

### **2023** PRODUCT CATALOGUE

CLEANROOM GARMENTS | SURGICAL FACE MASK | CORRUGATED BOXES | STENCIL WIPER ROLL THERMOFORMING TRAY | WORKSTATION & CHAIRS | PACKAGING BAGS | TAPE & PE FILMS



#### about us

Statfree, is India's reliable and largest manufacturer and supplier of controlled environment products. A spin off from Pro-Pack Materials India. World-class work force and well-diversified customer market segments and business units. The company continues to grow as a global enterprise through the expansion of its diverse business activities. Our global presence and resources provide value-added solutions that are integrated with manufacturing and logistics to optimize customer & operations and competency in their respective industry.

#### **Our Capabilities**

We are committed to creating value that increases and enhances customer's competitiveness in its industry as well as providing a high standard for superior quality products and value-added service. We firmly believe that long-term customer satisfaction is the determining factor of our success. We also believe in delivering quality projects and services with the highest professional ethics and personal integrity.

We have expanded our capabilities to manufacturing of

- ESD & Cleanroom Garments
- ESD & Non ESD Corrugated Boxes
- SMT Stencil Wiper Roll
- Face Mask
- Thermoforming Tray
- ESD workstation & Chairs
- Packaging Bags
- Tape / PE Films

We are trained, certified and audited in various field of speciality. We have iNarte Certified Engineers that can help you solve your ESD issue.

#### CONTENTS

#### Manufacturing Units



**Cleanroom Garments** 



Surgical Face Mask



**Corrugated Boxes** 



Stencil Wiper Roll



Thermoforming Tray

Our other range of products



**ESD** Furnitures



**Packaging Bags** 



Tapes / PE Films



**ESD** Finger Cots



ESD Vinyl Flooring Tiles



Industrial Surgical Gloves



Cleanroom Sticky Mat



**ESD** Turnstile Gate



**Cleaning Chemicals** 



#### **Our Manufacturing Units**

.1.11.

.11. .11.

100%

POWFI

Manufacturing is more than just putting parts together. It's coming up with ideas, testing principles and perfecting the engineering, as well as final assembly.



#### » ESD / Cleanroom Garments

Our garments are specially designed and stitched with requirements of the user's comfort and to maintain the ESD standards. Customizations are done with embroidery, Pockets, elastics, and others. ESD safe garments, whether we are talking about ESD Lab Coats are clothing with conductive properties. ESD-Smocks must protect the electrical charges and discharges. In practice this means that in the ESD textile a conductive yarn is woven into a specific pattern. This pattern can take many forms which need to meet the international accepted ESD-standards, the "Grid" is the only option. This pattern must be taken to ensure that controlled loads are discharged. The conductive yarns may not be more than 5mm apart. ESD clothing behaves as shielding packaging only in reverse. ESD clothing protects your ESD-sensitive components by wrapping your employees in ESD shielding clothing. The most critical element with ESD-garment, in addition to whether or not use of conductive yarn, is the washing of the ESD clothes. The conductive yarn resistant to the temperature.



#### Why is ESD clothing important?

If you work with electronic components or in an environment where ESD is a risk, then it is important to wear the right type of clothing. ESD clothing can help to protect you from static electricity build-up, and can also help to protect delicate electronic components from damage. Static discharge is destructive to electronics. It can cause circuits to melt or burn, leading to catastrophic failures. The damage caused by ESD may also occur on a smaller scale and go unnoticed at first. Latent defects are hard to identify before the device is released for use and can cause to dangerous malfunctions in sensitive industries, such as aerospace. This is why the prevention of ESD is so important.

#### Where we use?

we customize the garments by the classifications of environments and class such as Clean room with ISO CLASS and industrial shop floors.

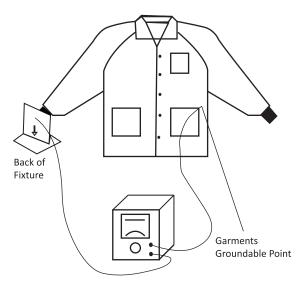
#### How Conductive fabric works?

