

3M Static Control Systems

3M WRIST STRAPS

3M™ Wrist Straps are the front line of defence in all static control processes. A one megohm resistor is molded into 3M™ Wrist Strap Ground Cords. All 3M™ Wrist Strap Sets include an alligator clip, which fits over the installed banana jack on the ground cord, to provide an alternative ground attachment method.



ADJUSTABLE FABRIC WRIST STRAPS

Ensure a comfortable, custom fit with 3M™ Adjustable Fabric Wrist Straps, which feature a band made of silver plated, monofilament continuous thread woven together with elastic nylon to assure full conductivity, comfort, and reliability, while providing rapid and continuous drain of static charge. Adjustability eliminates the need to order and stock several band sizes and provides reliable 360-degree protection.

Cat. No.	Description	Net Price
2204	Adjustable fabric wrist band made of knitted fabric. Colour: Burgundy.	\$7.15
2214	Wrist strap with coiled cord. 5 ft. (5.5m) practical extended length with burgundy adjustable fabric band.	17.94
2224	Wrist strap with coiled cord. 10 ft. (3.0m) practical extended length with burgundy adjustable fabric band.	24.93
2271	Adjustable Fabric Wrist Band made of stretch weave fabric, blue colour with white trim.	3.65
2272	Adjustable wrist strap with coiled cord. 5 ft. (1.5m) practical extended length. Colour: Blue with white trim band.	7.38



FIXED-SIZE METAL WRIST STRAPS

3M™ Metal Wrist Straps feature quality Speidel™ metal expansion bands for durability and comfort. Each link is covered with an insulative plastic cap. Three sizes are available: small for wrists from 4.5" to 6" in circumference, medium for wrists from 5.5" to 7.25", and large for wrists larger than 6.5". Extra large sizes available upon request. Grounding cords sold separately.

Cat. No.	Size	Net Price
2205	Small	\$20.96
2206	Medium	20.96
2207	Large	20.96



WRIST STRAP GROUNDING SYSTEM

Grounds two wrist straps and conveniently mounts beneath the edge of most work benches. Comes complete with 10 ft ground cord.

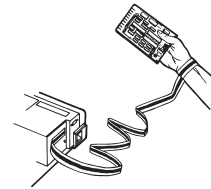
Cat. No.	Net Price
3042	\$21.49



ADJUSTABLE THERMOPLASTIC WRIST STRAP

This 3M™ 4600 Series Adjustable Wrist Strap features a thermoplastic band with an integrally molded conductive interior. Comes with an easy on/easy off adjustable "zipper" style latching mechanism and has a 4mm snap. Colour: Blue.

Cat. No.	Description	Net Price
4620	Wrist strap	\$3.08
4650	Wrist strap with 5 ft. coiled cord, 4mm stud	12.23
4610	Lightweight coiled cord, 5 ft. (1.5m), 4mm snap	9.14
4611	Lightweight coiled cord, 10 ft. (3.0m), 4mm snap	9.35



DISPOSABLE WRIST STRAPS

The 3M™ 2209 Disposable Wrist Strap provides cost-effective and reliable static protection. The wrist strap is ideally suited for shipping with components and devices, such as memory upgrades, sound cards, etc., to ensure protection at the receiving end. It may also be used for short-term use in the plant for visitors and others who don't need the durability of a reusable strap. Hypoallergenic. Custom printing available.

Cat. No.	Description	Net Price
2209	Disposable Wrist Straps	\$1.22



2210




2220

WRIST STRAP GROUNDING CORDS

3M™ Wrist Strap Ground Cords are highly durable with segmented strain relief and a single bundle of tensile conductors laced for great strength and reinforced with strong synthetic fibres. These features provide long cord life and easy movement. Each cord has a 1-megohm resistor molded into the snap end.

Cat. No.	Size	Description	Net Price
2210	5'	Ground Cord, Coiled	\$14.31
2220	10'	Ground Cord, Coiled	18.63



Part's indicated with a leaf  are considered RoHS July 2006 compliant based on the manufacturer's confirmation at the time of publishing. For additional information please contact Electro Sonic.

3M CONTINUOUS MONITORING SYSTEM

The 3M™ Continuous Monitoring System is designed to continuously monitor the ground operation of work strap grounding systems to ensure a static-free workspace. Personnel using this system would not be required to test their wrist straps, or cords, or fill in a daily ESD log.

The 3M™ system consists of a workstation monitor and specially designed wrist straps and ground cords. 3M™ monitors are either resistance or voltage type, which are far more reliable than capacitance type monitors. 3M™ dual-conductor wrist straps and ground cords contain two separate sets of independent conductors, which provide the resistance/voltage circuit that is monitored.



RESISTANCE-TYPE CONTINUOUS MONITOR

The 3M™ 724 Wrist Strap Workstation Monitor uses a reliable resistance method that includes the operator's skin resistance to determine if the ground system is operating properly. Audible and visible alarms are triggered if operator resistance or ground connections fall outside of acceptable limits. The 724 monitor uses dual conductor wrist straps (sold separately) to provide the operator resistance circuit. The 724 monitors a visitor to the workstation or a second operator and is designed to work with 3M™ 8200, 8300, and 8800 Series Worksurfaces.

Cat. No.	Description	Net Price
724	Workstation monitor complete with a quick connect/disconnect 732 remote jack and mounting hardware.	\$179.95



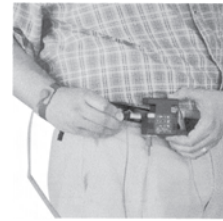
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VOLTAGE-TYPE CONTINUOUS MONITOR

The 3M™ 790 Static Monitor is a cost-efficient unit that is small, compact, and versatile in its usage and may be mounted directly onto device handling equipment, testers, and auto-insertion equipment as well as at individual workstations. Housed in static dissipative plastic, the 790 works by measuring the voltage potential on a person referenced to ground. A slide switch allows the user to select the voltage level necessary for the specific job function being performed. The audible alarm can be adjusted to overcome background noise. The 790 monitor has two wrist strap input jacks and uses dual conductor wrist straps (sold separately).

