

# FLEXIBLE PACKAGING



BAGS

DESICCANTS

ADHESIVES &  
ACCESSORIES

**-EUROSTAT-**

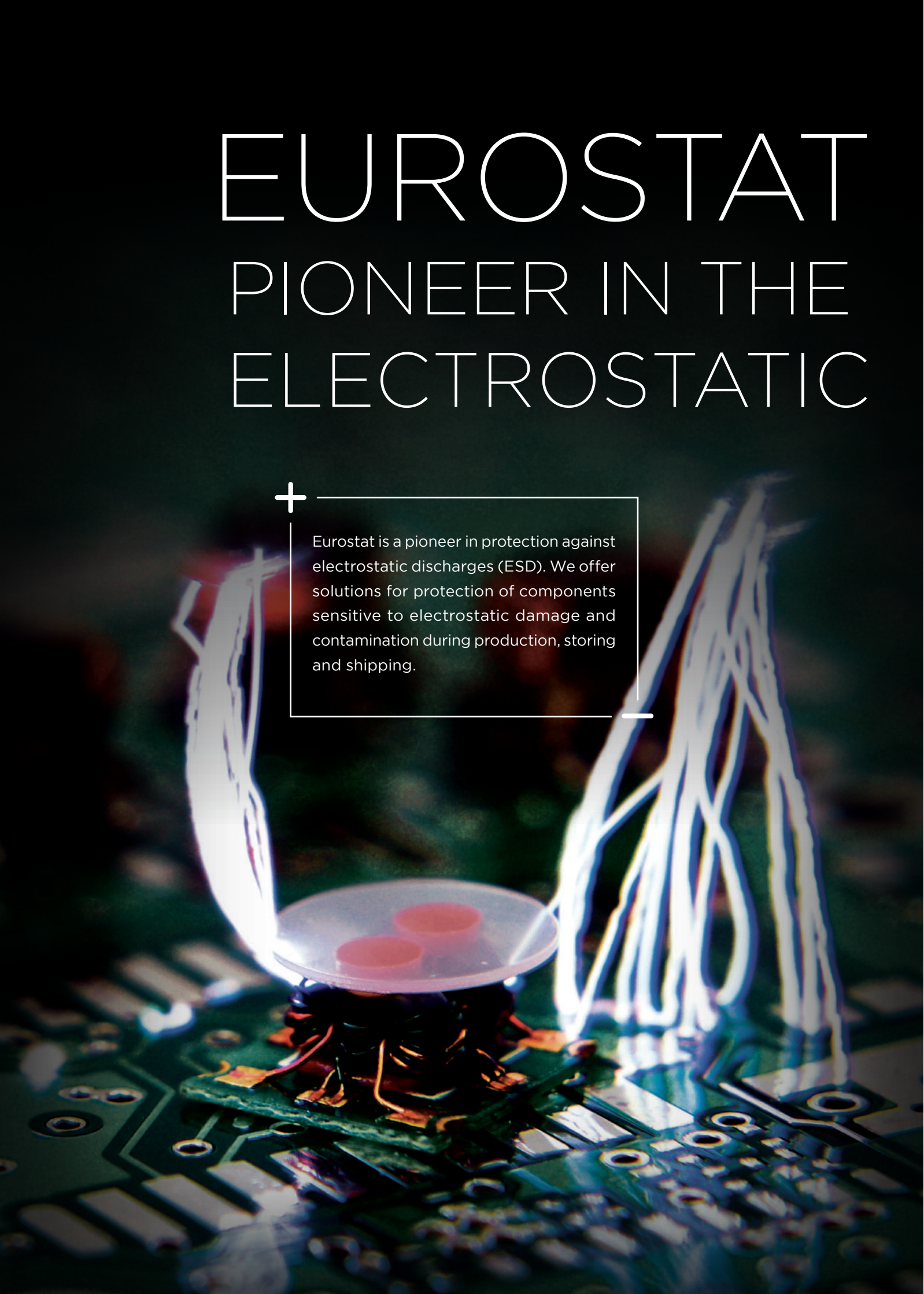
[www.eurostatgroup.com](http://www.eurostatgroup.com)

# EUROSTAT

## PIONEER IN THE ELECTROSTATIC



Eurostat is a pioneer in protection against electrostatic 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 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 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  
 $R_s/R_v < 1 \times 10^4 \Omega$

### Dissipative

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

Grounding resistance is between  $10^4 < R_s/R_v < 1 \times 10^{11} \Omega$

### Insulative

Offers no grounding of electrostatic charges.

Offer no grounding of electrostatic charges  
 $R_s/R_v > 1 \times 10^{11} \Omega$



## FLEXIBLE PACKAGING

Eurostat is a specialist in flexible packaging dedicated to the protection against electrostatic discharges (ESD).

With our partner Dou Yee, world leader in plastic film wrapping for electrical and micro-electrical industries, Eurostat produces a variety of flexible packaging all around Europe, offering protection against damage to static sensitive devices: components, electrical modules, motherboards etc...



## OUR TECHNICAL FILMS

Eurostat provides a wide range of technical films adapted to all types of sensitive components.

### **MBB (Moisture Barrier Bags)**

Films with different thickness and MVTR for moisture and ESD sensitive components.

### **Low generating films**

Various types of films for the shipment of finished products compatible with ESD sensitive and clean environments.

