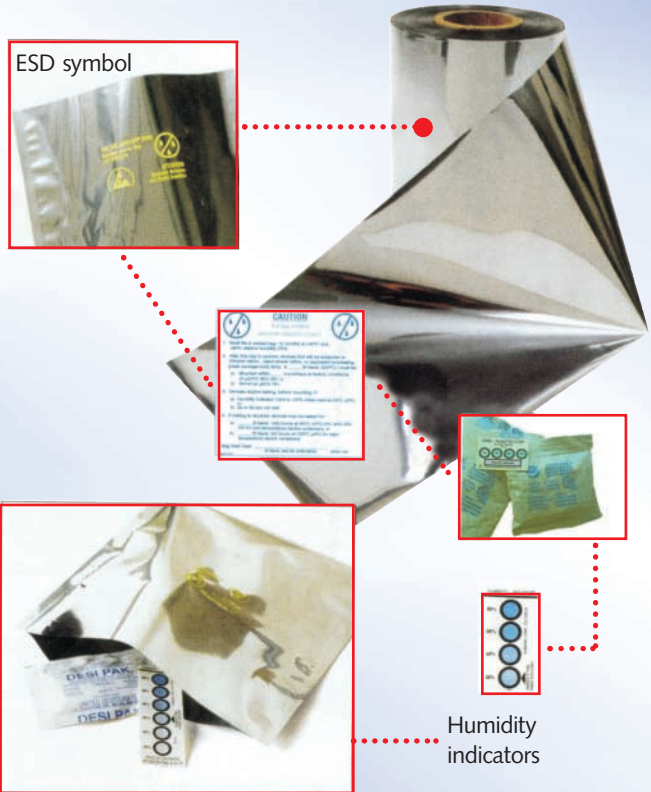


# ESD moisture barrier bags

## ESD/EMI/DRY pack moisture barrier bags

For the packaging of humidity sensitive components, for example SMD-reels, IC-shipping bars, flatpack-trays, etc. according to the NEDA-regulations.

- Electrostatic, dissipative inner and outer layer
- Corresponds to MIL-B 81705, type 1, class 1
- Free of Amines, N-octanoic-acid
- Polycarbonate compatible
- Vacuumisable
- Corrosion-free
- EMI-shielding >45 dB between 1 and 10 GHz, MIL-B 81705, REV-C
- Surface resistance (metallization) < 10<sup>2</sup> Ohm



## ESD/EMI/DRY pack moisture barrier bags

material thickness: 137 µm

Order No:	Bag sizes
24.000.80	100 x 660 mm
24.000.81	150 x 700 mm
24.000.82	250 x 750 mm
24.000.83	400 x 450 mm
24.000.84	450 x 450 mm

### Desiccant bags

For the drying during transport and storage of sensitive components. Usage together with moisture barrier bags.

Order No:	Bag sizes	Pack. unit
24.002.10	55 x 50 mm	1.200 pieces

Other bag sizes quoted on request

## EMI/STATIC SHIELD moisture barrier bags

material thickness: 93 µm

Order No:	Bag sizes
24.001.80	100 x 660 mm
24.001.81	150 x 700 mm
24.001.82	250 x 750 mm
24.001.83	400 x 450 mm
24.001.84	450 x 450 mm

### Humidity indicators

Facilitate an optical control of air sealed packagings due to the recognition of any change in relative air humidity. The indicator changes its colour from blue (safe) to pink (not safe).

- Corresponds to MIL I-8835 standard
- Indication of relative air humidity between 10% and 40%
- A warning arrow appears at 30% relative air humidity (pink indicates a failure of the desiccant)

Order No:	Pack. unit
24.002.00	200 pieces



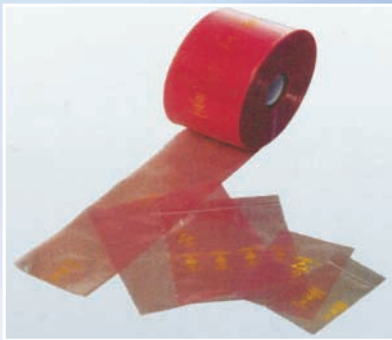
# ESD shielding bags and shielding films

## PE-bags

### Permanently dissipative

#### According to DIN EN 61340-5-1

- Amine-free and weldable Polyethylene, recyclable
- Colour: pink-transparent
- Printing: ESD symbol, recycling symbol and LOT-No.
- Surface resistance:  $10^{10}$  -  $10^{11}$  Ohm
- Material thickness: 0,08 mm