ESD garments are constructed out of polyester fabric that impregnated with a grid of woven conductive fibers. The grid creates a "Faraday Cage" effect around the body of the operator that shields charges generated from the operators clothing from damaging ESD sensitive devices. This shields and dissipates any charges generated from the clothing that could otherwise damage sensitive electronics. Especially when used with ESD mats and grounding wrist straps, anti static workwear redirects static electricity away from the worker's skin. The electric charge is redirected to the ground surroundings and safely discharged. This protects sensitive components and devices from potential damage while the operator is working. To ensure maximum safety, ESD clothing and anti static equipment should be used throughout the manufacturing, testing, shipping, and handling processes.

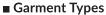
A "Groundable Static Control Garment" has < 1 x 109 ohms surface resistance measured point-to-point and point-to-groundable point.

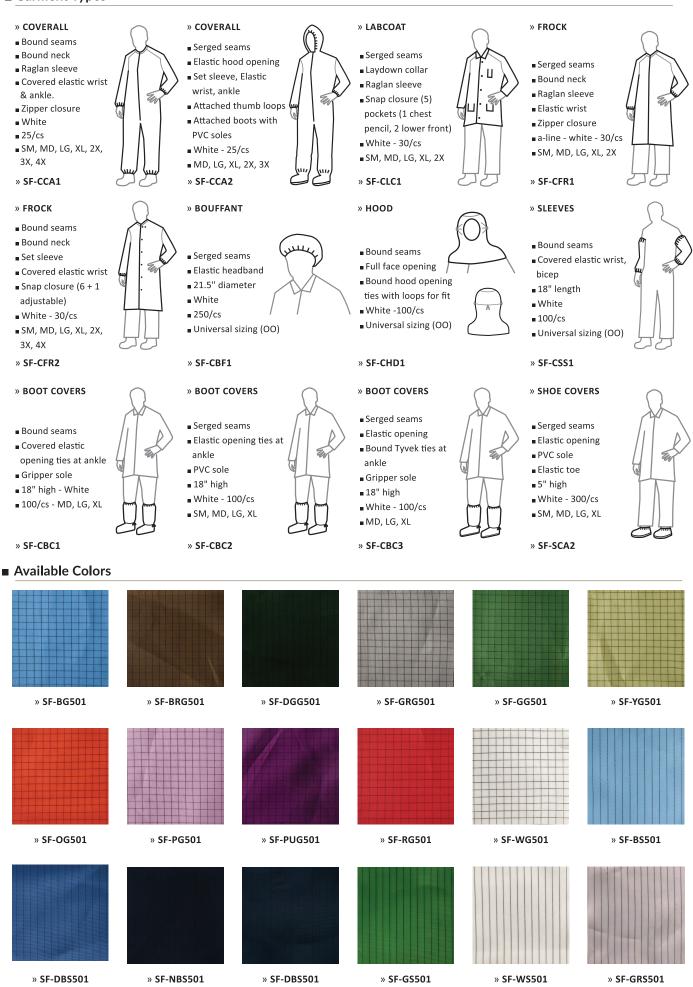
Standard followed: ANSI/ESD STM2.1





DESCRIPTION	UNIT	WARP	WEFT
Conductive Yarn	Denier	95	95
Polyester Filament Yarn	Denier	100	100
Tensile strength	Ν	1350	750
Density	ends/cm (ends/in)	66 (168)	39 (99)
Surface resistance	Ohm	E05-E09	E05-E09
Weaving structure		2 up 1 do	wn (Twill)
Width	cm	1	50
Weight	g/m2	13	35







#### » Surgical Face Mask

A surgical mask, also known by other names such as a medical face mask or procedure mask, is a personal protective equipment used by healthcare professionals that serves as a mechanical barrier that interferes with direct airflow in and out of respiratory orifices (i.e. nose and mouth). This helps reduce airborne transmission of pathogens and other aerosolized contaminants between the wearer and nearby people via respiratory droplets ejected when sneezing, coughing, forceful expiration or unintentionally spitting when talking, etc. Surgical masks may be labeled as surgical, isolation, dental or medical procedure masks.