### **SSB (Static Shielding Bags)**

Films with different thickness for protection of ESD sensitive products.

### **Low tribocharging bubble film**

Offers mechanical protection against shocks and ESD protection.

### **VCI (Vapor Corrosion Inhibitor)**

Low generating films providing a protection to corrosion.

## GLOSSARY

**ABS:** Acrylonitrile-Butadiene-Styrene

**APET:** Amorphous Polyethylene Terephthalate

**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

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

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

**European Standard IEC 61340-5-1:** Protection of electro static sensitive devices

**PC:** PolyCarbonate

**PCB:** Printed circuit board

**PE:** PolyEthylene

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

**PP:** PolyPropylene

**PS:** PolyStyrene

**PU:** PolyUrethane

**Rv (Volume resistance):** Resistance test between the surfaces of a material

**Rs (Surface resistance):** Measurement taken from the surface area of a material

**Shielding:** Material offering a Faraday cage

**TPU:** Thermoplastic Polyurethanes

**VCI:** Vapor Corrosion Inhibitor

**MVTR:** Moisture Vapor Transmission Rate

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# 01

## BAGS

+

To preserve, store and ship your components, Eurostat offers a variety of bags to protect them against any electrostatic or humid damages.

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# 1. SHIELDING BAGS

## 1.1. Standard shielding bags

High quality packaging for protection and shipping of components, semiconductors and sub-assemblies sensitive to electrostatic discharge.



- Available with or without zip,
- 2 thicknesses
- Other dimensions available on request
- Private labeling

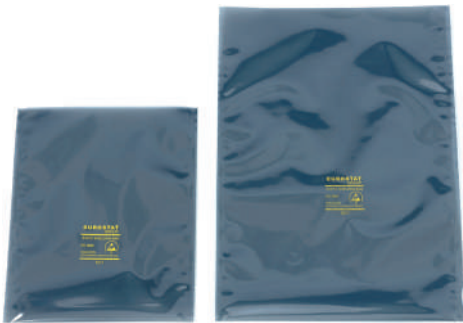
### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{11} \Omega$
- ESD-STM 11.11@12% HR
- Decay time:  $< 0.05$  sec. FTMS 101 Mtd 406
- Physical protection, transmitted energy:  $< 50$  nJ
- Material: shielding film
- Sticker P Nr. : 42-150-0010 / 42-150-0020

IEC  
61340  
Compliant  
RoHS  
Directive  
MIL-PRF-  
81705D

### Shielding bags- Thickness $\mu\text{m}$ (+/- 10%)

Dimensions (mm)	Dimensions (inches)	Thickness 50	Thickness 76	Thickness 76
		Without zip	Without zip	With zip
76 x 80	3 x 3	-	-	20-872-0303
76 x 102	3 x 4	20-771-0304	20-871-0304	-
76 x 127	3 x 5	20-771-0305	20-871-0305	20-872-0305
102 x 152	4 x 6	20-771-0406	20-871-0406	20-872-0406
102 x 660	4 x 26	-	20-871-0426	-
102 x 762	4 x 30	-	20-871-0430	-
127 x 203	5 x 8	20-771-0508	20-871-0508	20-872-0508
152 x 203	6 x 8	20-771-0608	20-871-0608	20-872-0608
152 x 254	6 x 10	20-771-0610	20-871-0610	20-872-0610
152 x 660	6 x 26	-	20-871-0626	-
203 x 254	8 x 10	20-771-0810	20-871-0810	20-872-0810
203 x 305	8 x 12	-	20-871-0812	20-872-0812
203 x 406	8 x 16	-	20-871-0816	-
254 x 305	10 x 12	-	20-871-1012	20-872-1012
254 x 356	10 x 14	-	20-871-1014	-
254 x 610	10 x 24	-	20-871-1024	-
254 x 660	10 x 26	-	20-871-1026	-
279 x 381	11 x 15	-	20-871-1115	-
305 x 305	12 x 12	-	-	20-872-1212
305 x 406	12 x 16	-	20-871-1216	20-872-1216
305 x 457	12 x 18	-	20-871-1218	20-872-1218
356 x 356	14 x 14	-	20-871-1414	-
356 x 457	14 x 18	-	20-871-1418	20-872-1418
381 x 457	15 x 18	-	20-871-1518	-
406 x 610	16 x 24	-	20-871-1624	-
457 x 457	18 x 18	-	20-871-1818	20-872-1818
457 x 610	18 x 24	-	20-871-1824	-
508 x 660	20 x 26	-	20-871-2026	-



Without zip



With zip

## 1.2. Shielding Shrouds



- Other dimensions available on request

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{11} \Omega$
- ESD-STM 11.11 @12% HR
- Decay time:  $< 0.05 \text{ sec. FTMS 101 Mtd 406}$
- Physical protection, transmitted energy:  $< 50 \text{ nJ}$
- Material: shielding film

IEC  
61340  
Compliant  
RoHS  
Directive  
MIL-PRF-  
81705D

Without zip - Thickness  $\mu\text{m}$  (+/- 10%) 76

Flat dimensions mm

Part Nr.