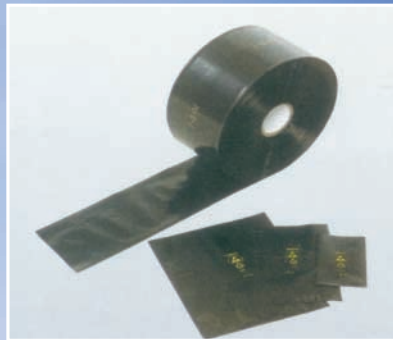


## PE-bags

### Electrostatic volume-conductive

#### according to DIN EN 61340-5-1

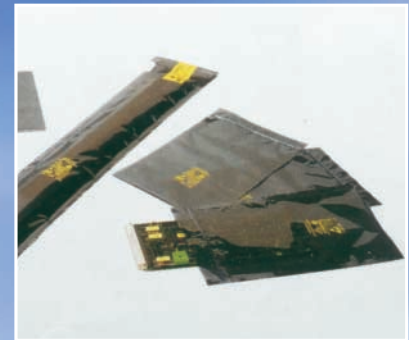
- Weldable Polyethylene, recyclable
- Colour: black
- Printing: ESD symbol, recycling symbol and LOT-No.
- Surface resistance:  $10^4$  -  $10^5$  Ohm
- Material thickness: 0,08 mm



## ESD shielding bags

### according to DIN EN 61340-5-1

- Metallized transparent shielding bag (aluminium vaporisation), recyclable
- Printing: ESD symbol, recycling symbol and LOT-No.
- Weldable
- Surface resistance: metallization  $< 10^2$  Ohm
- Surface resistance of inner and outer layer:  $10^9$  -  $10^{10}$  Ohm



## Pe-bags, pink

Order No:	Bag size
22.300.01	76 x 127 mm
22.300.02	102 x 152 mm
22.300.08	127 x 203 mm
22.305.02	152 x 203 mm
22.310.01	152 x 254 mm
22.315.00	203 x 254 mm
22.315.01	203 x 305 mm
22.300.09	203 x 406 mm
22.320.00	254 x 305 mm
22.320.01	305 x 356 mm
22.325.00	305 x 406 mm
22.330.00	406 x 508 mm

## Pe-bags, black

Order No:	Bag size
21.125.00	100 x 150 mm
21.100.00	130 x 200 mm
21.105.00	150 x 225 mm
21.110.00	200 x 250 mm
21.115.00	250 x 300 mm
21.120.00	300 x 400 mm
21.120.06	350 x 450 mm
21.135.00	400 x 500 mm
21.130.00	500 x 600 mm

## Shielding bags

Order No:	Bag size
23.150.00	76 x 127 mm
23.151.00	102 x 102 mm
23.154.00	102 x 152 mm
23.160.06	102 x 660 mm
23.158.00	127 x 203 mm
23.158.02	152 x 203 mm
23.160.00	152 x 254 mm
23.160.03	152 x 660 mm
23.164.00	203 x 254 mm
23.166.00	203 x 305 mm
23.166.02	203 x 406 mm
23.168.00	254 x 305 mm
23.170.00	254 x 356 mm
23.173.00	254 x 660 mm
23.174.00	305 x 406 mm
23.176.00	305 x 457 mm
23.176.01	305 x 508 mm
23.176.02	356 x 356 mm
23.180.00	356 x 457 mm
23.182.00	406 x 457 mm
23.182.02	406 x 559 mm
23.184.00	457 x 457 mm
23.184.03	457 x 610 mm
23.186.00	508 x 660 mm
23.188.00	533 x 457 mm

## Pe-bags, pink - reclosable

Order No:	Bag size
22.100.00	76 x 127 mm
22.105.00	102 x 152 mm
22.105.01	127 x 203 mm
22.111.00	152 x 254 mm
22.115.00	203 x 254 mm
22.118.00	203 x 305 mm
22.120.00	254 x 305 mm
22.125.00	305 x 406 mm

## Pe-tubular film

Order No:	Width	Bag size
21.500.00	100 mm	500 m
21.505.00	130 mm	500 m
21.510.00	150 mm	500 m
21.515.00	200 mm	500 m
21.520.00	250 mm	500 m
21.525.00	300 mm	500 m
21.535.00	400 mm	250 m
21.545.00	500 mm	250 m
21.550.00	600 mm	250 m

Special formats quoted on request

## PE-tubular film

Order No:	Width	Length
22.250.00	100 mm	250 m
22.255.00	130 mm	250 m
22.260.00	150 mm	250 m
22.265.00	200 mm	250 m
22.270.00	250 mm	250 m
22.275.00	300 mm	250 m
22.280.00	400 mm	250 m
22.285.00	500 mm	250 m

