2. EUROPEAN PALLETS

ESD SAFE - 1200 X 800 X 155 MM



Maximum weight:  
1000 kg

Our ESD safe trays are stackable directly on the pallets without secondary wrapping to optimize costs and effectively avoiding waste

Pallets are stackable to allow easy storage of empty pallets

### Technical Data

- Surface resistance:  $1 \times 10^4 \leq R_{pp} \leq 1 \times 10^8 \Omega$
- Volume resistance :  $1 \times 10^4 \leq R_g \leq 1 \times 10^8 \Omega$
- Weight: 7.3 kg (+/- 2%)
- Electrostatic features: High Density PolyEthylene (PEHD) dissipative
- Colour: black

Reference : 25-100-0061

## 3. HALF PALLET

ESD SAFE - 800 X 600 X 137 MM



Maximum weight:  
750-850 kg

### Technical Data

- Surface resistance:  $1 \times 10^4 \leq R_{pp} \leq 1 \times 10^{10} \Omega$
- Volume resistance :  $1 \times 10^4 \leq R_g \leq 1 \times 10^{10} \Omega$
- Weight: 3.5 kg
- Electrostatic features: PolyPropylene (PP) dissipative
- Colour: black

Reference : 25-100-0106



03

## BOXES & TOTES

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Made of conductive or insulative material, with or without a lid, Eurostat produces boxes of all sizes to answer the most specific of needs. Developed especially for storing and transportation of electrical components safely. All Eurostat boxes are stackable.

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# 1. BOXES AND TOTES

## INJECTED AND INSULATED

### 1.1. Boxes



- Stackable up to 500 kg,
- Made to adapt to the following pallets 1200 x 800 mm or 1200 x 1000 mm

#### Technical Data

- Surface resistance:  $R_{pp} < 1 \times 10^4 \Omega$
- Volume resistance:  $R_g < 1 \times 10^4 \Omega$
- Weight: 3.5 kg
- Electrostatic features:  
PolyPropylene (PP) conductive
- Colour: black

#### Available options

- Standard
- Lightweight
- Reinforced bottom
- Conductive PolyPropylene Copolymer



#### Standard version

Ext. Dimensions mm	Int. Dimensions mm	Usable depth mm	Capacity liter	Weight g.	Reference
300 x 200 x 100	254 x 154 x 96	83	3.75	520	21-701-0010
300 x 200 x 145	254 x 154 x 141	128	5.5	720	21-701-0015
400 x 300 x 53	354 x 254 x 49	40	4.4	540	21-701-0020
400 x 300 x 100	354 x 254 x 96	83	8.7	1030	21-701-0025
400 x 300 x 145	354 x 254 x 141	128	12.8	1200	21-701-0030
400 x 300 x 212	354 x 254 x 208	195	19.2	1610	21-701-0035
400 x 300 x 278	354 x 254 x 274	261	25.2	1975	21-701-0040
400x 300 x 320	354 x 254 x 316	303	29.0	2100	21-701-0045
600 x 400 x 100	554 x 354 x 96	83	19.0	1650	21-701-0055
600 x 400 x 145	554 x 354 x 141	128	28.0	2050	21-701-0060
600 x 400 x 212	554 x 354 x 208	195	41.0	2550	21-701-0065
600 x 400 x 278	554 x 354 x 273	260	55.0	3070	21-701-0070
600 x 400 x 320	554 x 354 x 316	303	62.0	3400	21-701-0075
600 x 400 x 412	554 x 354 x 407	393	82.0	4605	21-701-0080

**Lightweight version**

Ext. Dimensions mm	Int. Dimensions mm	Usable depth mm	Capacity liter	Weight g.	Reference
400 x 300 x 145	354 x 254 x 141	128	12.8	796	21-700-0100
600 x 400 x 145	554 x 354 x 141	128	28.0	1274	21-700-0105

**Reinforced bottom version**

Ext. Dimensions mm	Int. Dimensions mm	Usable depth mm	Capacity liter	Weight g.	Reference
300 x 200 x 53	260 x 160 x 41	31	1.70	290	21-700-0005
600 x 400 x 56	560 x 360 x 41	28	8.25	1080	21-700-0050



The reinforced bottom allows them to sustain heavy charges and stack the bigger models on the smaller ones.