Although the material of which surgical masks are made will filter out some viruses and bacteria by trapping the aerosol suspended in breathed air, they only provide partial protection from airborne diseases because of the typically loose fit between the mask edges and the wearer's face. Surgical masks are distinct from filtering respirators, such as those made to the standards, which are more airtight and purposefully designed to protect against finer airborne particles.

Although the material of which surgical masks are made will filter out some viruses and bacteria by trapping the aerosol suspended in breathed air, they only provide partial protection from airborne diseases because of the typically loose fit between the mask edges and the wearer's face.

A surgical mask is intended to be worn by health professionals during surgery and certain health care procedures to catch microorganisms shed in liquid droplets and aerosols from the wearer's mouth and nose. Evidence supports the effectiveness of surgical masks in reducing the risk of infection among other healthcare workers and in the community. However, a Cochrane review found that there is no clear evidence that disposable face masks worn by members of the surgical team would reduce the risk of wound infections after clean surgical procedures.

Bacterial Filtration Efficiency (BFE) > 99%, Particle Filtration Efficiency (PEE) > 98%





The Outer Layer is made of Polypropylene Spunbonded Fabric which is water-resistant and blocks dust, germs and liquids. The middle layer is made of Meltblown Filter which provides superior filtration for small wet and dry particles.

#### Adjustable Nose Pin

3 Lavers

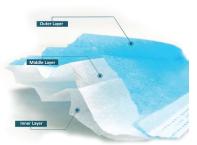
Easily moldable Aluminium Clip for perfect fit and snug fitting around the nose.

#### Ultrasonic Welded Ear Loops

Ultrasonically sealed 5mm elastic ear Loops which provide extra stretch making it comfortable for people with broad face. The loop does not break easily.







#### Color Variations



Light weight and precisely designed | Water resistant | Form-fit design for secure fit | Soft non-latex earloop | Adjustable nose clip | Made in class 10K environment

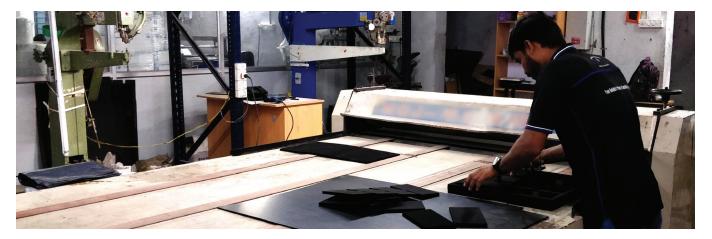
#### ■ 3 Ply Face Mask

Teo	chnical Data
Length	175 mm
Width	95 mm
No. of Layers	3 Ply
Nose Strip	100% PE
Nose Strip Length	95 mm
Ear Loop	PA & SP Elastic Band
Elastic Normal	170 mm
Elastic Expanded	>400 mm
Colour	Blue / Green / White
Lay	yer Material
Inner	Spunbond
Middle	Spunbond
Outer	Spunbond

#### 3-Ply Surgical Face Mask

	1
Technic	al Data
Length	175 mm
Width	95 mm
No. of Layers	3 Ply
Nose Strip	100% PE
Nose Strip Length	95 mm
Ear Loop	PA & SP Elastic Band
Elastic Normal	170 mm
Elastic Expanded	>400 mm
Colour	Blue / Green / White
Layer N	1aterial
Inner	Spunbound
Middle	Spunbound Meltblown
Outer	Spunbound





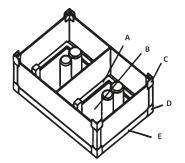
#### » ESD / Non ESD Corrugated Boxes

We provide ESD bins based on your requirements with completely ESD compatible raw materials. These ESD bins are used to protect electronics components sensitive to electrostatic charges. Majorly used in electronics industry.

