

FLEXIBLE PACKAGING



BAGS

DESSICANTS,

ADHESIVES &
ACCESSORIES

-EUROSTAT-
A MEMBER OF DOU YEE

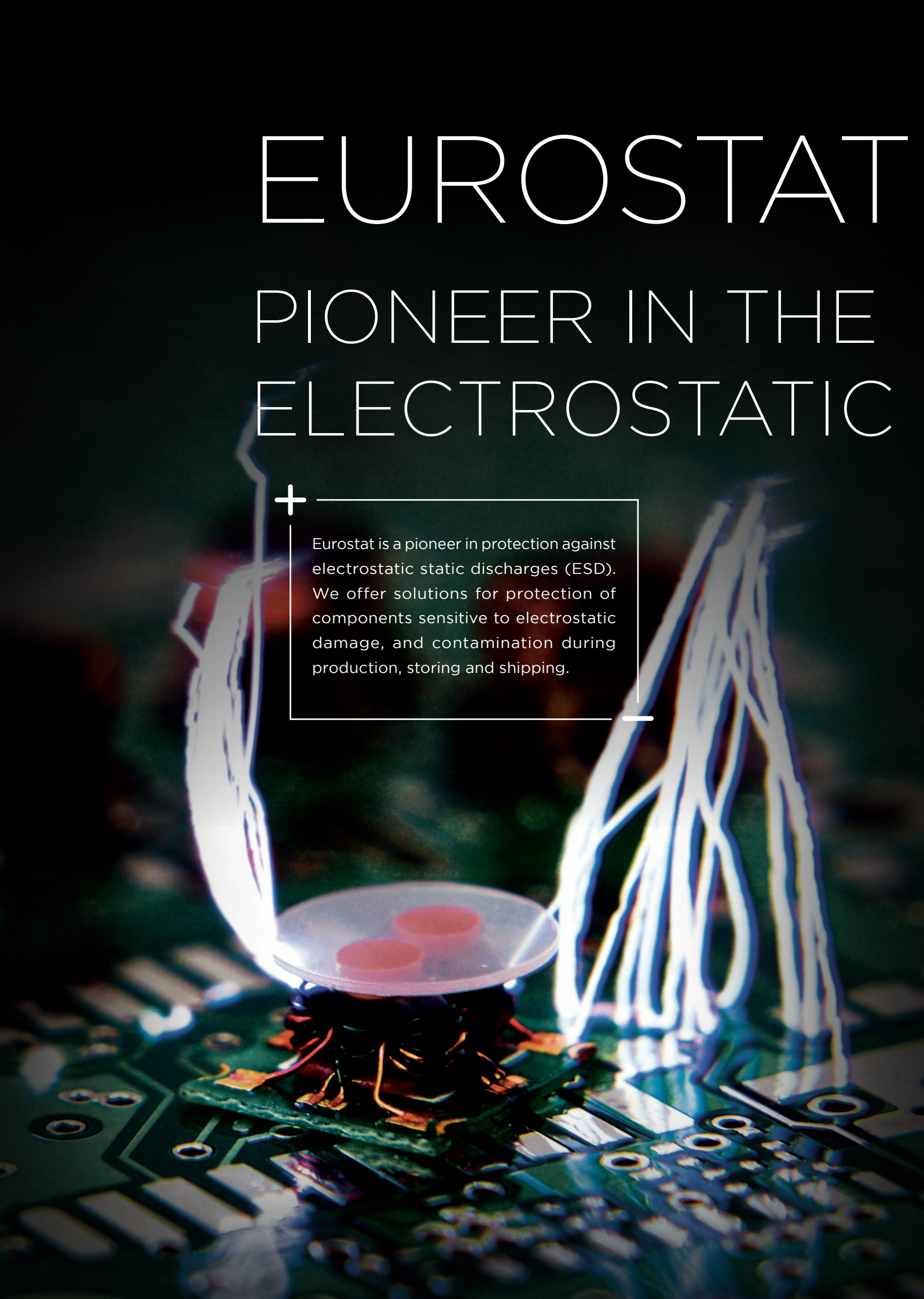
www.eurostatgroup.com

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 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.

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 $R_g > 1 \times 10^{11} \Omega$



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 in ESDs: 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 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.

SBB

Static shielding films in different thickness for protection of ESD sensitive products.

Low tribocharging bubble film

Offers mechanical protection against shocks and ESD protection.

VCI Film

Low generating films providing a protection to corrosion.