**Reinforced corners version**

Ext. Dimensions mm	Int. Dimensions mm	Useful height mm	Stackable Height mm	Capacity liter	Reference
600 x 400 x 175	562 x 362 x 170	159	163	15	21-701-0100
600 x 400 x 120	562 x 362 x 115	104	108	22	21-701-0101
400 x 300 x 175	362 x 262 x 170	159	163	15	21-701-0110
400 x 300 x 120	362 x 262 x 115	104	108	22	21-701-0111

**PolyPropylene conductive copolymer version**

Ext. Dimensions mm	Int. Dimensions mm	Weight g	Reference
800 x 600 x 120	758 x 555 x 85	3920	21-300-0065
800 x 600 x 170	757 x 556 x 136	4356	21-300-0070
800 x 600 x 220	758 x 557 x 187	5310	21-300-0075
800 x 600 x 325	757 x 557 x 293	5780	21-300-0080
800 x 600 x 430	758 x 557 x 393	6750	21-300-0085
Lid avec poignées 800 x 600mm	-	2142	21-304-0035

## 1.2. Lids and accessories



### LOOSE LIDS

Dimensions mm	Reference
300 x 200	21-704-0005
400 x 300	21-704-0010
600 x 400	21-704-0015



### HINGED LID WITH 2 SWING LATCHES

Dimensions mm	Reference
300 x 200	21-704-0020
400 x 300	21-704-0025
600 x 400	21-704-0030



### LID WITH 4 SWING LATCHES

Dimensions mm	Reference
300 x 200	21-704-0035
400 x 300	21-704-0040
600 x 400	21-704-0045



Label clip

### ACCESSORIES

Dimensions mm	Reference
Lid hinges	21-704-0055
Swing latches	21-704-0060
Security tags	21-704-0065
Label clip	21-717-0015

## 2. SEPARATORS

Accessories for sorting boxes and totes

### 2.1. Removable dividers

Aimed at storing PCB's these modular dividers offer both conductivity and protection against damage to components.



- Exists in PE version and PP version, carbon loaded
- Available in polystyrene and conductive cardboard

#### Technical Data

- Surface resistance  $R_{pp} < 1 \times 10^5 \Omega$
- Designed for standard box sizes 600x400 and 400x300
- Electrostatic features: dissipative
- Colour: black

#### PolyEthylène (PE) - Thickness mm 1.8

Dimensions L x H mm	Slots	Pitch mm	Reference
250 x 200	7	31	23-172-1015
350 x 200	11	30	23-172-1016
550 x 200	17	31	23-172-1017
250 x 150	7	31	23-172-7098
350 x 150	11	30	23-172-7099
550 x 150	17	31	23-172-7100
250 x 100	7	31	23-172-7101
350 x 100	11	30	23-172-7102
550 x 100	17	31	23-172-7103

Max. Temp.  
60°C

IEC 61340  
Compliant

#### Corrugated PolyPropylene (PP) - Thickness mm 2.5

Dimensions L x H mm	Slots	Pitch mm	Reference
250 x 200	7	31	23-175-1015
350 x 200	11	30	23-175-1016
550 x 200	17	31	23-175-1017
250 x 150	7	31	23-175-7098
350 x 150	11	30	23-175-7099
550 x 150	17	31	23-175-7100
250 x 100	7	31	23-175-7101
350 x 100	11	30	23-175-7102
550 x 100	17	31	23-175-7103

Max. Temp.  
90°C

## 2.2. Horizontal inserts

Made of dissipative alveolar PolyPropylene, horizontal inserts make it possible to compartment and separate boxes and to stack them on trays



- Ideal for protecting sensitive parts when piling them up in boxes
- 2 cut corners for easy handling
- Also available in pink alveolar PP

### Technical Data

- Surface resistance:  
Rpp < 1x10<sup>5</sup> Ω

### Inserts - Thickness mm **2.5**

Dimensions L x H mm	Designed for tote boxes mm	Reference
253 x 353	300 x 400	23-175-0034
353 x 553	400 x 600	23-175-0046

Max. Temp.  
**90°C**

IEC 61340  
Compliant

# 3. BOXES AND CARRYING CASES

Conductive boxes with latches for component transportation and protection

### Technical Data

- Boxes and carrying cases surface resistance: Rpp < 1x10<sup>5</sup> Ω
- Foam surface resistance: 1x10<sup>6</sup> < Rpp < 1x10<sup>8</sup> Ω
- Electrostatic features: dissipative PolyPropylene
- Colour: black



Available with or without dissipative PolyEthylene black closed cells foam for component insertion





**Boxes**

Int. Dimensions mm	References with foam	References without foam
97 x 54 x 14	25-313-0012	25-303-0050
34 x 34 x 10	25-313-0015	25-303-0055
73 x 50 x 16	25-313-0017	25-303-0060
108 x 81 x 16	25-313-0023	25-303-0065
89 x 64 x 16	25-313-0027	25-303-0070
138 x 96 x 35	25-313-0031	25-303-0075
227 x 125 x 20	25-313-0033	25-303-0080
227 x 125 x 30	25-313-0041	25-303-0085
227 x 125 x 40	25-313-0044	25-303-0090