Our ESD bins has complete ESD raw materials, which has very low carbon and hazardous content which will not make black residue and damages to your component. Our team provides you a best product meeting your requirements with best price in market.

Our ESD boxes has a highly technical bespoke material composition. It lowers the resistance so that when it's grounded, electrostatic charges are moved to the ground, protecting your ESD sensitive devices inside.

These Conductive Polypropylene Collapsible Totes are durable, cost-effective, and provide excellent ESD protection. With performance comparable to molded plastic totes, they have the added advantage of being able to collapse completely flat, which reduces demand on storage space and helps to keep down shipping costs. The antistatic conductive material, as well as offering excellent physical and ESD protection, is also easy to clean.



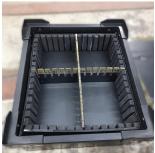
А	ESD Foam Support
В	Component
С	Top Corner (ESD Plastic)
D	Down Corner (ESD)
Е	Plastic Frame (ESD)

#### **Isometric View**



Our ESD boxes has a highly technical bespoke material composition. It lowers the resistance so that when it's grounded, electrostatic charges are moved to the ground, protecting your ESD sensitive devices inside. All our boxes are labelled with ESD Safe label before delivery.





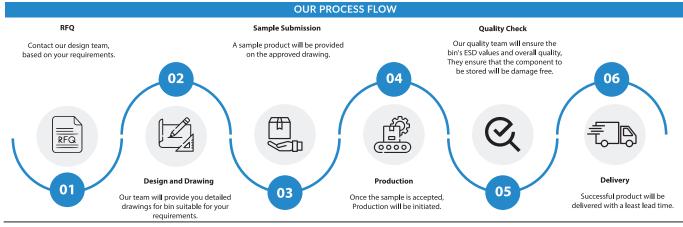








Sample Boxes/Bins





#### » Stencil Wiper Roll

Stencil Wiping Rolls are used to remove residual solder paste from the bottom side of PC Board stencils. Using Stencil Wiping Rolls prevents smearing, bridging, and solder balls caused by normal printing of solder paste onto PC Boards.

Sharp Screen printing on printed circuit boards (PCBs) requires clean stencils, Poly Cellulose and Poly Rayon fabric is specially engineered for under screen cleaning rolls, combining absorbency, strength, and low-limiting characteristics. The fabric quickly removes excess paste and adhesives from stencils - build-up that can ruin PCBs. That helps you produce better boards and faster.

#### Non-Woven 100% Polyester Papers

Poly Rayon Stencil Roll is anti static and an especially effective wiping fabric used in PREMIUM grade stencil wiping rolls. It is tough, abrasion resistant, absorbent, and virtually free of particle generation. It is comprised of a synergistic blend of virgin polyester and rayon that is bonded into a uniform, super-tough fabric. These unique features give it a high degree of absorbency and effectiveness during the process of wiping stencils. Unlike no other, it is especially effective in cleaning lead-free solder paste because it has an aggressive cleaning surface and many cavities that can handle the extra "stickiness" of lead-free paste. This product is also effective when used dry, of course cleaning is always enhanced when wet.

#### Non-Woven Polyester & Cellulose Papers

Poly cellulose stencil roll is an especially effective wipe. It is tough, abrasion resistant, absorbent, and virtually free of particle generation. It is comprised of a synergistic blend of virgin polyester and cellulose that is hydro-entangled into a uniform, super-tough fabric. These unique features give Polly cellulose stencil roll a high degree of absorbency and effectiveness during the process of general wiping.

#### **Rewinding Of Fabrics**

Selected raw material is then rewound over a standard PVC tube with or without notch. The fabric is wounded with specified meters of length and tension with a tension controller and a braking system and the end is been cut with a fine knife edge to prevent fabric hair lint's.