Cat. No.	Description	Net Price
790	The 790 includes adhesive mounting plate, AC adapter, and two ground cords with a two-wire connector.	\$97.52



PORTABLE WRIST STRAP CONTINUOUS MONITOR

The 3M™ 725 Wrist Strap Monitor is a small, compact, battery-powered unit that continuously monitors one worker and that worker's wrist strap. The 725 uses the same reliable resistance method as the 724 monitor, but also monitors the ground wire connection and battery level. The 725 uses dual conductor wrist straps (sold separately) and has both audible and visual alarms that alerts the worker when their wrist strap is not working properly. The 724 is ideal for field service applications or in manufacturing environment where employees are highly mobile.

Cat. No.	Description	Net Price
725	The 725 wrist strap monitor can be used in a manufacturing environment and field service environment.	\$94.31



2368



2385, 2386



4720



2360, 2370, 2371

DUAL CONDUCTOR WRIST BANDS AND GROUND CORDS

Adjustable Fabric Wrist Band: 2368 for use with 3M™ 724 and 725 continuous monitors, 2368VM with the 790 static monitor.

Adjustable Thermoplastic Wrist Band: 4720 for use with all 3M™ continuous monitors.

Metal Wrist Band—Fixed Size: 2384 (sm), 2385 (med), and 2386 (lg) for use with 725 and 725 continuous monitors. 2384VM, 2385VM, and 2386VM for use with the 790 static monitor. Extra large size available on request.

Cat. No.	Description	Net Price
2368	Dual conductor adjustable fabric wrist band. Colour: Turquoise. Ground cord not included.	\$10.94
2368VM	Dual conductor adjustable fabric wrist band. Colour: Turquoise. Ground cord not included.	10.94
4720	Dual conductor wrist band. Colour: Blue. Ground cord not included.	6.49
2384	Small dual conductor metal wrist band. Ground cord not included.	27.33
2384VM	Small dual conductor metal wrist band. Ground cord not included.	27.33
2385	Medium dual conductor metal wrist band. Ground cord not included.	27.33
2385VM	Medium dual conductor metal wrist band. Ground cord not included.	27.33
2386	Large dual conductor metal wrist band. Ground cord not included.	27.33
2386VM	Large dual conductor metal wrist band. Ground cord not included.	27.33

GROUND CORDS FOR WRIST BANDS ABOVE

Cat. No.	Description	Net Price
2360	Dual conductor coiled cord, 5 ft. (1.5m) practical length.	22.06
2370	Dual conductor coiled cord, 10 ft. (3.0m) practical length.	25.61
2371	Dual conductor coiled cord, 20 ft. (6.0m) practical length.	31.24

NOTE: Dual conductor bands and cords are not interchangeable with single conductor bands and cords.

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3M SHOE GROUNDING ASSEMBLIES

3M™ Shoe Grounding Assemblies effectively ground mobile personnel when they are in contact with conductive and dissipative flooring. The function of foot and heel straps depends upon foot perspiration in the shoe to sustain electrical contact between the strap and the body. One size fits most shoes and boots, with comfortable elastic straps.



HEEL-GROUNDING ASSEMBLY

3M™ 2051 Heel Grounding Assemblies have a conductive, non-slip outer sole providing reliable static grounding. Cup-style construction provides durability. Comes complete with a 1-megohm resistor.

Cat. No.	Net Price
2051	\$9.09

3M™ ECONOMY HEEL GROUNDING ASSEMBLY

3M™ 2044 Economy Heel Grounding Assemblies feature the cup-style construction of our 2051, but at a very attractive price. The "yellow glow" fabric is a high visibility colour, allowing supervisors to easily see that employees are wearing their heel grounders. Comes complete with a 1-megohm resistor.

Cat. No.	Net Price
2044	\$4.96

NON-MARKING HEEL GROUNDING ASSEMBLY

3M™ 2056 Heel Grounding Assemblies have a non-marking, conductive, carbon-free, non-slip outer layer providing reliable static grounding, while the inner layer provides a non-marking surface for the shoe.

Cat. No.	Net Price
2056	\$12.07

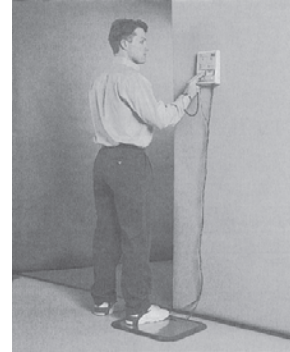


DISPOSABLE SHOE GROUNDING STRAP

3M™ 2045 Disposable Shoe Grounding Straps provide a reliable path for static charge drain to ground when personnel are wearing shoes with insulated soles. The 2045 is especially desirable in work situations where personnel must move around—wave soldering, automatic insertion, or operation of sensitive computerized equipment. To be effective, the shoe grounders must be worn on both feet.

Cat. No.	Net Price Per Box of 100
2045	\$43.90

3M WRIST STRAP AND FOOTWEAR TEST EQUIPMENT



WRIST STRAP TESTER

The 3M™ 740 Wrist Strap and Footwear Tester is an AC-powered unit designed to be wall mounted in a production facility for daily testing of employees' static control wrist straps. Use of the optional 3M™ 741 Shoe Electrode test plate allows the 740 to be used as a footwear tester as well. Simple to operate, the 3M™ 740 has several useful features and options:

- Red and green LEDs give a clear "go" or "no go" indication.
- The user can select any of four different resistance levels.
- The unit tests the wrist strap and cord while they are being worn, and can also test each component independently to isolate an indicated fault.

There is also a digital output that can be used to interface with a computer, automatic door lock, alarm, or other control device. The 741 Electrode is not included with the 740 and must be ordered separately.

Cat. No.	Description	Net Price
740	Wrist Strap and Footwear Tester	\$513.44
741	Shoe Electrode (sold separately)	132.78

NOTE: 740 includes base unit, output connector, 3M™ DualLock™ wall mounting system, AC/DC transformer and a cover for the plug-in jack.



PORTABLE WRIST STRAP TESTER

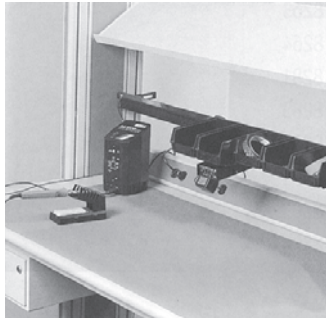
The 3M™ 746 Wrist Strap Tester can be used to test wrist straps in a variety of situations, from daily testing in a production facility to periodic testing at remote sites or field service locations. The 746 is supplied with an AC adapter, but it also contains a long-life lithium battery as back-up power for portable applications or during power failures. As with other 3M™ test equipment, the 746 is easy to use. It can test the entire wrist strap system while it is being worn, or it can test the individual components to isolate a fault condition.

