



Antistatic Tape Applications



Wescorp Antistatic Tapes

In ESD protected areas, replace regular high charging tape with Wescorp Antistatic Tape. ANSI/ESD S20.20 paragraph 6.23.1. state "All nonessential insulators, such as those made of plastics and paper (e.g., coffee cups, food wrappers and personal items) must be removed from the workstation.

Wescorp Antistatic Cellulose Tape Line Technical Information for Antistatic Cellulose Tape



Thickness: 2.4 mil (0.06 mm)
 Film construction: Cellulose
 Adhesive: Rubber based - non-staining, absorbs moisture
 Adhesive surface resistance: 10E10 - 10E11 Ohms
 Temperature Range: -10°C - 71°C (14°F - 160°F)
 100°C for 10 min max - MIL-B-81705
 Color: Transparent
 Roll Length: 36 yards (1" core); 72 yards (3" core)
 Film Thickness: 2.0 mils
 Elongation: 25%
 Tensile Strength: 25 lbs/in²
 Adhesion Strength: 40 oz/in²

Surface Resistance (73°F, 45% RH):
 10E10 - 10E11 Ohms - ASTM-D-257
 Static Generation from conductive plate:
 (73°F, 45% RH): 80 volts average
 Static Generation from roll:
 (73°F, 45% RH): 50 volts average
 Meets government specs: CID-A-A-113C, Type 1 Class A

Applications for Antistatic Clear Cellulose Tape with and without Symbols

- Sealing ESD bags and other ESD packaging / containers
- Use with ESD symbols for ESD awareness
- General purpose ESD tape applications
- Secure (bundle) IC DIP tubes
- Prevents damage to sensitive electronic components in manufacturing
- Ideal for holding notes, work orders or obstructions in offices, antistatic workstations, or for general purpose third hand use
- Ideal for conformal coating or holding and sealing supplies in manufacturing
- Ideal in packaging for container sealing, static shielding bag closure and holding DIP tubes

Applications for Antistatic Clear Cellulose Tape with Symbols

- Identification or marking product / paperwork / processes
- High visibility with ESD susceptibility symbol for increased awareness
- Attach ESD paperwork to bags or product
- Ideal in packaging for container sealing, static shielding bag closure and holding IC DIP tubes
- Prevents damage to sensitive electronic components in manufacturing
- Available on paper cores and plastic cores

Wescorp Antistatic Conductive Shielding Grid Tape



Technical Information for Conductive Shielding Grid Tape

Both surfaces non-tribocharging at 50% RH
Thickness: 1.9 mil (0.049 mm)
Adhesive: acrylic based
Conductive grid layer (50% RH): 10E4 - 10E5 ohms
Adhesive copolymer resistivity: 10E9 Ohms
Copolymer layer resistivity: 10E12 Ohms
Max Temperature: 140°F (60°C)
Absence of shed, crack, chip, or rub off
Non-corrosive

Applications for Conductive Shielding Grid Tape

- For applications requiring EMI shielding
- Use in areas where the generation of static electricity is of concern
- Using grounded Tape Dispenser, voltage generated by unrolling will effectively be reduced to zero
- Secure (bundle) IC tubes
- Covers external plugs, holes or connector pins on electronic chassis (black boxes, etc.) during transportation or storage

Excerpt from the Naval Aviation Schools Command: "...Weapon Replaceable Assemblies (WRA)s shall have ESD conductive plug caps or grid tape over all external cannon plugs and connector pins."