#### **Rewinding Of Fabrics**

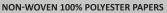
Selected raw material is then rewound over a standard PVC tube with or without notch. The fabric is wounded with specified meters of length and tension with a tension controller and a braking system and the end is been cut with a fine knife edge to prevent fabric hair lint's.

#### Characteristics

- 1. Low lint, ultra-low particle generation
- 2. Tear resistant, very strong and durable
- 3. With favorable performance of absorbing water and oil.
- 4. Cut automatically and folded in clean room
- 5. Solvent resistant
- 6. Super soft and cannot Scratch









#### Specification

Machine	Machine	Machine
DEK	515	530
DEK	400	530
DEK	300	530
Samsung / EKRA / KME	300	325



#### » Thermoforming Trays

Thermoformed trays is a kind of simple thermoformed packaging, they are also known as vacuum formed trays. These trays are designed with a flat bottom, or easy open plastic blister tray, or specific shapes for placing individual components as dunnage trays, in-process trays, and thermoformed parts trays. Thermoforming is a process of heating a thermoplastic sheet to its softening point. The sheet is stretched across a single-sided mold and then manipulated. Then, it cools into the desired shape. The most common methods to get the sheet to conform to its final shape are vacuum-forming, pressure-forming, and mechanical forming.

#### Thermoformed trays are opted for the following advantages.

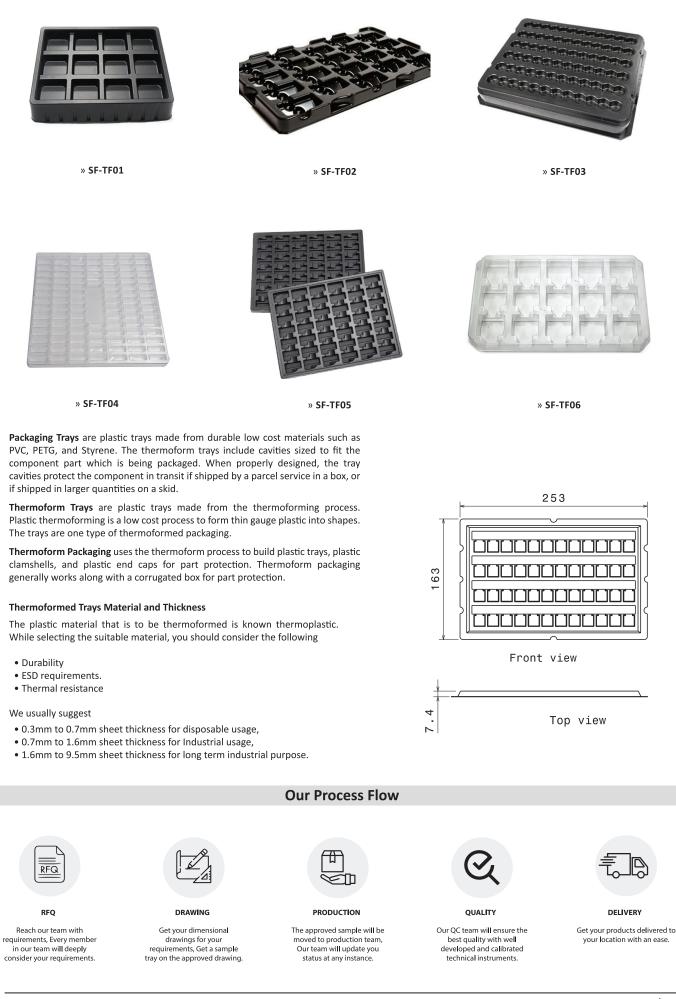
- 1. Grooves for finger, Grooves for finger can added as a part of the design, These helps in easy pick of components from the tray, Only thermoformed trays can be provide with finger grooves.
- 2. Poka yoke Fitment These provision will helps in fitting the components to the tray. These will minimize the chance of components fall-off. Also these will helps in preventing component vibration.
- 3. Printing Thermoformed trays can be printed with specific identification marks, company name, logo etc.., It is up to our customization. These printings will not get damaged or removed.
- 4. Less weight -These thermoformed trays are the most weight less packaging method, that has high efficiency with best component protection.
- 5. Stackablity Thermoformed trays can be designed with best stacking feature, This can reduce space consumption leads to low shipment cost.