Cat. No.	Description	Net Price
746	Includes an AC adapter, lithium battery, and wall-mounting kit.	\$242.02

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3M TABLE AND FLOOR MATS

3M™ Workstation Mats deliver an added layer of static control to the workspace. All 3M™ Static Control Matting products include ground cords and snap fasteners. Snaps are installed on table and floor mats, but must be installed by the user on table and floor runners. Non-standard sizes are available on a custom-order basis. Wrist and foot straps sold separately.



DISSIPATIVE THREE-LAYER MATS AND RUNNERS

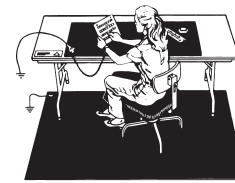
3M™ 8200 Series Mats and Runners have a unique three-layer construction. The top layer is durable static dissipative vinyl, which has sufficiently low resistance to discharge static-laden conductors, yet will prevent the shorting of pins on the backs of PCB's laid on the mat. The middle layer is a highly conductive scrim that provides the main discharge path to ground, and the bottom layer is static-dissipative foam, providing a durable, non-skid cushion. **Thickness:** .138" (3.5mm).

Cat. No.	Colour	Type	Size ft. (m)	Net Price
HARDWARE INCLUDED				
8201	Brown	Floor Mat	4' x 6' (1.2 x 1.8)	\$166.87
8203	Grey	Floor Mat	4' x 6' (1.2 x 1.8)	166.87
8204	Blue	Floor Mat	4' x 6' (1.2 x 1.8)	166.87
8251	Brown	Floor Runner	4' x 24' (1.2 x 1.8)	570.40
8253	Grey	Floor Runner	4' x 24' (1.2 x 1.8)	570.40
8254	Blue	Floor Runner	4' x 24' (1.2 x 1.8)	570.40
8211	Brown	Table Mat	2' x 24' (0.6 x 1.2)	66.41
8213	Grey	Table Mat	2' x 24' (0.6 x 1.2)	66.41
8214	Blue	Table Mat	2' x 24' (0.6 x 1.2)	66.41
8261	Brown	Table Runner	2' x 24' (0.6 x 1.2)	297.97
8263	Grey	Table Runner	2' x 24' (0.6 x 1.2)	297.97
8264	Blue	Table Runner	2' x 24' (0.6 x 1.2)	297.97
HARDWARE NOT INCLUDED				
8200-2X40BR	Brown	Floor Runner	2' x 40' (0.6 x 12.1)	495.07
8200-2X40GR	Grey	Floor Runner	2' x 40' (0.6 x 12.1)	430.98
8200-2X40BL	Blue	Floor Runner	2' x 40' (0.6 x 12.1)	411.62
8200-4X40BR	Brown	Floor Runner	2' x 40' (0.6 x 12.1)	823.25
8200-4X40GR	Grey	Floor Runner	4' x 40' (1.2 x 12.1)	880.98
8200-4X40BL	Blue	Floor Runner	4' x 40' (1.2 x 12.1)	823.25

DISSIPATIVE RUBBER MATS AND RUNNERS

3M™ 8800 Series Mats and Runners consists a top layer of static dissipative rubber laminated to a bottom layer of conductive rubber. Both layers are made from vulcanized synthetic rubber, which offers excellent resistance to oil, grease, and most common solvents. They offer superior resistance to heat and hot solder as compared to vinyl or olefinic materials. **Thickness:** 0.065" (1.7mm).

Cat. No.	Colour	Type	Size ft. (m)	Net Price
8810	Grey	Table Mat	2 x 4 (0.6 x 1.2)	\$68.11
8811	Blue	Table Mat	2 x 4 (0.6 x 1.2)	68.11
8830	Grey	Table Mat	3 x 4 (0.9 x 1.2)	122.60
8831	Blue	Table Mat	3 x 4 (0.9 x 1.2)	122.60
8840	Grey	Table Runner	2 x 24 (0.6 x 7.2)	396.75
8841	Blue	Table Runner	2 x 24 (0.6 x 7.2)	396.75
8860	Grey	Table Runner	3 x 24 (0.9 x 7.2)	714.14
8861	Blue	Table Runner	3 x 24 (0.9 x 7.2)	714.14
8870	Grey	Floor Mat	4 x 6 (1.2 x 1.8)	198.37
8871	Blue	Floor Mat	4 x 6 (1.2 x 1.8)	198.37
8880	Grey	Floor Runner	4 x 24 (1.2 x 7.2)	793.48
8881	Blue	Floor Runner	4 x 24 (1.2 x 7.2)	793.48



WORKSTATION GROUNDING KITS

Each ready-to-use 3M™ Workstation Grounding Kit provides the basic items needed to create a static-safe work environment, including a 4' x 6' floor mat, 2' x 4' table mat, adjustable fabric wrist strap with grounding cord, and accessories to properly connect and ground all of the kit components.

8020 Series: The table and floor mats are both made from our soft three-layer static dissipative material (8200 series).

8030 Series: The table mat is made from our soft three-layer static dissipative material (8200 series), while the floor mat is of the more rigid, conductive material (1864).

Cat. No.	Colour	Net Price
STATIC-DISSIPATIVE TABLE AND FLOOR MATS, 3-LAYER CONSTRUCTION		
8021	Brown	\$421.54
8023	Grey	421.54
8024	Blue	421.54
STATIC-DISSIPATIVE 3-LAYER TABLE MAT, CONDUCTIVE FLOOR MAT		
8031	Brown	396.75
8033	Grey	396.75
8034	Blue	396.75