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

TABLE OF CONTENTS

01

BAGS

1. 9

BAGS SHIELDING

1.1. Shielding Shrouds 11

1.2. Shielding Bubble Bags 12

2. 12

MOISTURE BARRIER BAGS

2.1. Transparent Moisture Barrier Bag . 13

3. 14

**POLYETHYLENE BAGS
TRIBOCHARGING**

3.1. Pink Poly Bag 14

3.2. Pink Bubble Bag 15

3.3. Transparent PolyEthylene
for screens 15

3.4. PolyEthylene Gusseted Shrouds ... 16

4. 16

ESD PERMANENT SAFE BAG

5. 17

**ANTISTATIC FILM AMINE
FREE (VCI)**

6. 18

TUBING AND FILM

6.1. Black Conductive Tubing 18

6.2. Black Dissipative Cover Tapes 18

6.3. Low Tribocharging Pink
Bubble Rolls 18

6.4. Low Tribocharging Pink Tubing 19

7. 20

SEALERS

7.1. Vacuum Sealers 20

7.2. Manual Welders 21

02

DESSICANTS, ADHESIVE & ACCESSORIES

1. 22

DESSICANTS AND HUMIDITY INDICATOR CARDS (HIC)

1.1. Clay 23

1.2. Molecular Sieve 23

1.3. Silicagel 24

1.4. Humidity Identification Cards 24

2. 25

ADHESIVES

2.1. Wrapping Adhesive 25

2.2. ESD Transparent Adhesive 25

2.3. Adhesive Tapes with Conductive
Grid 25

2.4. Adhesive Tapes Dispensers 26

3. 26

ACCESSORIES

3.1. Conditioning 26

 Dissipative stretch film 26

 PolyPropylene Straps 27

 Dissipative Straps 27

3.2. Waste Bag 27

PAGE 22

03

TRAINING AUDIT & SERVICE

PAGE 28



01

BAGS

+

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

—

1. SHIELDING BAGS

Top 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

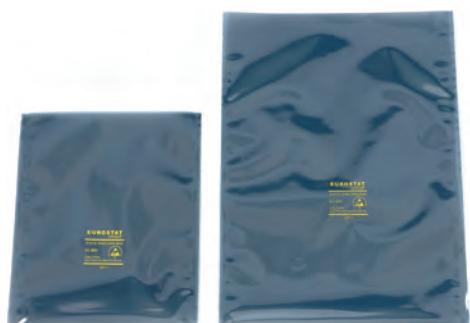
Technical Data

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

IEC
61340
Compliant
RoHS
Directive
MIL-PRF-
81705D

Shielding bags- Thickness μm (+/- 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

1.1. Shielding Shrouds



Technical Data

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



- Other dimensions available on request

Without zip - Thickness μm (+/- 10%) **76**

Flat dimensions mm

Reference

600 (width) + 200 + 200 (shroud) x 640 (height)	20-875-0007
400 (width) + 150 + 150 (shroud) x 500 (height)	20-875-0008

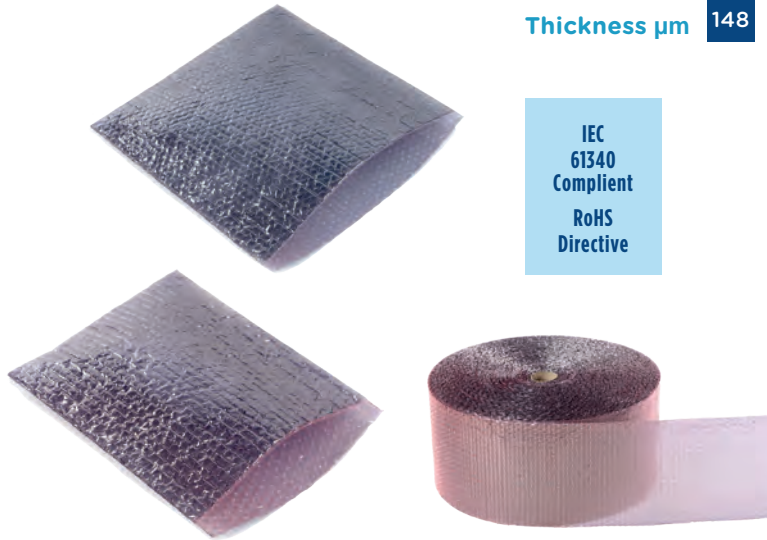
1.2. Shielding Bubble Bags



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

Technical Data

- Surfaceresistance: $R_{pp} < 1 \times 10^{11} \Omega$
- 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 μm 148