#### Applications

- ABS (Acrylonitrile Butadiene Styrene) This is a common material that has good stiffness and impact strength. It comes in almost any color as well as several textures.
- Acrylic (Polymethyl Methacrylate, Plexiglass or PMMA) This material is clear and abrasion-resistant. It can be fabricated easily, is available in impact-modified grades and also comes in many colors.
- HDPE (High-Density Polyethylene) This material is resistant to impact as well as chemicals. It also has great cold-temperature properties. However, it is not as stable as many other available materials.
- HIPS (High Impact Polystyrene) This material has a low cost attached to it. IT also forms easily and is available in many colours. It is more brittle than some other materials, including ABS.
- LEXAN This material has great variability, is flame-resistant, scratch-resistant, and can stand up to various types of weather.
- PC (Polycarbonate) This material has an incredibly high impact strength. It is clear and has a high-temperature resistance.
- PET (Polyethylene Terephthalate) This material is commonly used food packaging. It is clear and has a low cost. It can be FDA certified if needed.
- PP (Polypropylene) This material has excellent chemical resistance. It is rigid and has good impact strength. It is good at higher temperatures but dimensionally is not as stable as other materials.
- PVC (Polyvinyl Chloride) This rigid material is strong and has good impact strength. It is also flame-retardant. However, its availability is limited.

#### Why Thermoformed Trays ??.

One of the efficient method in packaging industry | More Cost-effective | Freedom of design | Durability | Versatility





#### » ESD / Non ESD Workstations



#### LABORATORY ESD WORKBENCH

Has the ability to adopt the structure of table together with the double slotted upright frame supporter in a simple and effort less method.



#### MULTI ESD WORKBENCH

Provides the functionalities of erasing the entire problems of storage, caters a better display, fully operational in performance and meet the end user requirements.



#### BASIC ESD WORKBENCH

Equipped with the necessary strength and stability for meeting the demanding environments.



#### CORNER ESD WORKBENCH

Allows to enlarge the working space for the angled work area that enhances the usable space of the room.



#### DOUBLE ESD WORKBENCH

Allows the worktop and accessories to be shared with the double sided mounted on upright frame.



#### MOTORIZED WORKBENCH

Target at reducing the strain and fatigue in shoulders, arms and the back of the workers.



FLOW THROUGH WORKBENCH

Equipped with the rule of first-in/first-out.



#### CONVEYOR WORKBENCH

Equipped with the conveyor that is capable of connecting the different working position together and allow the bulk material to quickly flow through.

#### Features

- Workstation collection is furnished with the beauty & comfort resulting in improving the production efficiency.
- Desired combination by using various accessories is provided by modular design.
- Feature a static-dissipative top with a common grounding point for equipment and personnel.



#### » ESD Chairs / Stools



» SF-CH01



» SF-CH06



» SF-ST04



» SF-CH09

Features

## » SF-ST05

» SF-CH02

» SF-CH07





» SF-CH03



» SF-ST01







» SF-ST09

Material

Wheels



» SF-CH04

» SF-CH05



» SF-ST02

» SF-ST07

» SF-ST03



» SF-CH08





» SF-CH11

SD leather / AS PU Foam / SS Cylinder Height 120 - 260 mm Conductive plastic/Metal Casters & Plastic Stud. 10<sup>4</sup> - 10<sup>6</sup> ; 10<sup>6</sup> - 10<sup>9</sup> Ohm Surface Resistance

» SF-CH10

ensure comfort and safety. Back tilt control & ESD armrest for customizeable adjustment.

■ Ergonomic design features adjustable functions to

Static-dissipative construction makes these chairs safe

for use around sensitive components and equipment.

Built to stand up to long, rugged use.