3M ACCESSORIES FOR MATS, RUNNERS, AND WRIST STRAPS

Cat. No.	Description	Net Price
3034	Snap Fastener, female, 0.125 in. (3.2mm) hole. For mats and runners. Pkg. of 10.	\$10.54
3040	Ground Cord, 15 ft. (4.6m). Moulded-in male snap fastener with integral 1-megohm resistor on one end, solderless terminal on other. Connects all 3M™ static control mats and runners to building ground.	12.58
3043	Interconnect Cord, 5 ft. (1.5m). Moulded-in male snap fasteners at each end. Connects all 3M static control mats and runners to each other.	11.92
3048	Ground System for Wrist Strap/Table Mat. Easily snaps onto mats and runners; grounds two single conductor wrist straps. Comes complete with ring connector and 15 ft. (4.6m) ground cord. Ground cord has a 1-megohm resistor for mat connection only.	17.49
3050	Female Connector Snap, accepts ground cord snap fasteners, attaches to 8200 series static control table mats, floor mats, and runners.	13.56
8001	An extra-strength cleaner for removing dirt and stains from all types of static control surfaces, including table and floor mats, hard laminate benchtops, and portable field service kits. Used full strength, it is a clean, colourless, water-based liquid which leaves no tacky or corrosive residue. 32 oz. trigger-spray bottle.	5.76

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WORKSURFACE CLEANING PRODUCTS

3M™ 8001 Cleaner for static control mats is an extra-strength fluid for removing dirt and stains from all types of static control surfaces, such as table mats, floor mats, hard-laminate benchtops, portable field-serve kit work surfaces, etc. It is a clean, colourless, water-based liquid, which leaves no tacky or corrosive residue and has a fresh, clean scent.

Cat. No.	Description	Net Price
8001	32oz. trigger-spray bottle	\$5.76



TEST KIT FOR STATIC CONTROL SURFACES

The 3M™ 701 Test Kit contains a lightweight, user-friendly megohmmeter plus all of the components needed to make testing mats and other surfaces simple and accurate. The 701 is compatible with ANSI/ESD Standard 4.1, ANSI/ESD Standard 7.1, and MIL-PRF-87893, for auditing purposes. The meter has separate scales and test settings for measuring surface-to-ground and surface-to-surface resistance at two prescribed test voltages (10V and 100V), and system continuity. The scales are colour-coded and numbered, and are very easy to read. **Kit Contents:** 1 megohmmeter, 2 test weights, 2 test leads, 1 insulated bulldog clip, 1 alligator clip, 1 continuity test plate, 2 batteries, 1 operators manual, and 1 foam-lined molded carrying case.

Cat. No.	Net Price
701	\$830.35

3M IONIZERS

The use of ionized air in electronics work environments eliminates the build-up of potentially damaging static charges. Air ionizers are the best method of neutralizing static charge on nonconductive materials. 3M™ offers a wide variety of ionizers, from hand-held ionized air guns to overhead units.



BENCHTOP AIR IONIZERS

3M™ 963 Series Benchtop Air Ionizers are mid-size units capable of producing extremely large amounts of ions, blanketing the benchtop with ionized air to help prevent static. The 963 operates using AC120V power and the 963E with DC24V power (transformer included). **Dimensions (with base):** 9.0"H x 7.0"W x 4.0"D.

Cat. No.	Net Price
963	\$512.04



MINI AIR IONIZERS

The 3M™ 960 Mini Air Ionizer responds to the industry's need for a small, versatile balanced-flow ionizer for equipment or local area ionization. The 960 runs off low-voltage AC24V power, which can be supplied by the 960X Wall Transformer (sold separately). **Dimensions:** 3.2"H x 2.6"W x 1.9"D.

Cat. No.	Description	Net Price
960	Mini air ionizer	\$477.32
960X	Power supply (up to 4 units)	52.08



IONIZED AIR GUN

The 3M™ 980 Ionized Air Gun is an excellent tool for blowing particulate contamination off any surface. It releases a balanced stream of compressed ionized air and patented technology ensures balanced ionization. The 980 never needs adjustment and requires very little maintenance. The console, gun, and air hose are all made of static dissipative, ESD-safe materials. Weight: 12 oz.

Cat. No.	Description	Net Price
980	Air gun, flexible hose, and monitor	\$1039.37



OVERHEAD AIR IONIZERS

The 3M™ 990 Overhead Air Ionizer guarantees consistent static control coverage of an individual workstation by bathing a typical work area (2' x 3') in ionized air. Using an overhead mounting system, the 990 is unobtrusive and does not compromise valuable space on the workbench. The 990 is built using Steady-State DC ionizing technology that guarantees intrinsically balanced ionization. Red LED power supply indicator communicates system failure. The 990 is ideal for areas where bench space is limited. **Dimensions:** 4.0"H x 6.0"W x 36.0"L.

Cat. No.	Net Price
990	\$1041.46

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3M FIELD SERVICE SOLUTIONS



3M™ has a complete family of high-quality, portable static control products designed to provide protection at a variety of field service sites, from typical office environments to remote telephone terminals. Practicing proper static control in the field can save time, money, and aggravation for both your customers and your company. Ensure that your technicians do the job right the first time—safely and productively. Custom kit design and imprinting on the worksurface are available upon request.



PORTABLE FIELD SERVICE KIT

The 3M™ 8501 Portable Field Service Kit quickly and reliably removes any static charge on an electronics field technician and provides a durable, static-free surface upon which to lay parts. Pockets are sewn into the worksurface to provide storage for the cords. The entire kit folds to a size that fits easily into most tool cases. **Kit Includes:** 22" x 24" worksurface, 2204 adjustable fabric wrist band, 3051 ground cord assembly, and 3038 alligator clip.

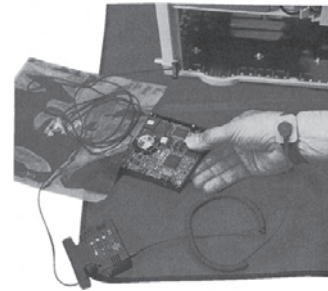
Cat. No.	Net Price
8501	\$64.37



LIGHTWEIGHT PORTABLE FIELD SERVICE KIT

The 3M™ 8505 Portable Field Service Kit is a small, flexible, lightweight kit that offers the same level of static control as the full-sized 8501 field service kit, yet is small enough to fit in a shirt pocket. **Kit Includes:** 15" x 20" worksurface, 2204 adjustable fabric wrist band, three lightweight heavy-duty ground cords, and a 3038 alligator clip.

Cat. No.	Net Price
8505	\$94.23



CONTINUOUS MONITORING FIELD SERVICE KIT

The 3M™ 8507 Continuous Monitoring Field Service Kit gives field technicians the same continuously-monitored static-protected work environment as that enjoyed by workers in a manufacturing facility. Two pockets sewn into the worksurface provide storage. **Kit includes:** 22" x 24" worksurface, 725 portable continuous wrist strap monitor, 2368 dual conductor adjustable fabric wrist band, and a 10' dual conductor ground cord.