**Boxes with latches**

Int. Dimensions mm	References without foam
130 x 80 x 14	25-303-0005*
130 x 80 x 30	25-303-0010*
130 x 80 x 50	25-303-0015*
178 x 133 x 78	25-303-0020
221 x 121 x 55	25-303-0025

\* Support document on lid



**Carrying cases**

Int. Dimensions mm	References without foam
260 x 160 x 39	21-705-0005
254 x 154 x 95	21-705-0010
254 x 154 x 139	21-705-0015
354 x 254 x 48	21-705-0020
354 x 254 x 95	21-705-0025
354 x 254 x 139	21-705-0030
354 x 254 x 206	21-705-0035
354 x 254 x 272	21-705-0040
554 x 354 x 95	21-705-0045
554 x 354 x 139	21-705-0050
554 x 354 x 206	21-705-0055
554 x 354 x 272	21-705-0060

# 4. CARDBOARD BOXES

## CONDUCTIVE



Eurostat produces all kinds of ESD safe cardboard boxes in micro-groove or simple-groove material. The most commonly used quality is the conductive one (using 2-side conductive coated black sheets).

Our “De-boxes” are a low cost packing method providing static protection for shipping, handling and storage of static sensitive devices

### Technical Data

- Boxes surface resistance:  $R_{pp} < 1 \times 10^5 \Omega$
- Electrostatic features: conductive corrugated cardboard
- Colour: black

IEC 61340  
Compliant



- Conductive two sided black cardboard with ESD symbol
- Inside padded with foam
- Personalized models and other foams on request

### Cardboard boxes - Thickness mm 1.7

Int. Dimensions mm	Product description	Reference
40 x 40 x 15	Pink dissipative PU flat foam	25-402-0105
60 x 60 x 25		25-402-0110
100 x 100 x 38		25-402-0115
135 x 50 x 20		25-402-0120
178 x 127 x 38		25-402-0205
229 x 191 x 38		25-402-0210
229 x 191 x 64		25-402-0215
267 x 216 x 64		25-402-0220
318 x 267 x 64		25-402-0225
394 x 318 x 64		25-402-0230
100 x 60 x 15	With black dissipative PE Foam (Static field alternative and physical protection for shipping Microchips EPROMS/SIMMS)	25-402-0010
120 x 100 x 15		25-402-0015

# 5. ASSEMBLED TOTE BOXES

## CONDUCTIVE



To facilitate transport of components

IEC 61340  
Compliant

### Technical Data

- Surface resistance:  $< 1 \times 10^5 \Omega$
- Electrostatic features: Carbon charged Corrugated PolyPropylene
- Colour: black



- For non-standard dimensions, Eurostat can produce custom made corrugated PolyPropylene boxes



# 04

## FOAMS

+

EUROSTAT is in a position to provide the widest range of ESD safe quality foam:

- Carbon impregnated material provides uniform and permanent protection for ESD safe sensitive devices.

It's perfect for long term packaging of semiconductor components due to its low ionic contamination and out gassing.

- Pink low turbocharging and dissipative foams are inexpensive and perform general cushioning and product protection function within the EPA.

Available in 2 types:

- PU open cells for "propping up" applications
- PE closed cell product for non-shedding and routing applications

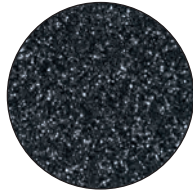


# 1. FOAMS

## 1.1. Conductive



Surface  
resistance:  
 $R_{pp} < 1 \times 10^5 \Omega$

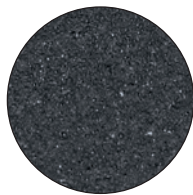


### PE conductive black 32 kg/m<sup>3</sup>

Thickness mm **3** (Starting at, + 2/- 1 mm)

#### Technical Data

- Rigid, closed cells, carbon loaded
- Ideal for routed foam pads or insertion of non-sensitive ESD safe components



### PU conductive black 24 kg/m<sup>3</sup>

Thickness mm **3** (Starting at, + 2/- 1 mm)

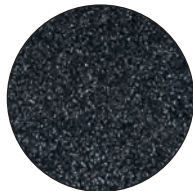
#### Technical Data

- Soft, open cells
- Ideal for shock absorption of non-sensitive components

## 1.2. Dissipative



Surface  
resistance:  
 $R_{pp} < 1 \times 10^{11} \Omega$

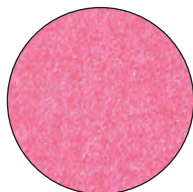


### PE dissipative black 30 kg/m<sup>3</sup>

Thickness mm **3** (Starting at, + 2/- 1 mm)