600 (width) + 200 + 200 (shroud) x 640 (height)

20-875-0007

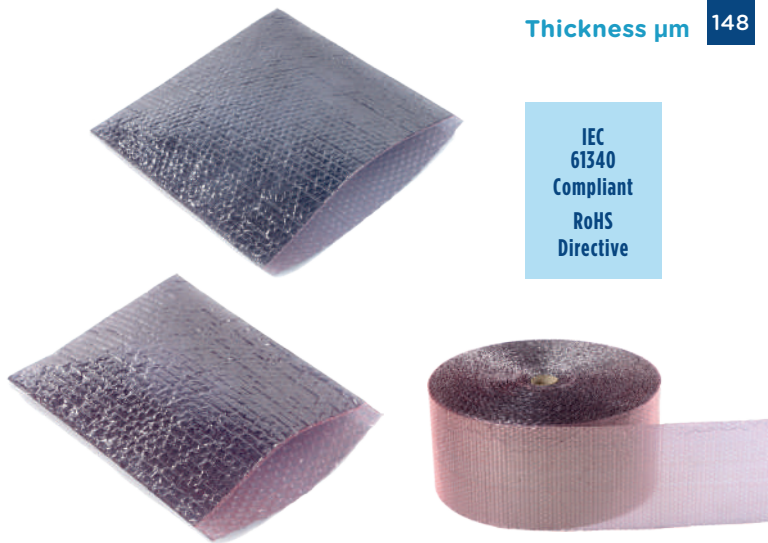
## 1.3. Shielding Bubble Bags



- Electrostatic and mechanic protection for ESD sensitive components
- Available with or without folding
- Other dimensions available on request

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{11} \Omega$
- ESD-STM 11.11 @12% HR
- Decay time:  $< 0.05 \text{ sec. FTMS 101 Mtd 406}$
- Physical protection, transmitted energy:  $< 50 \text{ nJ}$
- Material shielding film + PE



Thickness  $\mu\text{m}$  **148**

IEC  
61340  
Compliant  
RoHS  
Directive

### Dimensions available

Dimensions mm	Part Nr.
100 x 150 + 30	20-006-6000
150 x 200 + 30	20-006-6001
200 x 250 + 30	20-006-6002
240 x 210 + 30	20-006-6003
250 x 300 + 30	20-006-6004
300 x 375 + 30	20-006-6005N
460 x 460 + 30	20-006-6007

# 2. MOISTURE BARRIER BAGS

## 2.1. Standard Moisture Barrier Bags

Multilayer barrier bags offer superior protection against EMIs, ESDs and moisture absorption.



- Packaging dedicated for electronic components, vacuum or inert gas sealed immediately after production
- Other dimensions available on request
- Zip possibility on request
- Private labeling

### Thickness available $\mu\text{m}$ (+/- 10%)

**90** **106** **152**

MIL-PRF  
Compliant  
81705D  
Type 1 Class,  
EIA-583

### Technical Data

- Shielding effect:  $< 10\text{nJ}$
- Characteristics : Anti-humidity, shielding properties and electromagnetic interferences protection

**Surface resistance:  $R_s < 1 \times 10^{11} \Omega$**

	Thickness $\mu\text{m}$ <b>90</b>	Thickness $\mu\text{m}$ <b>106</b>	Thickness $\mu\text{m}$ <b>152</b>
Decay time: 1000 V - 100 V	< 0,1s	< 0,02s	< 0,02s
MVTR	< 0,02g /100in <sup>2</sup> /24 h	$\leq 0,0003\text{g}$ /100in <sup>2</sup> /24h	$\leq 0,0003\text{g}$ /100in <sup>2</sup> /24h

**Dimensions available**

Dimensions mm	Dimensions inches	Thickness $\mu\text{m}$ <b>90</b>	Thickness $\mu\text{m}$ <b>106</b>	Thickness $\mu\text{m}$ <b>152</b>
102 x 152	4 x 6	20-082-0039	20-211-0406	20-072-0013
102 x 762	4 x 30	20-082-0004	20-211-0430	20-071-0430
254 x 305	10 x 12	20-082-1012	20-211-1012	20-072-0011
254 x 508	10 x 20	20-082-1020	20-211-1020	20-071-1020
254 x 762	10 x 30	20-082-0007	20-211-1030	20-072-0035
406 x 457	16 x 18	20-082-0003	20-211-1618	20-071-1618
457 x 457	18 x 18	20-082-0009	20-211-1818	20-071-1818
203 x 406	8 x 16	20-082-0010	20-211-0816A	20-071-0816



**2.2 .Low Generating Transparent Moisture Barrier Bags**



**Technical Data**

- Surface resistance  $R_s$ :  $< 1 \times 10^{11} \Omega$
- MVTR:  $< 0,006\text{g} / 100 \text{ in}^2 / 24 \text{ h}$
- Characteristics: transparent moisture barrier
- No shielding properties

**EEIA-541  
Compliant**



Provides moisture and corrosion protection for sensitive components

Dimensions mm	Part Nr.
102 x 152	20-200-0406
254 x 305	20-200-1012
254 x 508	20-200-1020
406 x 457	20-200-1618
457 x 457	20-200-1818

**Thickness  $\mu\text{m}$  (+/- 10%) **115****

# 3. POLYETHYLENE BAGS

## LOW TRIBOCHARGING

### 3.1. Pink Poly Bags

IEC  
61340  
Compliant  
RoHS, REACH  
Directive

Heat-sealable bags made from pink low tribocharging LDPE (Low Density PolyEthylene).