Wescorp Antistatic High-Temp Masking Tape



Technical Information for High-Temp Masking Tape

Backing: Saturated, high strength crepe paper
Adhesive: Natural rubber based, non-staining, solvent spread, cured
Thickness: 0.18 mm / 7 mils
Adhesion Strength: 38 N/100 mm / 35 oz/in²
Tensile Strength: 385 N/100 mm / 22 lbs/in²
Temperature Resistance: 302°F (150°C) - 60 minutes
Color: Natural
Meets CDN Spec.: 53.79-94 Type 1
Meets US Spec.: A-A 883-B-Type 1
Roll Length: 55 meters (60 yards)
Thickness: 7.0 mils (0.18 mm)
Adhesion to Steel: 35 oz/inch²
Elongation: 8%
Moisture Resistance: fair
Solvent Resistance: good
Storage Stability: excellent
Temperature Range: -32°F to + 275°F
Max Temp: 275°F (135°C) 45 minutes max
Government Specs: PPP-T-42C
Type 1, CID-AA-883A Type 1
Waterproof
Tribocharges, but no charge retention (recommend slow unrolling utilizing an ionizer to neutralize charges)
Adhesive surface resistance: 10E11 Ohms
Non-toxic, and pH neutral
Non-corrosive

What causes residue problems (excessive stickiness) for masking tape?

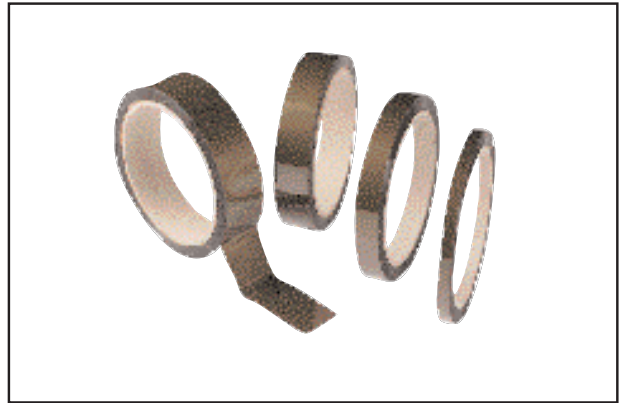
- 1) Direct sunlight [ultra-violet radiation]
- 2) Usage shelf life is the combination of time and heat at a temperature of about 300°F for a duration of 1 hour or until it is cured out (not holding its adhesive)
- 3) Storage time
 - if stored flat (72°F) and rotated every 6-8 weeks, the product should be evaluated every 12 months
 - if stored in a hot environment (>70°F) then the tape should be evaluated every 6 months or less

Normal use of our High Temperature Low Charging tape is for masking or protective applications on printed circuit boards not exceeding temperatures of 150°C (302°F) at a duration under 60 minutes. If the tape is used for masking operations or temporary protection, it should not be left on the product for more than 24 hours. For best results, the tape should not be exposed to ultraviolet rays or high temperature for prolonged periods of time (beyond manufacturer's specs). This tape is non-staining under normal use as described above.

Applications for High-Temp Masking Tape

- Silk screening applications
- Masking application in spray and brush painting, non-staining
- Protective purposes in manufacturing processes, strips clean
- For securing polyethylene sheeting to walls during painting
- For OEM repair shops
- Use in applications masking PCBs gold features for wave soldering or soldering under 302°F (150°C)
- Thick conductive adhesive excellent for conformability to protect critical PCB features
- Ideal for masking gold leads and other components on boards populated with sensitive integrated circuits
- Easily handles high temperatures of wave soldering without leaving a residue
- Handles temperatures found in test and burn-in ovens

Wescorp Antistatic High-Temp Polyimide Tape



Technical Information for High-Temp Polyimide Tape

Removal leaves little or no residue

Adhesive surface resistance: 10E2 - 10E4 Ohms

Max Temperature: 572°F (300°C) 10 seconds

Adhesive Strength: 1 N/cm (DIN), 5 oz/inch² (ASTM)

Surface Resistance (Adhesive): 10E3 - 10E4 Ohms

Polyimide Film (DuPont's Kapton® or equivalent)

Thickness: 0.0254 mm (DIN), 1.0 mil (ASTM)

Conductive Silicone Adhesive

Thickness: 0.0356 mm (DIN), 1.4 mil thick (ASTM)

Total Thickness: 0.060 mm (DIN), 2.4 mil (ASTM)