#### Technical Data

- Rigid, closed cells, carbon loaded
- Ideal for routed foam pads or insertion of sensitive ESD safe components

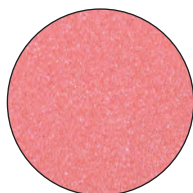


### PE dissipative pink 35 kg/m<sup>3</sup>

Thickness mm **3** (Starting at, + 2/- 1 mm)

#### Technical Data

- Rigid, closed cells
- Economical solution
- Ideal for routed foam pads, shock absorption and insertion of non-sensitive components



### PU dissipative pink 29 kg/m<sup>3</sup>

Thickness mm **6** (Starting at, + 2/- 1 mm)

#### Technical Data

- Soft, open cells
- Economical solution
- Ideal for shock absorption of non-sensitive components

## 2. ROUTED FOAM PADS

### Dissipative PE Black

**Dimensions**  
mm

355 x 255 x 3
555 x 355 x 3
355 x 255 x 12
555 x 355 x 12
355 x 255 x 6
555 x 355 x 6

### Conductive PU Black

**Dimensions**  
mm

355 x 255 x 3
555 x 355 x 3
355 x 255 x 6
555 x 355 x 6

### Dissipative PU Pink

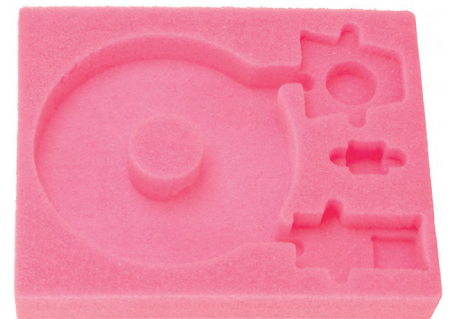
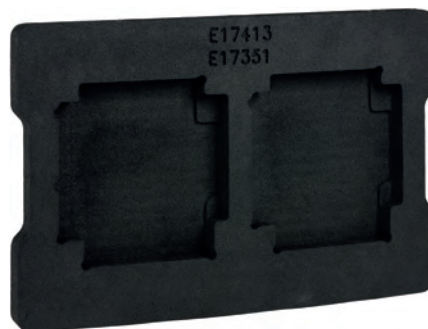
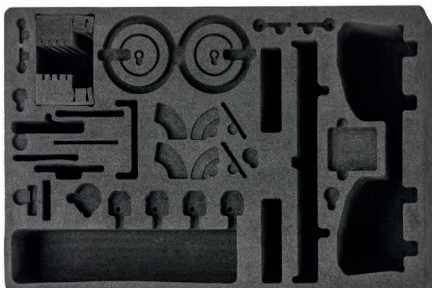
**Dimensions**  
mm

355 x 255 x 15
555 x 355 x 15



Customised routed foam pads available on request.

Routing examples



The background of the entire page is a blue-tinted photograph of three individuals in profile, facing right. They are wearing specialized ESD (Electrostatic Discharge) protection suits, which include hoods and gloves. They appear to be in a laboratory or cleanroom environment, with a long horizontal beam or structure in the foreground. The overall mood is professional and technical.

# 05

## TRAINING AUDIT & SERVICES



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

# 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 done in English or in French, 3 training levels are available.

## Level 1

Attendees	Goals	Sessions
<ul style="list-style-type: none"> <li>Operators</li> <li>Manufacturing support</li> <li>Management</li> </ul>	<ul style="list-style-type: none"> <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 non-adherence or drift from the rules and means of prevention</li> </ul>	Approx. 3h30 (recommended period)

## Level 2

Attendees	Goals	Sessions
<ul style="list-style-type: none"> <li>Engineers</li> <li>Technicians</li> <li>management with engineering background</li> </ul>	<ul style="list-style-type: none"> <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 (recommended period)

## Level 3

Attendees	Goals	Sessions
<ul style="list-style-type: none"> <li>ESD coordinators</li> <li>Supervisors</li> <li>Instructors</li> </ul>	<ul style="list-style-type: none"> <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 Experts and voting member of the IEC/TC101 “electrostatics”, Eurostat offers on site audits and product characterisation.

### 2.1. Site Audit

**GOALS** **To highlight existing in-situ gaps**  
with what is recommended through IEC 61340-5-1/2 international standard

**To analyse and understand**  
any electrostatic issues in discussion with your technical representative

#### The site visit - Approx. 1 day

**1** 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.

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

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. Characterisation

**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 necessary to achieve your study (depends on the quantities and objectives of your demands), we will do some testing in our characterisation 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



A technical service ensures the installation and maintenance of equipment as well as repairs during the guarantee period.

The range setting and control procedures of measuring equipment could be also carried out.

INSTALLATIONS

MAINTENANCE

REPARATION

SIZING

VERIFICATION



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