Cat. No.	Net Price
8507	\$148.77



ELECTRONICS FIELD SERVICE VACUUM

The 3M™ 497AJM Electronics Vacuum is a feature-packed and easy to set up and operate. Portability, quick set-up, and efficient, safe operation are key features of this powerful vacuum. The power cord, stretch hose, and all other attachments fit easily into the cover compartment for rapid access. The extendible hose allows the operator to clean large machines and hard-to-reach areas without lifting the vacuum. Current-limiting attachments protect the service technician from electrostatic shock. 3M™ offers two types of disposable filter cartridges for different size particles. **Vacuum Includes:** a type2 filter, stretch hose, crevice tool and toolbrush, wand tool, detachable power cord, and a 3-year limited warranty.

Cat. No.	Net Price
497AJM	\$246.98

ACCESSORIES FOR 497AJM ELECTRONICS VACUUM

Cat. No.	Description	Net Price
SV-SPF1	Vac-Type 1 Filter, Small Particles	\$26.97
SV-MPF2	Vac-type 2 filter, medium particles	25.28
SV-CS1	Vac-Carrying Strap	12.97
SV-DBSD1	Vac-Dusting Brush, Static Dissipating	16.87
SV-NN	Vac-Nozzle, Needle Nose	9.27
SV-PC8	8 ft. vac-power cord stretches to 16 ft.	10.12
PC-PC15	15 ft. vac-power cord	94.20
SV-SH50	Vac-Stretch Hose, 50 Inches	101.20
SV-WA1	Vac-Wand Assembly, Straight	26.99
SV-WA2	Vac-Wand Assembly, Bent	14.83

NOTE: For other parts and accessories contact your Electro Sonic sales representative.

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3M STATIC SHIELDING BAGS

3M™ offers a wide variety of Static Shielding Bags to suit virtually every application and customer need. All 3M™ Static Shielding Bags meet the electronic industry's static shielding requirements. Custom sizes and bags without printing are available upon request.

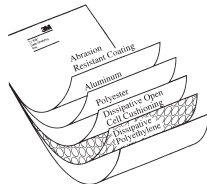
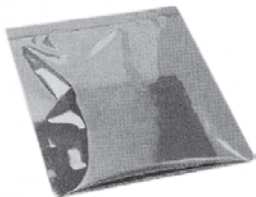


METAL-IN STATIC-SHIELDING BAGS

The 3M™ 1900/1910 Series Metal-In Static Shielding Bag is ideal for applications where testing and reusing bags is not a prime consideration. 1900/1910 bags are amine-free and non-corrosive. 1910 bags feature a zipper closure for easy opening and closing. **Thickness:** 2.9mil.

Cat. No.	Size*	Net Price Per 100
PLAIN TOP		
1900-3-5	3"×5"	\$7.36
1900-4-6	4"×6"	8.48
1900-5-8	5"×8"	12.03
1900-6-10	6"×10"	15.74
1900-8-12	8"×12"	21.27
1900-12-16	12"×16"	41.11
RECLOSEABLE TOP		
1910-3-5	3"×5"	10.54
1910-4-6	4"×6"	12.19
1910-5-8	5"×8"	17.28
1910-6-10	6"×10"	22.60
1910-8-12	8"×12"	30.57
1910-12-16	12"×16"	58.49

*Available in other sizes, must be bought in multiples of 100 bags.

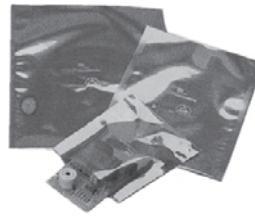


METAL-OUT STATIC SHIELDING BAGS

The 3M™ 2100R/2110R Metal-Out Static Shielding Bag is our thickest and most durable bag, ideal for more demanding applications where testing and reusing bags is a prime consideration. 2100R bags are produced such that the shielding layer is very near the exterior surface. A thin abrasion-resistant coating protects this metal surface from scratches, but still permits rapid charge draining. 2110R bags feature a zipper closure for easy opening and closing. **Thickness:** 3.2mil.

Cat. No.	Size*	Net Price Per 100
2100R-3-5	3"×5"	\$16.42
2100R-4-6	4"×6"	21.43
2100R-4-26	14"×26"	55.31
2100R-5-8	5"×8"	35.40
2100R-6-10	6"×10"	40.96
2100R-8-10	8"×10"	45.01
2100R-8-12	8"×12"	51.04
2100R-10-12	10"×12"	63.44
2100R-11-15	11"×15"	89.06
2100R-12-16	12"×16"	103.71
2100R-12-18	12"×18"	107.98
2100R-14-18	14"×18"	125.35
2100R-15-18	15"×18"	134.42
2100R-18-18	18"×18"	160.45
2100R-16-24	16"×24"	182.33
RECLOSEABLE ZIPPER		
2110R-3-5	3"×5"	21.56
2110R-4-6	4"×6"	28.13
2110R-5-8	5"×8"	46.51
2110R-6-8	6"×8"	48.01
2110R-6-10	6"×10"	53.77
2110R-8-10	8"×10"	59.15
2110R-8-12	8"×12"	67.05
2110R-10-12	10"×12"	83.33
2110R-11-15	11"×15"	117.04

*Available in other sizes, must be bought in multiples of 100 bags.

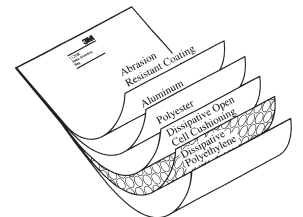
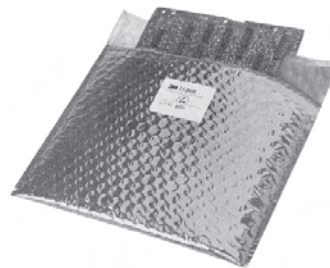


LIGHTWEIGHT METAL-IN STATIC SHIELDING BAGS

The 3M™ 1960 Metal-In Static Shielding Bag is a low-cost, lightweight bag. The 1960 bag meets standard requirements of static shielding bags, but is lighter in weight to provide significant cost savings. **Thickness:** 2.0mil.