IEC
61340
Compliant
RoHS
Directive

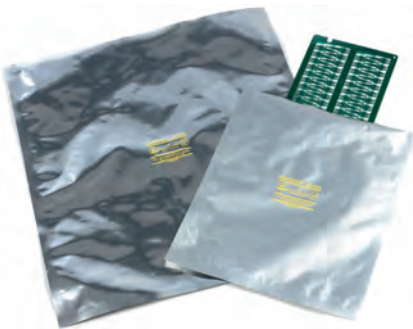
Dimensions available

Dimensions mm	References
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
345 x 300 + 30	20-006-6006
460 x 460 + 30	20-006-6007

2. MOISTURE BARRIER BAGS

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

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

Thickness available μm (+/- 10%)

90 106 152

Technical Data

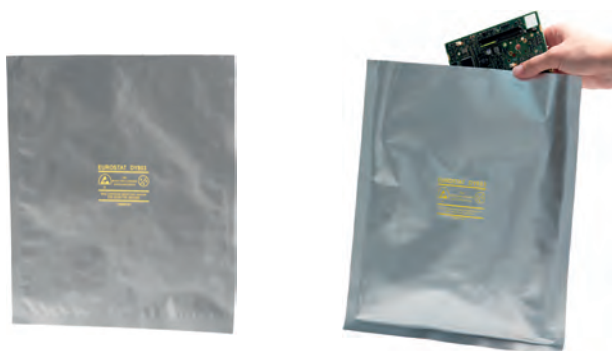
- Shielding effet: $< 10\text{nJ}$
- Characteristics : Anti-humidity, shielding properties and electromagnetic interferences protection

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

	Thickness μm 90	Thickness μm 106	Thickness μm 152
Decay time: 1000 V – 100 V	< 0,1s	< 0,02s	< 0,02s
MVTR	< 0,02g /100in ² /24 h	$\leq 0,0003\text{g}$ /100in ² /24h	$\leq 0,0003\text{g}$ /100in ² /24 h

Dimensions available

Dimensions mm	Dimensions inches	Thickness μm 90	Thickness μm 106	Thickness μm 152
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	20-211-0816	20-071-0816



2.1. Transparent Moisture Barrier Bag



Technical Data

- Surface resistance R_{pp} : $< 1 \times 10^{11} \Omega$
- MVTR: $< 0,006\text{g} / 100 \text{ in}^2 / 24 \text{ h}$
- Characteristics: transparent moisture barrier

**EEIA-541
Compliant**



Provides moisture and corrosion protection for sensitive components

Dimensions References

mm

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 μm (+/- 10%) **115**

3. POLYETHYLENE BAGS

TRIBOCHARGING

3.1. Pink Poly Bag

IEC
61340
Compliant
RoHS, REACH
Directive



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



- Avoids static electricity creation in protected environments
- 3 thicknesses available, with or without zip

Technical Data

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

Dimensions available - Thickness μm (+/- 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 Bag



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	References
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 μm (+/- 10%) 55

Technical Data

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

3.3. Transparent PolyEthylene (PE) for screens



Complex film specially designed and developed to protect LCD screens.

IEC
61340
Compliant
RoHS, REACH
Directive

Thickness μm 35

Technical Data

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

3.4. PolyEthylene Gusseted Shrouds



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

Thickness μm (+/- 10%) 80

IEC
61340
Compliant
RoHS
Directive

Technical Data

- Surface resistance: $R_{pp} < 1 \times 10^{11} \Omega$
- MVTR: $\leq 2.7 \text{ g/m}^2/24 \text{ h}$
- 3 layers pink PE co-lamination
- Characteristics : Pink dissipative PolyEthylene BD/HD/BD



- Other dimensions available on request
- Creation of standard LDPE shrouds possible

Dimensions available

Dimensions W x G* x L mm	References
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

4. ESD PERMANENT SAFE BAG



No shelf life; made from permanently dissipative foil.