- Avoids static electricity generation in protected environments
- 3 thicknesses available, with or without zip
- Private labeling

#### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{11} \Omega$
- Characteristics : dissipative Low Density PolyEthylene (LDPE) amine free

#### Dimensions available - Thickness $\mu\text{m}$ (+/- 10%)

Dim. mm	Dim. inches	Thickness 50		Thickness 75		Thickness 90	
		Without zip	With zip	Without zip	With zip	Without zip	With zip
76 x 80	3 x 3,2	-	20-010-0006	-	20-112-0001	-	20-014-0002
76 x 100	3 x 4	-	-	20-111-0304	20-112-0002	20-013-0003	20-014-0006
76 x 127	3 x 5	20-007-0305	20-008-0305	20-111-0305	20-112-0305	20-011-0305	20-012-0305
102 x 152	4 x 6	20-007-0406	20-008-0406	20-111-0406	20-112-0406	20-011-0406	20-012-0406
127 x 203	5 x 8	20-007-0508	-	20-111-0508	20-112-0508	20-011-0508	20-012-0508
152 x 203	6 x 8	20-007-0608	-	20-111-0608	-	20-011-0608	-
152 x 254	6 x 10	20-007-0610	20-008-0610	20-111-0610	20-112-0610	20-011-0610	20-012-0610
203 x 254	8 x 10	20-007-0810	-	20-111-0810	20-112-0810	20-011-0810	20-012-0810
203 x 305	8 x 12	20-007-0812	20-008-0812	20-111-0812	20-112-0812	20-011-0812	20-012-0812
203 x 406	8 x 16	20-007-0816	-	-	-	-	-
254 x 305	10 x 12	20-007-1012	20-008-1012	20-111-1012	20-112-1012	20-011-1012	20-012-1012
254 x 356	10 x 14	-	20-010-0007	-	-	-	-
305 x 356	12 x 14	-	-	20-111-1214	-	20-011-1214	-
305 x 406	12 x 16	20-007-1216	20-008-1216	20-111-1216	20-112-1216	20-011-1216	20-012-1216
406 x 508	16 x 20	20-007-1620	-	20-111-1620	-	20-011-1620	-
457 x 610	18 x 24	-	-	20-111-1824	--	20-011-1824	-

## 3.2. Pink Bubble Bags



Low tribocharging, offering mechanical protection at an optimal price due to a 2 layer co-lamination.



3 layer co-lamination and other dimensions available on request.

IEC  
61340  
Compliant  
RoHS, REACH  
Directive

### Dimensions available

Dimensions mm	Part Nr.
100 x 150	20-021-6000
150 x 200	20-021-6001
175 x 250	20-021-6002
200 x 250	20-021-6003
250 x 300	20-021-6004
300 x 375	20-021-6005
400 x 700 + 100 fold	20-021-6020

Thickness  $\mu\text{m}$  (+/- 10%) 55

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{10} \Omega$
- Bubbles diameter: 10 mm
- Characteristics : Dissipative Low Density PolyEthylene (LDPE)

# 4. ESD SAFE PERMANENT BAGS

No shelf life, made from permanently dissipative foil.

Thickness  $\mu\text{m}$  (+/- 10%) 75



### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{11} \Omega$
- Characteristics: permanent dissipative PolyEthylene

IEC  
61340  
Compliant  
RoHS  
Directive



- No greasy effect, stains, or contamination. Will not scratch in contact with sensitive parts
- Other dimensions available on request

### Dimensions available

Dimensions mm	Part Nr.	
	Without zip	With zip
76 x 80	-	20-096-0002
76 x 102	20-095-0304	20-096-0304
76 x 127	20-095-0305	20-096-0305
102 x 152	20-095-0406	20-096-0406
127 x 203	20-095-0508	20-096-0508
152 x 203	20-095-0608	-
152 x 254	20-095-0610	20-096-0610
203 x 254	20-095-0810	20-096-0810
203 x 305	20-095-0812	20-096-0812
254 x 305	20-095-1012	20-096-1012
305 x 356	20-095-1214	-
305 x 406	20-095-1216	20-096-1216
406 x 508	20-095-1620	-
457 x 610	20-095-1824	-

## 5. ANTISTATIC BAGS AMINE FREE (VCI)



NACE  
Standard  
TM0208-2008

### Technical Data

- PE density: 0,92 - 0,93 g/cm<sup>3</sup>
- MVTR: 0,9 - 1,1 g/m<sup>2</sup>
- Permeable-gas/oxygen: not detectable cm<sup>3</sup>/m<sup>2</sup>
- Surface resistance: Rs < 1x10<sup>11</sup> Ω
- Characteristics: anticorrosion, amine free, dissipative
- Colour: Red

### Dimensions available

Dimensions mm	Part Nr. Without zip
102 x 152	20-115-0406
152 x 254	20-115-0610
203 x 305	20-115-0812
254 x 305	20-115-1012
305 x 406	20-112-1216

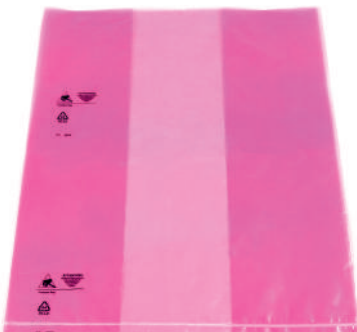


- VCI polybags provide efficient corrosion protection to all types of metals
- Private labeling

## 6. PE GUSSETED SHROUDS

Shrouds dedicated to the palletisation providing an electrostatic immunity and a protection against humidity transfer.