Cat. No.	Size*	Net Price Per 100
1960-3-5	3"×5"	\$4.98
1960-4-6	4"×6"	5.94
1960-5-8	5"×8"	8.82
1960-6-10	6"×10"	10.44
1960-6-8	6"×8"	9.45
1960-8-10	8"×10"	13.17
1960-8-12	8"×12"	14.70
1960-10-12	10"×12"	16.50
1960-12-18	12"×18"	29.35
1960-15-18	15"×18"	36.27
1960-18-18	18"×18"	43.16

*Not available in other sizes, must be bought in multiples of 100 bags.



CUSHIONED METAL-OUT STATIC SHIELDING BAGS AND WRAPS

3M™ 2120R/2126R Metal-Out Cushioned Static Shielding Bags and Wrap protect devices from physical damage as well as provide proper static shielding. The open-cell cushioning structure provides physical shock protection even when punctured.

2120R bags have a smooth static-dissipative polyethylene liner that minimizes snagging of pins or sharp edges during insertion or removal.

2126R wrap is heat-sealable, but does not have the smooth inner liner. Supplied in rolls, it can be cut to fit various wrapping applications.

Cat. No.	Size*	Net Price Per 100
2120R-6-7	6"×7"	\$86.25
2120R-8-7	8"×7"	106.25
2120R-8-11	8"×11"	132.71
2120R-10-7	10"×7"	121.24
2120R-12-11	12"×11"	184.09
2120R-12-18	12"×18"	196.99
2120R-14-11	14"×11"	206.61
2120R-16-15	16"×15"	292.54
2120R-18-11	18"×11"	251.06
2120R-18-23	18"×23"	491.96

*Available in other sizes, must be bought in multiples of 100 bags.

WRAP

Cat. No.	Roll Size	Net Price Per Roll
2126R-24-125	24"×125"	\$326.72
2126R-48-125	48"×125"	718.54

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MOISTURE BARRIER BAGS

The 3M™ 3370 Moisture Barrier Bag has been designed to meet the demanding moisture protection needs of the electronics market. 3370 bags utilize a multi-layer 3.6mil film design that provides puncture and tear resistance and the problems associated with them. 3370 bags provide proven, long-term protection in the most critical seepage area—the seams. The 3370 bag provides high frequency protection and static shielding to protect even the most sensitive parts.

Cat. No.	Size*	Net Price Per 100
3370-4-6	4" x 6"	\$13.35
3370-5-8	5" x 8"	18.11
3370-8-10	8" x 10"	30.47
3370-10-12	10" x 12"	43.42
3370-12-16	12" x 16"	66.15
3370-16-18	16" x 18"	93.93
3370-18-24	18" x 24"	136.08

*Available in other sizes, must be bought in multiples of 100 bags.

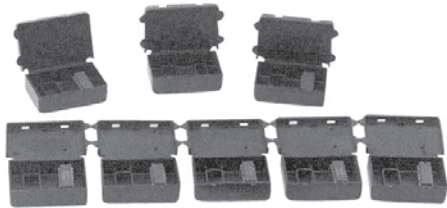


SINGLE CARD CARRIERS

3M™ Static-Shielding Single Card Carriers protect individual printed circuit boards or other electronic devices from static and physical damage during storage and transport. The lid of the card carrier can be modified to include windows for viewing the contents, company logo, or identification labels. Interiors are lined with dissipative cushioned foam.

Cat. No.	Dimensions In. (cm)			Net Price
	Length	Width	Depth	
8520	10 (25.4)	8 (20.3)	1.25 (3.2)	\$27.40
8521	12 (30.5)	9 (22.9)	1.25 (3.2)	34.05
8522	18 (45.7)	17 (43.2)	2 (5.1)	69.49
8523	10 (25.4)	8 (20.3)	2 (5.1)	31.82

NOTE: All dimensions are referenced from the inside bottom of the container.



SINGLE DEVICE CARRIERS

The rugged injection-molded 3M™ 5701 Single Device Carrier provides cost-effective physical and static protection for DIPs. 5701 Single Device Carriers meet EIA-540 requirements for static shielding and a unique "saddle" design supports device leads and helps prevent accidental bending. Carrier accepts up to 18-pin 300 mil and 400 mil devices, and up to 28-pin 600 mil devices.

Cat. No.	Dimensions In. (cm)			Net Price
	Length	Width	Depth	
5701	1.55 (3.9)	1.01 (2.6)	0.46 (1.2)	\$3.50

Note: All dimensions are referenced from the inside bottom of the container.



7101/REUSABLE



7102/DESTRUCTIBLE



7201/REUSABLE
7202/DESTRUCTIBLE

LABELS

3M™ 7000 Series Labels are designed to alert personnel handling bags, boxes, or other carriers that the contents are static-sensitive to help prevent improper handling. Available in single use or reusable forms using the accepted industry static symbols. Bags sealed with destructible labels cannot be opened without fracturing the label.

Cat. No.	Description	Net Price Per Roll of 500
7101	JEDEC-14, reusable labels. 1 7/8" W x 2 1/2" H. Colour: black print on orange.	\$33.46
7102	JEDEC-14, destructible labels. 1 7/8" W x 2 1/2" H. Colour: black print on yellow.	37.19
7201	MIL-STD-129, reusable labels. 2" x 2". Colour: black print on yellow.	42.33
7202	MIL-STD-129, destructible labels. 2" x 2". Colour: black print on yellow.	42.33



ANTISTATIC UTILITY TAPE

3M™ 40 Antistatic Utility Tape combines 3M's remarkable antistatic adhesive with a clear, one mil polyester film backing. It is perfect for use in static-sensitive areas to hold work orders, notes, or instructions in place, to seal static shielding bags and boxes containing electronic components, or to bundle DIP tubes and JEDEC shipping trays. 40PR is a printed version with a special pattern of ESD symbols to alert users that this is the only tape that should be used in static-safe areas.

Cat. No.	Dimensions		Net Price
	Widths In. (mm)	Length Yd. (m)	
40-1/2-36	0.50 (12.6)	36 (66)	\$4.76
40-3/4-36	0.75 (19.0)	36 (66)	8.32
40-1/4-72	0.25 (6.3)	72 (66)	4.80
40-1/2-72	0.50 (12.6)	72 (66)	9.59
40-3/4-72	0.75 (19.0)	72 (66)	14.39
40-1-72	1.00 (25.4)	72 (66)	19.16



ANTISTATIC UTILITY TAPE DISPENSER

The 3M™ 620 Tape Dispenser is designed for use in ESD protected areas with 3M™ utility tapes. It is made of conductive and static-dissipative materials, which will minimize or eliminate problems associated with conventional dispensers. Accepts tape up to 2" wide on either 3" or 1" cores. Unit is shipped with a 3" dissipative drum.