IEC
61340
Compliant
RoHS
Directive

Thickness μm (+/- 10%) 75

Technical Data

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



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

Dimensions available

Dimensions mm	References	
	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 FILM AMINE FREE (VCI)



NACE
Standard
TM0208-2008



- VCI polybags provide effective corrosion protection to all types of metals

Technical Data

- PE density: 0,92 - 0,93 g/cm³
- MVTR: 0,9 - 1,1 g/m²
- Permeable-gas/oxygen: not detectable cm³/m²
- Surface resistance: Rpp < 1x10¹¹ Ω
- Characteristics: anticorrosion, amine free, dissipative
- Colour: Red

Dimensions available

Dimensions mm References 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

6. TUBING AND FILM

6.1. 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 μm (+/- 10%) **100**

Technical Data

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

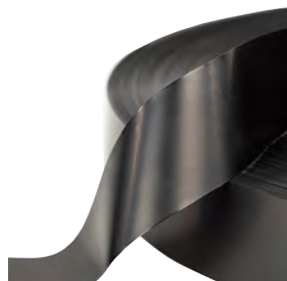
Dimensions available

Dimensions	References
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

6.2. Black Dissipative Cover Tape



Protection film for blister band for CMS.

RoHS
REACH
Directive

Thickness μm (+/- 10%) **70**

Technical Data

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

Dimensions available

Roll length	Reference
1000 m	90-400-0035



Thermo sealable, allows a precise and resistant seal

6.3. Low Tribocharging Pink Bubble Rolls



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

IEC
61340
Compliant
RoHS
Directive

Technical Data

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

Dimensions available

Thickness μm (+/- 10%) 55



Other strip and precut sizes on request

Dimensions

Reference

Dimensions	Reference
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

6.4. Low Tribocharging Pink Tubing



Low tribo-charging and dissipative PolyEthylene packaging tubing

IEC
61340
Compliant
RoHS
Directive

Technical Data

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

Dimensions available

Thickness μm (+/- 10%) 90



Other Thicknesses and dimensions available on request

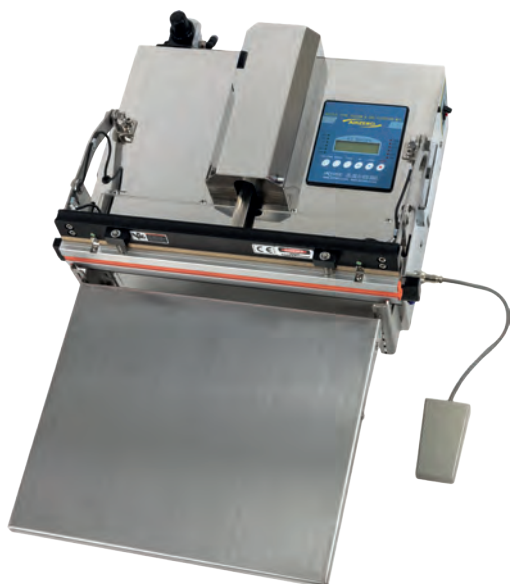
Dimensions

Reference

Dimensions	Reference
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

7. SEALERS

7.1. Vacuum Sealers



This machine is designed to heatseal packaging. It offers a unique solution for generating vacuum without an embedded vacuum pump (Bernoulli effect). This allows us to avoid moving mechanical parts and to use the machine in a cleanroom environment.



- Great flexibility of use thanks to the possibility of setting the user modes
- Allows injection of rare gazes for neutral environments



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.

Other available options

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

Dimensions available

Heating bar width mm	N ^{ber} of heating bars	Stand	Reference
450	1	No	70-100-6019
450	1	Yes	70-100-6023
600	1	No	70-100-6022
600	1	Yes	70-100-6021

7.2. 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	Reference
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



02

DESSICANTS ADHESIVES & ACCESSORIES



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



1. DESSICANTS

AND HUMIDITY INDICATOR CARDS (HIC)

Dessicants absorb residual humidity inside the packaging.



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

MIL-D-3464 E
Compliant

1.1. Clay



max. T°
50°C

Dimensions available

Unit	Quantity/Box	Reference
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	Reference
10 gr	750	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

1.3. Silicagel



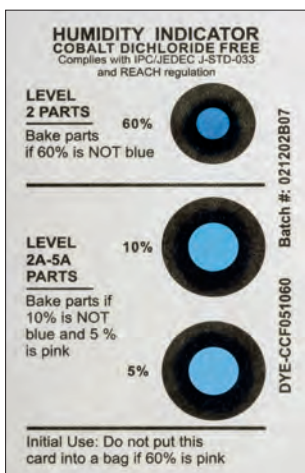
Available sizes

Unit	Quantity/Box	Reference
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

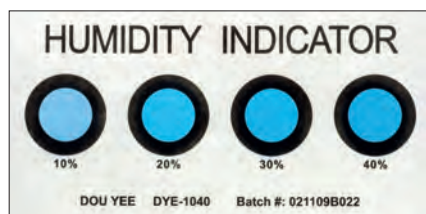
1.4. Humidity Identification Cards



Humidity indicator cards are recommended to identify the humidity inside packaging or in a dry area.