Thickness µm (+/- 10%) **80** **40**



IEC  
61340  
Compliant  
RoHS  
Directive

### Technical Data

- Surface resistance: Rs < 1x10<sup>11</sup> Ω
- MVTR: ≤ 2.7 g/m<sup>2</sup>/24 h
- 3 layers pink PE co-lamination
- Characteristics : Pink dissipative PolyEthylene BD/HD/BD

### Dimensions available

Dimensions W x G* x L mm	Part Nr.
1250 x (2x425) x 1850	20-019-6025
1250 x (2x425) x 1600	20-019-6027
579 x (2x196) x 745	20-019-6029

\* Gusseted



- Other dimensions and colors available on request
- Creation of standard LDPE shrouds possible
- Private labeling



# 7. WASTE BAGS

Pink PE low tribocharging bags to be used in waste bins. Typical surface resistance value:  $R_s < 1 \times 10^{11} \Omega$ .

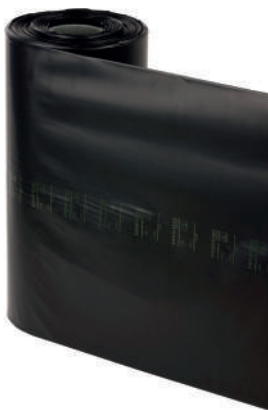
## Dimensions



Features	Dimensions (mm) Width x Height x Gusset	Thickness $\mu\text{m}$	Part Nr.
Waste bags for 15L bins (50 bag roll)	300 x 600 x (100 + 100)	25 +/-10%	41-095-0005
Waste bags for 40L bins (10 bag pack)	450 x 750 x (180 + 180)	23 +/-10%	41-095-0007
Waste bags for 40L bins (50 bag roll)	500 x 650 x (100 + 100)	23 +/-10%	41-095-0023
Waste bags for 70L bins (50 bag roll)	500 x 900 (50 +50)	23 +/-10%	41-095-024
Waste bags for 120L bins (10 bag pack)	680 x 1180 x (150 + 150)	23 +/-10%	41-095-0010
Waste bags for 125L bins (50 bag roll)	500 x 1180 x (120 + 120)	23 +/-10%	41-095-0025
Waste bags for 140L bins (10 bag pack)	700 x 750 x (160 + 160)	28 +/-10%	41-095-0017
Waste bags for 180L bins (10 bag pack)	800 x 1300 x (200 + 200)	28 +/-10%	41-095-0013

# 8. TUBING AND FILMS

## 8.1. Black Conductive Tubing



IEC  
61340  
Compliant  
Directive  
RoHS

Carbon loaded conductive PolyEthylene.

**Caution!** The use of black conductive PE bags or tubing might be detrimental to electronic components due to the high speed of the electrostatic discharge on the surface.

Thickness  $\mu\text{m}$  (+/- 10%) **100**

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^5 \Omega$
- Electrostatic characteristics : Carbon loaded conductive PolyEthylene
- Colour: black

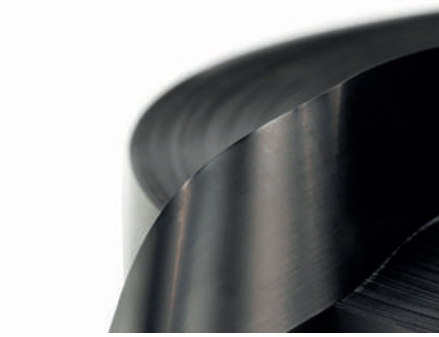
### Dimensions available

Dimensions	Part Nr.
76 mm x 152 m	20-851-0005
102 mm x 152 m	20-851-0010



Thanks to its excellent grounding proprieties, it can replace the Copper as a conductive mesh when used as a floor cover

## 8.2. Black Dissipative Cover Tape



Protection film for blister band for CMS.

RoHS  
REACH  
Directive

Thickness  $\mu\text{m}$  (+/- 10%) **70**

### Technical Data

- Tape width: 35 mm
- Surface resistance:  $1 \times 10^5 < R_s < 1 \times 10^{10} \Omega$
- Electrostatic characteristics : Dissipative PolyEthylene
- Material: Black PolyEthylene



Thermo sealable, allows a precise and resistant seal

### Dimensions available

Roll length	Part Nr.
1000 m	90-400-0035

## 8.3. Low Tribocharging Pink Bubble Rolls



For mechanical protection, and packagings with a variety of sizes.