Cat. No.	Net Price
620	\$83.40

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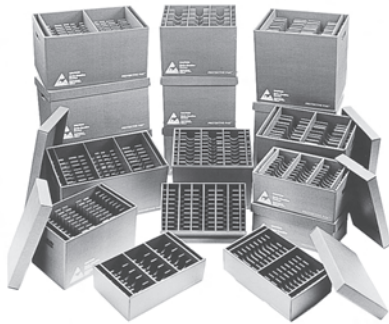
PROTEKTIVE PAK

PROTEKTIVE PAK® THE BENEFITS OF IMPREGNATED VS. SURFACE COATED/PRINTED CORRUGATED PRODUCTS

PROTEKTIVE PAK'S impregnated static dissipative surface buried shielding corrugated linerboard is manufactured at one location on a multimillion dollar computerized paper making machine that utilizes Statistical Quality Control/Statistical Process Control (SQC/SPC) during manufacturing. This linerboard is produced from 100% recycled linerboard (which consistently insures very low sulfur content) and is 100% recyclable.

CDM DANGER (CHARGED DEVICE MODEL)—Conductive surfaces (whether paper or plastic) can be too surface conductive and may pose a danger to components stored in open bin boxes, open in-plant handlers, open shippers, totes, or nesting trays. Burying the conductive layer ($<10^4$ ohms/square) under a dissipative surface ($10^7 - 10^{10}$ ohms/square) reduces the potential for a "rapid discharge" or "sparking".

PROTEKTIVE PAK'S—state of the art impregnated material is consistently more durable and safer than coated/printed conductive materials. In fact, PROTEKTIVE PAK'S material in certain applications is safer than conductive plastics. So for the best value, and for state of the art ESD protection, consider PROTEKTIVE PAK'S stock or custom products.

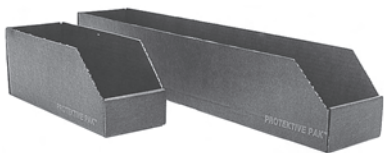


PROTEKTIVE PAK® IN-PLANT HANDLERS

In-Stock solutions for your ESD handling. No tooling cost, low unit cost, extra thickness durability, roll over adjustable and reversible partitions, no taping, gluing, or stapling, and 100% recyclable. Eliminate the need and cost of static dissipative/shielding bags. Additional stock sizes available. Call Electro Sonic for details. **Custom sizes available.**

TEK-SEARCH

Protektive Pak has the world's largest **Inplant Handler** program. Protektive Pak also implemented a revolutionary unique program called **TEK-SEARCH**. This proprietary computer program is designed to instantly designate the most efficient and cost effective **PROTEKTIVE PAK Inplant Handler** to accommodate your specific circuit board size or configuration. Just call or fax us your circuit board size (length x width x thickness) and the **TEK-SEARCH** program will provide you a quote listing which **In-Plant Handler** part number(s) most efficiently fits your circuit board. **NOTE:** For more information on **TEK-SEARCH**, access **PROTEKTIVE PAK'S** website through www.e-sonic.com.

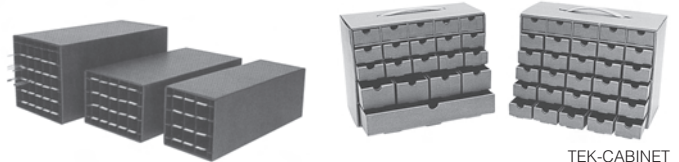


OPEN
(STACKABLE ALSO AVAILABLE)

OPEN BIN BOXES

Protektive Pak offer's the largest selection of ESD Container's and material handling products. **FEATURES:** In-plant handlers. Kitting totes—stackable and nesting. Tek-Mate—portable work surface. Pro Mat—cart, shelf and work station matting. Tek-Cabinet—parts storage cabinets. Bin Boxes—open, closed, hopper and reel dip tube storage containers. Circuit Board Shippers—full board, SIMM module and individual SMT component shipper's. Multi Board Shipper's—Low cost for one way shipping.

Cat. No.	Outside Dimensions L x W x D	Net Price
37101	9 x 4 x 4-1/2	\$2.62
37102	12 x 2 x 4-1/2	2.69
37103	12 x 4 x 4-1/2	2.78
37104	12 x 6 x 4-1/2	2.93
37105	12 x 8 x 4-1/2	3.06
37106	12 x 12 x 4-1/2	3.47
37108	18 x 6 x 4-1/2	2.87
37109	18 x 8 x 4-1/2	3.35
37110	18 x 12 x 4-1/2	3.85
37116	24-3/4 x 2-1/4 x 4-1/2	5.46
37111	24-3/4 x 4-1/4 x 4-1/2	2.84
37112	24-3/4 x 6-1/4 x 4-1/2	2.82
37113	24-3/4 x 8-1/4 x 4-1/2	3.26
37114	24-3/4 x 12 x 4-1/2	5.18
37117	24 x 12 x 6-3/8	6.58



TUBE HANDLERS

TEK-CABINET

TUBE HANDLERS

Economical and efficient way to store and transport DIP tubes and rails. Each cell has an extender tab which may be labeled to identify the contents. Excellent for stock room or R&D labs.