Color: Brown Opaque

Tensile Strength: 50 N/cm (DIN), 28 lbs/in² (ASTM)

Elongation: 70% (DIN & ASTM)

Static Charge Generation (300 mm/min):

Removal from Core (23°C ± 2°C, 50% ± 2% RH):

5 volts, Internal Test Method

Removal from stainless steel (50% RH):

5 volts, Internal Test Method

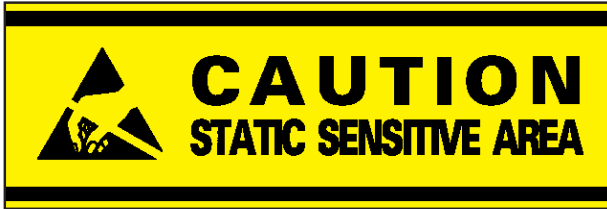
Flammability: NASA 6001, Test 1

Hypergol ignition and Penetration testing: MTB-175-88
(for casual contact)

Applications for High-Temp Polyimide Tape

- Ideal for masking gold leads and other components on boards populated with sensitive integrated circuits
- Thick conductive adhesive excellent for conformability to protect critical PCB features
- Near zero voltage generation when tape unrolled from roll [at 50% relative humidity]
- Near zero voltage generation when tape removed from PCB [at 50% relative humidity]
- Masking off PCBs for IR reflow ovens or wave soldering under 572°F (300°C) ~ 10 seconds

Applications for Aisle Marking Tape



- Use to mark off floors designating ESD Controlled areas
- Can be used as area signs

Tape Dispenser



2 inch wide Tape Dispenser Item #81281

- Use with Wescorp antistatic tapes
- For tapes with 3" Cores
- For tapes up to 2" wide
- Groundable chassis with cord

Proper Storage of Tape Rolls

For best results, tape inventory should be continually replenished. It is recommended that rolls of tape be stored flat and rotated (flipped over to the other side) 6 to 8 weeks. Tapes should be stored in a dry, well ventilated room with a reasonably consistent temperature of 68° F (20° C) and be protected from exposure to direct sunlight. Tape should not be stored while exposed to ultraviolet sunlight, moisture, or heat. Tape over one year old should be evaluated by the user to determine acceptability for the user's application. Master packs are date coded.

Desco's Wescorp™ ESD Tape line, if stored under proper conditions (see Note above) should retain its ESD technical properties as described by each corresponding Technical Drawing:

Wescorp Antistatic Cellulose Tape

<http://www.desco.com/pdf/79200.pdf>

Wescorp Antistatic Conductive Shielding Grip Tape

<http://www.desco.com/pdf/81250.pdf>

Wescorp Antistatic High Temp Masking Tape

<http://www.desco.com/pdf/81260.pdf>

Wescorp Antistatic High Temp Polyimide Tape

<http://www.desco.com/pdf/81270.pdf>

Usability

The user must determine the suitability for use of an antistatic tape for his particular application.

Tape widths are nominal metric ± 0.8 mm ($\pm 1/32$ ")

- 1/4" is 6 mm nominal or 0.236"
- 1/2" is 12 mm nominal or 0.472"
- 3/4" is 18 mm nominal or 0.709"
- 1" is 24 mm nominal or 0.945"
- 2" is 48 mm nominal or 1.890"

Limited Warranty

Desco Industries, Inc. expressly warrants that for a period of one (1) year from the date of purchase, our Wescorp Brand Antistatic Tape will be free of defects in material (parts) and workmanship (labor). Within the warranty period, the material will be replaced at our option, free of charge. Call our Customer Service Department at 909-627-8178 (Chino, CA) or 781-821-8370 (Canton, MA) for a Return Material Authorization (RMA) and proper shipping instructions and address. Include a copy of your original packing slip, invoice, or other proof of purchase date. Any material under warranty should be shipped prepaid to our factory.

Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

Limit of Liability

In no event will Desco Industries, Inc or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.