IEC  
61340  
Compliant  
RoHS  
Directive

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{10} \Omega$
- Electrostatic characteristics :  
Low Density dissipative PolyEthylene (LDPE)

### Dimensions available

Dimensions	Part Nr.
300 mm x 150 m	20-022-0003
500 mm x 150 m	20-022-0005
600 mm x 150 m	20-022-0006
750 mm x 150 m	20-022-0007
1000 mm x 150 m	20-022-0010
1500 mm x 150 m	20-022-0015

Thickness  $\mu\text{m}$  (+/- 10%) **55**



Other strip and precut sizes on request

## 8.4. Low Tribocharging Pink Tubing



Low tribo-charging and dissipative PolyEthylene packaging tubing

IEC  
61340  
Compliant  
RoHS  
Directive

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{12} \Omega$
- Decay time: de 1000 V to 100 V < 2 sec.
- Material: Pink antistatic PolyEthylene BD

Thickness  $\mu\text{m}$  (+/- 10%) **90**



Other Thicknesses  
and dimensions  
available on request

### Dimensions available

Dimensions	Part Nr.
100 mm x 250 m	20-031-0005
150 mm x 250 m	20-031-0015
200 mm x 250 m	20-031-0020
250 mm x 250 m	20-031-0025
300 mm x 250 m	20-031-0030
400 mm x 250 m	20-031-0035
500 mm x 250 m	20-031-0040

# 9. SEALERS

## 9.1. Vacuum Sealers

Nozzle type vacuum sealers are clean-room compatible and work well with all common vacuum bag materials. The unit uses a low noise, non-particle generating compressed air driven ejector vacuum pump which is efficient and maintenance free.



- 4 types of vacuum
- 3 types of flushing
- 1 type of sealing and cooling
- LCD screen
- Automatic malfunction check



With Mounting  
Stand option

### Technical Data

- Multifunction nozzle for an optimal performance
- Appropriate for cleanroom applications thanks to the absence of pump and moving mechanical parts.
- Stainless steel
- Weight : 30kg (without mounting stands)

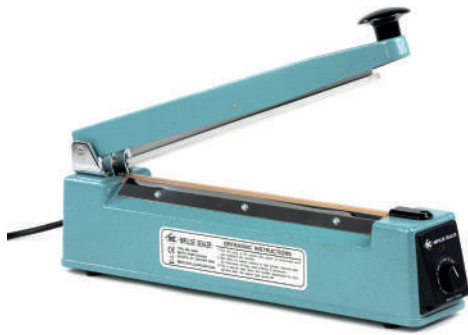
### Other available options

- Sealing width up to 1100mm
- Double sealing bars for thick bags
- Mounting Stands

### Dimensions available

Heating bar width mm	N <sup>ber</sup> of heating bars	Stand	Part Nr.
450	1	No	70-100-6104
450	1	Yes	70-100-6107
600	1	No	70-100-6106
600	1	Yes	70-100-6105

## 9.2. Manual Welders



Welding machine for film with cut device on request.

No vacuum function.



Ideal for sealing poly tubing

### Dimensions available

Sealing length mm	Sealing width mm	Max. seal Thickness mm	Power W	Weight kg	Part Nr.
200	2	2 x 0,1	260 W	4,5	70-100-6202
300	2	2 x 0,15	380 W	5,4	70-100-6201



# DESICCANTS ADHESIVES & ACCESSORIES



Eurostat offers accessories to facilitate sensitive item storage: desiccants bags and humidity indicator cards for MBB bags, adhesive, stretch film, straps etc...



# 1. DESICCANTS

## AND HUMIDITY INDICATOR CARDS (HIC)

Desiccants absorb residual humidity inside the packaging.



- No-woven bags with dissipative coating
- Recommended to use with moisture barrier bags

**MIL-D-3464 E  
and REACH  
Compliant**

### 1.1. Clay Desiccants



max. T°  
**50°C**

#### Dimensions available

Unit	Quantity/Box	Part Nr.
1/18 unit (2 gr)	2000	20-053-0002
1/6 unit (6 gr)	1000	20-053-0006
1/3 unit (12 gr)	1000	20-053-0012
1/2 unit (17 gr)	1000	20-053-0017n
1 unit (35 gr)	400	20-053-0035
2 units (70 gr)	250	20-053-0070n
4 units (140 gr)	100	20-053-0140
8 units (280 gr)	50	20-053-0280
16 units (560 gr)	25	20-053-0560

#### Technical Data

- Humidity level: effective from 15% to 50%
- Reactivation temperature: 120°C

### 1.2. Molecular Sieve



#### Dimensions available

Unit	Quantity/Box	Part Nr.
10 gr	800	20-055-0010
15 gr	500	20-055-0015
25 gr	300	20-055-0025
30 gr	500	20-055-0030
45 gr	300	20-055-0045

#### Technical Data

- Humidity level: effective from 15% to 50%
- Reactivation temperature: 120°C

## 02. DESICCANTS, ADHESIVES & ACCESSORIES

### 1.3. Silicagel



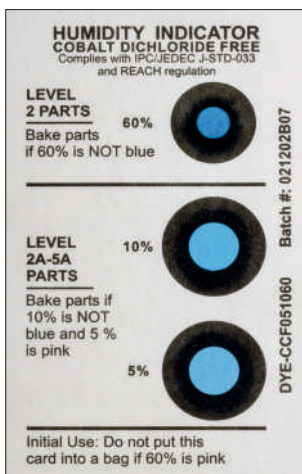
#### Available sizes

Unit gr	Quantity/Box	Part Nr.
1 gr	5000 (50pcs/bag and 100 bags/box)	20-054-0007
2 gr	2500 (50pcs/bag and 50 bags/box)	20-054-0002
10 gr	1200	20-054-0003
15 gr	500	20-054-0001

#### Technical Data

- Humidity level: effective from 15% to 50%
- Reactivation temperature: 120°C

### 1.4. Humidity Identification Cards (Cobalt dichloride free)



The cobalt dichloride free humidity indicator cards are recommended to identify the humidity inside packaging or in a dry area.