Special formats quoted on request

**ESD goods at risk are packed and transported safely in our ESD shielding bags and foils.**

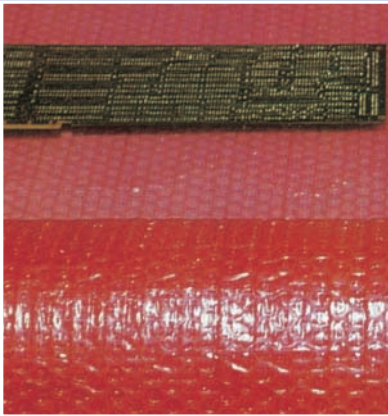
## Shielding bags - reclosable

Order No:	Bag size
23.200.00	76 x 127 mm
23.202.00	102 x 152 mm
23.202.01	102 x 660 mm
23.204.00	127 x 203 mm
23.206.00	152 x 254 mm
23.208.00	203 x 254 mm
23.210.00	254 x 305 mm
23.212.00	254 x 356 mm
23.214.00	305 x 406 mm
23.216.04	356 x 457 mm
23.218.00	457 x 457 mm

Special formats quoted on request

# ESD air cushion film, shrink film, stretch foil

## Antistatic air cushion film "Amine-free"



Surface resistance: approx.  $10^{10}$  Ohm  
 Colour: transparent-pink  
 Knob diameter: 10 mm  
 Knob height: approx. 4 mm

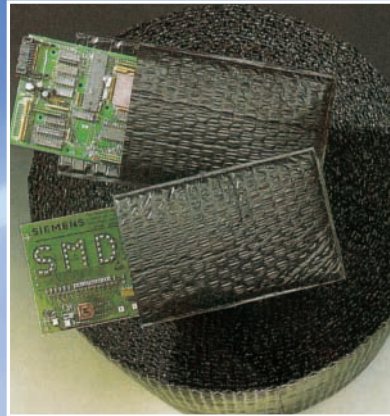
### Design: 3 layers

Order No:	Width	Length
23.403.00	300 mm	100 m
23.404.00	400 mm	100 m
23.406.00	600 mm	100 m
23.412.00	1200 mm	100 m

### Design: 2 layers

Order No:	Width	Length
23.403.01	300 mm	100 m
23.404.01	400 mm	100 m
23.406.01	600 mm	100 m
23.412.01	1200 mm	100 m

## Electrically conductive air cushion film



Surface resistance: approx.  $10^5$  Ohm  
 Colour: black  
 Knob diameter: 10 mm  
 Knob height: approx. 4 mm

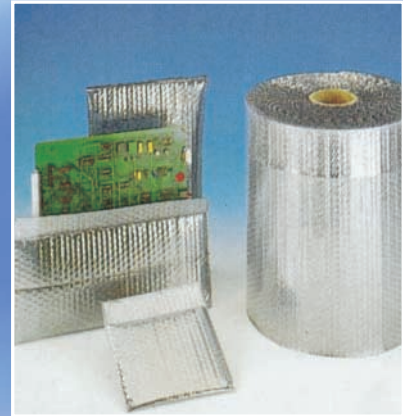
### Design: 3 layers

Order No:	Width	Length
23.303.00	300 mm	100 m
23.304.00	400 mm	100 m
23.306.00	600 mm	100 m
23.312.00	1200 mm	100 m

### Design: 2 layers

Order No:	Width	Length
23.303.01	300 mm	100 m
23.304.01	400 mm	100 m
23.306.01	600 mm	100 m
23.312.01	1200 mm	100 m

## Metallized air cushion film



- Aluminium vaporized, shielding, 3 layers, smooth surface and under-surface, inner surface made of permanent antistatic Polyethylene – Amine-free weldable
- Inner surface resistance  $\leq 10^{12}$  Ohm
- Outer surface resistance  $\leq 10^2$  Ohm (metallization)

Order No:	Width	Length
23.503.00	300 mm	100 m
23.504.00	400 mm	100 m
23.506.00	600 mm	100 m
23.512.00	1200 mm	100 m

Blanks and bags of any size also with self-adhesive locking – quoted on request

## ESD shrink film

Made of permant dissipative, amine-free polyolefin, recyclable

- Excellent transparency and high shrinking character
- Suitable for manual and automatic packaging plants
- Suitable for packaging of bare printed boards, IC-bars etc.
- Narrow shrinkage
- Corrosion-free, clean surface
- Compatible with Polycarbonate
- Surface resistance:  $10^{10}$  -  $10^{11}$  Ohm



Order No:	Width	Material thickness	Length
23.813.00	356 mm	0,025 mm	800 m
23.814.00	559 mm	0,025 mm	800 m

## ESD stretch film

- Made of permant dissipative, amine-free polyolefin, recyclable
- Colour: pink-transparent
- Surface resistance:  $10^{10}$  -  $10^{11}$  Ohm

Order No:	Width	Material thickness	Length
23.815.00	500 mm	0,025 mm	300 m
23.816.00	500 mm	0,025 mm	1560 m