#### » Packaging Bags

Packaging bag used in industries for storing electronic components, which are prone to damage caused by electrostatic discharge (ESD). These bags are usually plastic polyethylene terephthalate (PET) and have a distinctive color (silvery for metallised film, pink or black for polyethylene). The polyethylene variant may also take the form of foam or bubble wrap, either as sheets or bags. Multiple layers of protection are often used to protect from both mechanical damage and electrostatic damage. A protected device can be packaged inside a metalized PET film bag, inside a pink polyethylene bubble-wrap bag, which is finally packed inside a rigid black polyethylene box lined with pink poly foam. It is important that the bags only be opened at static-free workstations. Dissipative antistatic bags, as the name suggests, are made of standard polyethylene with a static dissipative coating or layer on the plastic. This prevents buildup of a static charge on the surface of the bag, as it dissipates the charge to ground.

Conductive antistatic bags are manufactured with a layer of conductive metal, often aluminum, and a dielectric layer of plastic covered in a static dissipative coating. This forms both a shield and a non-conductive barrier, shielding the contents from static charge via the Faraday cage effect. These bags are preferred for more sensitive parts, but they also see use in environments where sparks would be hazardous, such as oxygen-rich areas in aircraft and hospitals. Metalized bags are more fragile than their nonmetal counterparts, however, as any puncture compromises the integrity of the shield. In addition, they have a limited shelf life, as the metal substrate can deteriorate over time. These bags are often gray or silver owing to the metal layer, while still being transparent to some degree. ESD bags for packaging of materials such as fragile Materials, ESD equipment's and ESD consumables are protected by these type of packaging materials.

#### » Antistatic Bubble Bag

Provides cushion packaging & eliminates static charge in electronic parts packaging.

- Made of low density polyethylene containing an internal antistat, implanted in the polymer matrix.
- Exhibits excellent cushioning properties due to the regular dense air bubbles, trapped between two layers of antistatic polyethylene film.
- Non-corrosive and therefore will not electrolytically corrode or affect solderability of metals.
- Lightweight, versatile and easy to use.
- Contain an additional laminated layer of antistatic polyethylene for better strength than single layer.

Tensile Strength	185 kg/cm <sup>2</sup>
Tear Strength	1200 g
Sealing Time	0.5 - 5 sec
Sealing Temperature	82 - 121 °C

# Pink Antistatic<br/>Single LayerPink Antistatic<br/>Double LayerImage: Distribution of the state of the s

#### » Static Shielding Bag

Used to eliminates the hazards of static damage in electronics & semiconductor industry.



- Gives 3-layer protection guards against static charges.
- Semi transparent for easy content identification.
- Offered in a 2-seal configuration and bottom fold.
- Customizable to all sizes & available in standard thickness of 3.1 mil.

#### » Aluminium Moisture Barrier Bag

Used to eliminates the hazards of static damage in electronics & semiconductor industry.



Longitudinal Strength	5.92 kgf/mm <sup>2</sup>
Elongation	74.26%
Resistance Strength	7.86 kgf/mm <sup>2</sup>
Thickness	160 μm



#### » Kapton Tapes

Its also called as polyimide tapes and the main purpose of the tapes is resistance to heat and temperatures. It has strong hydrogen bonds, which makes it not only heat resistant but chemical resistant as well. The tape has been found to be quite resistant to oils, solvents, and acids. Its adhesiveness and insulating capacity are not affected by exposure to chemicals.

-----

	<ul> <li>Manufactured from polyimide backing film &amp; silicone adhesive.</li> <li>Offers high cohesion within the adhesive.</li> <li>Excellent heat resistance &amp; adhesion on all substrates.</li> <li>Perfect anchorage of adhesive to the backing.</li> </ul>
Adhesion Value	4.8 N/25mm
Tensile Strength	70 N/25mm
Temperature Range	Up to 200 °C

#### » Grid Tapes

Temperature Range Thickness

Grid tape can be used as a part of the overall anti-static control program and applied to static safety workstations. Even in a dry environment with a relative humidity of 10%, only a very low level of static charge is generated. This new type of tape, when it is removed from stainless steel, the charge generated does not exceed 50 volts.