- Recommended with moisture barrier bags



#### Available sizes

Unit %	Q/Box	Standard	Part Nr.
5,10,60	125	JEDEC J-STD-033	20-062-0023
30,40,50	125	Mil-I-8835 & Mil-P-116 Method 2	20-062-0029
10,20,30,40	125	Mil-I-8835	20-062-0030
5,10,15	125	JEDEC J-STD-033	20-062-0031
10,20,30,40,50,60	200	Mil-I-8835 & Mil-P-116	20-063-0011



## 2. ADHESIVES

### 2.1. Wrapping Adhesive



#### Technical Data

- French and English text “Circuits sensibles to l'électricité statique” and “Observe precautions for handling electrostatic sensitive devices”.
- ESD Symbol

**Core diameter: 76 mm**

Dimensions mm	Part Nr.
66 m x 50 mm	42-005-0010

### 2.2. ESD Transparent Adhesive



#### Technical Data

- Rs: approx.  $1 \times 10^8 \Omega^*$  -  $1 \times 10^9 \Omega^*$
  - Rv: approx.  $1 \times 10^9 \Omega^*$  -  $1 \times 10^{10} \Omega^*$
- \*Relative air humidity: approx. 55%

IEC  
61340  
Compliant

**Core diameter: 76 mm**

Dimensions	Part Nr.
66 m x 12 mm	42-015-5000
66 m x 24 mm	42-015-5001
66 m x 48 mm	42-015-5002

### 2.3. Adhesive Tapes with Conductive Grid



Can be purchased with a plastic core on request (clean room requirement)

#### Technical Data

- Rs:  $\leq 1 \times 10^{11} \Omega$

**Cardboard core diameter: 76 mm**

Dimensions	Part Nr.
36 m x 48 mm	42-115-0105
36 m x 24 mm	42-115-0110
36 m x 19 mm	42-115-0115
36 m x 12 mm	42-115-0120

## 2.4. ESD safe adhesive tape dispensers



### Adhesive tapes dispenser 50mm tape (max)

- Coating: conductive powder coated finish
- Core diameter: 76mm
- Surface resistance:  $< 1 \times 10^3 \Omega$
- Colour: Black

Part Nr. : 42-100-6007



IEC  
61340  
Compliant

### Adhesive tapes dispenser 29mm tape

- Conductive tape dispenser with black epoxy paint design
- Material: ABS
- Core diameter: 25 mm et 76 mm
- Surface resistance:  $1 \times 10^5 - 1 \times 10^9 \Omega$
- Colour: Black

Part Nr. : 41-092-0103

# 3. ACCESSORIES

## 3.1. Conditioning

### a. Low tribocharging stretch film



EN 61340  
and  
ANSI/ESD  
S20.20 –  
1999  
Compliant

Thickness  $\mu\text{m}$  23

#### Technical Data

- Excellent mechanical properties
- Electrostatic characteristics: pink electrostatic dissipative LDPE



- Suitable for machine and hand wrapping
- Recyclable

#### Dimensions available

Dimensions m	Weight kg	Core diameter mm	Usage	Part Nr.
0,5 x 250 (+/- 5%)	3 (+/- 5%)	50	Manual	85-100-0018
0,5 x 1000 (+/- 5%)	12 (+/- 5%)	75	Automatic	85-100-0019

## b. PolyPropylene Straps



Compatible with most conventional strapping machines

Designed for automatic packing of ESD sensitive items.

### Technical Data

- Dimensions: 12 mm x 0.5 mm – roll of 1500 m
- Surface resistance:  $< 1 \times 10^9 \Omega$
- Stretch resistance: 1430 kg/mm<sup>2</sup>
- Breaking point: 125 %
- Electrostatic characteristics: Dissipative PolyPropylene

### Dimensions available

Dimensions mm	Part Nr.
12 x 0.5	70-101-0001

## c. Dissipative straps



- Other dimensions available on request.

Static dissipative straps are especially designed to safe pack ESD sensitive items.

### Technical Data

- Surface resistance:  $R_s < 1 \times 10^{11} \Omega$
- Material: Velcro coated nylon strap
- Colour: Black

### Dimensions available

Dimensions mm	Part Nr.
25,4 x 915	70-101-0002
25,4 x 508	70-101-0003



03

# TRAINING AUDIT & SERVICE



Eurostat, ESD Expert and voting member of the IEC/TC101 “electrostatics”, offers on site audits and product characterization.