Cat. No.	Outside Dimensions	Cell I.D.	# of Cells	Net Price
37790	12 x 6 x 20	1-7/8 x 1-7/8 x 20	10	\$46.03
37791	12 x 6 x 24	1-7/8 x 1-7/8 x 24	10	52.98
37792	12 x 12 x 20	1-7/8 x 1-7/8 x 20	25	54.26
37793	12 x 12 x 24	1-7/8 x 1-7/8 x 24	25	62.41
37794	24 x 12 x 20	1-7/8 x 1-7/8 x 20	50	66.39
37795	24 x 12 x 24	1-7/8 x 1-7/8 x 24	50	75.97

TEK-CABINET

An economical storage solution for ICs, PGAs, Flat Packs, Hybrids, SIMMs and SIPDs. It can be used for both storage and kitting. Made from our impregnated 200# E-Flute material. Includes static dissipative handles & drawer labels. (Grounding snaps available)

Cat. No.	Outside Dimensions L x W x D	Number of Drawers	Net Price
37771	13-3/16 x 6 x 10	20	\$67.76
37770	13-3/16 x 6 x 10	30	67.76



SMALL COMPONENT SHIPPERS

Shipped assembled with static dissipative polyurethane foam laminated to top; removable conductive cross-link shunting polyethylene foam in bottom. Can be ordered with special foam configurations. **Custom sizes available.**

Cat. No.	Inside Dimensions L x W x D	Net Price
37000	2-1/2 x 1-1/4 x 1	\$1.57
37001	3-1/2 x 1-1/4 x 1	1.57
37002	4-1/2 x 1-1/4 x 1	1.63
37003	3-7/16 x 2-1/8 x 1	1.77
37004	3-3/4 x 3-3/4 x 1	2.53
37005	7 x 3-1/2 x 1	2.92
37006*	4-1/8 x 3-1/16 x 1	2.99

*Stock Trays to fit this box available for surface mount component.

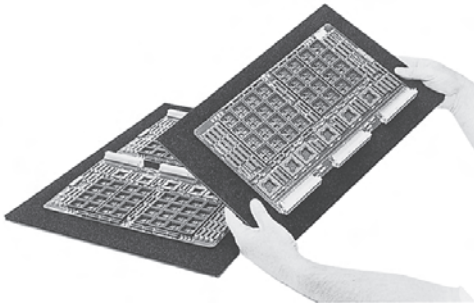


CIRCUIT BOARD SHIPPERS

For storing or shipping circuit boards. Shipped assembled with convoluted static dissipative foam laminated to top and loose in bottom. Also available with special foam configurations or box only (without foam, shipped flat). **Custom sizes available.**

Cat. No.	Inside Dimensions L x W x D	Net Price
37053	7 x 5 x 1-1/2	\$3.59
37055	7 x 5 x 2-1/2	4.06
37057	9 x 7-1/2 x 2-1/2	5.69
37059	10-1/2 x 8-1/2 x 1-1/2	4.99
37067	14-7/8 x 6-5/8 x 2	5.47
37071	15-1/2 x 12-1/2 x 2-1/2	10.61
37073	16 x 12-1/4 x 3-1/2	11.84

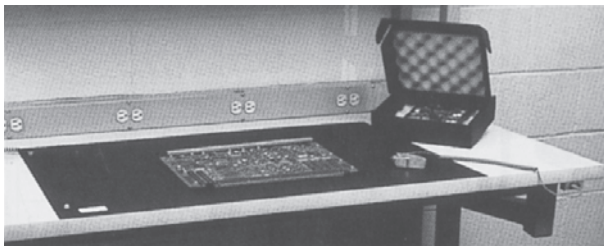
NOTE: Other sizes available.



TEK-MATE™

Permanently static dissipative cross-link foam bonded to a laminated static safe corrugated folder. Includes 3/8" grounding snap. Used as a portable work surface for handling or storing circuit boards. **Available in 2 popular sizes.**

Cat. No.	Size	Net Price
37800	12 x 18	\$17.51
37801	18 x 24	25.55

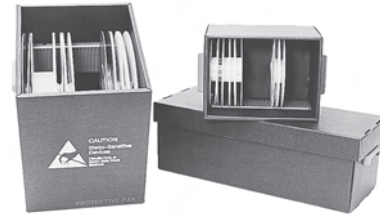


PRO-MAT™ SHELF, CART & WORK STATION MATS

PROTEKTIVE PAK'S static dissipative mat material assists in the protection from sensitive electronic discharge (ESD) during the manufacturing process. Static charges from people and conductive/dissipative objects are quickly drained to ground by the CDM safe material. The static dissipative surface measures 10⁷—10¹⁰ ohms/square with a buried shielding layer of < 10⁴ ohms/square. Pro-Mat liners come complete with 3/8" grounding snap. Specify male or female snaps when ordering.

APPLICATION—Wood or steel shelving liners, metro carts, circuit board cart liners, inexpensive work station mats/field service mats or floor mats.

Cat. No.	Description	Net Price
MALE SNAPS		
37674	23-1/2 x 47-1/2 x 1/16	\$14.58
37673	17-1/2 x 35-1/2 x 1/16	10.94
37676	23-1/2 x 35-1/2 x 1/16	12.76
FEMALE SNAPS		
39792	17-1/2 x 35-1/2 x 1/16	10.94
39796	23-1/2 x 47-1/2 x 1/16	14.58
39858	23-1/2 x 35-1/2 x 1/16	12.76



REEL STORAGE CONTAINERS

The 413-132 Reel container is very heavy duty incorporating a metal reinforced perimeter frame. Static dissipative indexing ribs prevent the reels from rolling forward when stacked on their sides and from falling over when the container is partially full. This container comes fully assembled including static dissipative handles. This box is currently available for 13" reel and 7" reel sizes. (7" does not include steel frame)

Cat. No.	Outside Dimensions L x W x D	Net Price
37560	13-1/2 x 12 x 13-1/4	\$41.03
37561	12 x 7-1/4 x 7-1/4	28.87
37562	20 x 7-1/4 x 7-1/4	41.77



RICHMOND 8300 BAGS

FEATURES: ESD shielding. Low charging interior and exterior layers. High performance abrasion-resistance coating. Metal outer layer provides a more rapid charge dissipation when the bag touches a grounded surface. Extrusion laminated film—cleaner interior than competitor's. Reduced NVR. Controlled out-gassing. No solvent based adhesives used in manufacturing. Low ionic (anion) content. Greater than 40% light transmission. 100 bags per package. Meets or exceeds the recommendations of ANSI/EOS S20.0 ESD Standard. **SPECIFICATIONS:** Resistivity of outer surface: <10⁹ ohms. Resistivity of metal layer: <10² ohms. Resistivity of inner surface: <10¹² ohms. Thickness: 3.1 mil.

Cat. No.	Description	Size (Inches)	Net Price Per 100
48500	Metal out	4 x 4	\$6.54
48501		4 x 6	7.86
48502		5 x 8	10.88
48503		6 x 8	12.35
48504		6 x 10	14.61
48505		8 x 8	15.58
48506		8 x 10	18.16

Note: Other sizes available. Pink poly bags are also available 491XX series.