- Recommended with moisture barrier bags
- Identification without cobalt dichloride available on demand with a minimum order required



Available sizes

Percentage	Q/Box	Reference
10, 20, 30, 40, 50, 60	200	20-063-0011 without COCL2
5, 10, 15	125	20-063-0016
10, 20, 30, 40	100	20-063-0020
5, 10, 60	125	20-063-0021
30, 40, 50	125	20-063-0022
5, 10, 60	125	20-062-0023 without COCL2

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	Reference
66 m x 50 mm	42-005-0010

2.2. ESD Transparent Adhesive



IEC
61340
Compliant

Core diameter: 76 mm

Dimensions	Reference
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)

Core diameter: 76 mm

Dimensions	Reference
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. Adhesive Tape Dispensers



Adhesive Tape Dispenser 50 mm (max)

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

Reference: 42-100-6007

IEC 61340
Compliant

Adhesive Tape Dispensers 29 mm

- Metal conductive dispenser with black colour epoxy coating
- Material: ABS
- Core diameter: 25 mm and 76 mm
- Surface resistance: $1 \times 10^5 < R_{pp} < 1 \times 10^9 \Omega$
- Colour: Black

Reference: 41-092-0103

3. ACCESSORIES

3.1. Conditioning

a. Dissipative stretch film



Technical Data

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



- Suitable for machine and hand wrapping
- Recyclable

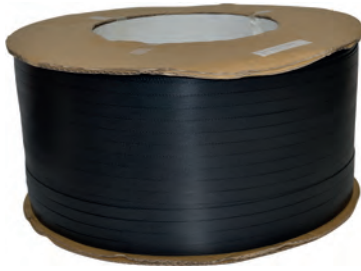
EN 61340
and
ANSI/ESD
S20.20 –
1999
Compliant

Thickness μm 23

Dimensions available

Dimensions m	Weight kg	Core diameter mm	Usage	Reference
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/mm²
- Breaking point: 125 %
- Electrostatic characteristics: Dissipative PolyPropylene

Dimensions available

Dimensions mm	Reference
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: $R_{pp} < 1 \times 10^{11} \Omega$
- Material: Velcro coated nylon strap
- Colour: Black

Dimensions available

Dimensions mm	Reference
25,4 x 915	70-101-0002
25,4 x 508	70-101-0003

3.2. Waste Bag



Pink antistatic PE waste bag.

Dimensions available

Features	Dimensions mm W x H x Gussted	Thickness mm	Reference
50 x 15 litre bags	300 x 600 x (100 + 100)	25 +/-10%	41-095-0005
10 x 40 litre bags	450 x 750 x (180 + 180)	23 +/-10%	41-095-0007
10 x 120 litre bags	680 x 1180 x (150 + 150)	23 +/-10%	41-095-0010
10 x 180 litre bags	800 x 1300 x (200 + 200)	28 +/-10%	41-095-0013



03

TRAINING AUDIT & SERVICE

+

Eurostat, ESD Expert and voting member of the IEC/TC101 "electrostatics", 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"> Operators Manufacturing support Management 	<ul style="list-style-type: none"> To understand why and how damages and defects, due to static electricity occur 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 	Approx. 3h30 (recommended period)

Level 2

Attendees	Goals	Sessions
<ul style="list-style-type: none"> Engineers Technicians management with engineering background 	<ul style="list-style-type: none"> To take care that all prevention rules are implemented and respected by all personnel working within or entering an EPA To be aware of the basic methods and tools currently used to make measurements into an EPA 	Approx. 4h30 (recommended period)

Level 3

Attendees	Goals	Sessions
<ul style="list-style-type: none"> ESD coordinators Supervisors Instructors 	<ul style="list-style-type: none"> To establish a complete Prevention and Control Plan preventing from static electricity To propose progress axis and fitted preventive or corrective actions To prepare in-house audits thanks to punctual help of third-part ESD experts 	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

INSTALLATIONS

MAINTENANCE

REPARATION

SIZING

VERIFICATION



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.



45 route d'Orgelet - 39130 PONT-DE-POITTE - FRANCE
Tel. : +33 (0) 3 84 87 02 39 - Fax : +33 (0) 3 84 48 30 00
info.fr@eurostatgroup.com

www.eurostatgroup.com