# 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 is offered 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 ESD damages and defects 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 (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 in 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 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. Characterization

**GOALS** **Define the Electrostatic features of your products**  
with measurements performed in our laboratory to IEC.



#### 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



Our Technical service centre 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







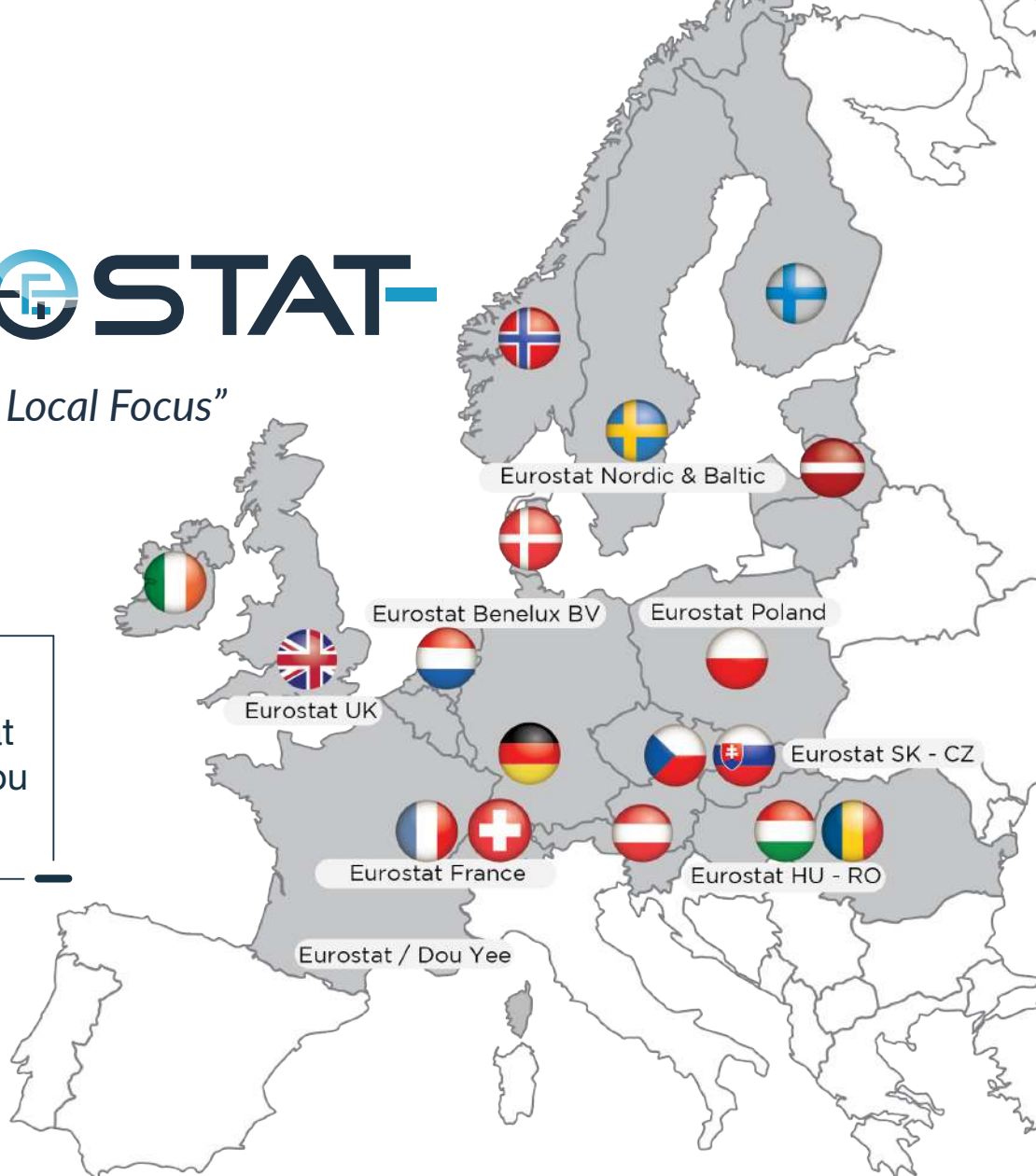


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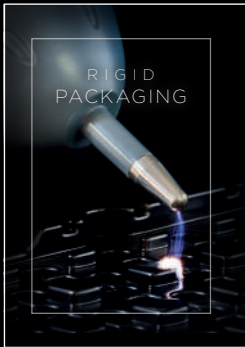
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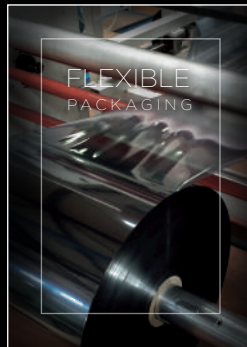
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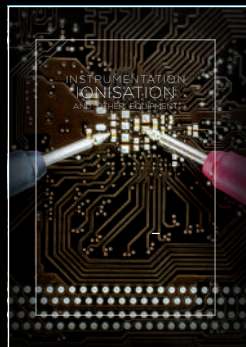
# The Eurostat offer



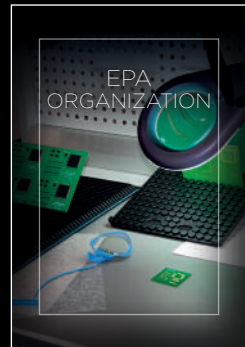
RIGID  
PACKAGING



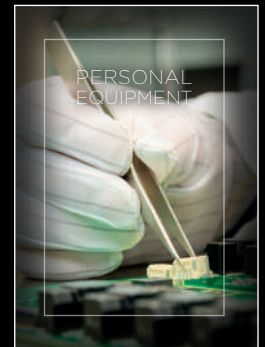
FLEXIBLE  
PACKAGING



INSTRUMENTATION  
& IONISATION



EPA  
ORGANIZATION



PERSONAL  
EQUIPMENT

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