75 μm



 Has anti static inner and outer surfaces.

- With no shed, flake, crack, chip or rub off of the inner layer grids.
- Combination of inner & outer layer provides excellent properties for the most effective static prevention and shielding applications.
- Easy tear and smooth dispensing with good finger tack and adhesion.

Peel Adhesion	0.45 Kg/15mm
Tensile Strength	5.00 Kg/15mm
Temperature Resistance	Up to 60 °C
Thickness	49 µm

#### » PE Tapes

PE tape is high performance, durable, moisture resistant and manufactured to withstand the most demanding conditions. Common product applications include: patching, sealing, bundling & wrapping, splicing & surface protection, exterior paint masking, wire hold-down, seaming PE sheeting, and more.



 Offers excellent chemical resistance and adhesion.

-----

- Suitable for preventing the application from contamination by dust and scratch.
- Widely use in PCM, VCM steel plate, Polished, molded plastic materials, high gloss screen printed nameplates, gloss instrument dumm sheet, diffuser and window of mobile phone.

Tensile Strength	> 8.3 N/10mm
Elongation	> 200%
Adhesion	8 gf/ 25mm
Thickness	0.04 - 0.14 mm

#### » **BOPP** Tapes

It is coated with a "water-based" adhesive – made with the assistance of a "thermoplastic polymer." This means is that the BOPP Tape is temperature resistant. You can use it in both hot and cold temperatures. Moreover, the tape also has a rough texture and structure that makes it ideal for providing maximum "tensile strength." It also protects any moisture and abrasion, making it perfect to use for packaging.



- Have good resistance to humidity
   & longer shelflife.
- High mechnical & Impact resistance.
- Delivers high bonding tack, enhanced safe permanent seal.
- Ensures tamper proof & security protection to applied item.

Peel Strength	700-750 gm/inch
Tensile Strength	30 N /cm
Elongation	75 - 100%
Thickness	55 μm

1

٦

- PRODUCTS >>>
- OTHER RANGE OF
- OUR



#### » Finger Cots

Finger cots have applications in many workplaces, mainly to protect objects which can be damaged by exposure to the skin's natural oils, skin particles, and dirt on hands. In electronics manufacturing, e.g., the manufacture of semiconductors, finger cots are used while handling such components. In watchmaking they are used to protect delicate watch parts. In art conservation and restoration they protect works of art from contamination which can have detrimental effects over time. In jobs that require labour with the hands, such as automobile repair or cooking, finger cots may be used to protect and isolate an injured finger.

Antistatic Finger Cots provide cost effective protection from contaminants such as skin salts, oils, and particulates. While anti-static pink latex is commonly recognized for being effective in eliminating contamination risks, black latex offers added security for those specifying mid-range static dissipation. Washed and powder-free, the inherent elasticity of latex allows for a comfortable fit that is easy to attach and remove.

#### Applications:

- EPAs and other ESD-sensitive areas
- Defence, avionics
- IC industries, Marine and consumer electronics
- Assembly areas, wire bonding, and laser diodes
- Repair stations, field repair kit

Powder-free / ISO 5 / Class 100 Cleanroom Suggested for Class II static sensitivity devices (thresholds up to 3999v) Compliant with ASTM and IEST-RP-CC 005.3 standards Immobilized packaged in anti-static, gas-impermeable film flushed with semiconductor grade Resistance per ANSI/ESD SP15.1



Pink - Finger Cots



Yellow - Finger Cots



Black - Finger Cots

Specification		
Material	100% Pure latex	
Surface Resistance	Antistatic / conductive	
Surface	Textured / smooth	
Color	Black, pink, yellow	
Static charge	< 50v	
Tribo-Electric charge	150v	
Surface resistivity	10 8 ~ 10 11 Ω/cm²	
Decay time	< 3.0sec. (From 1000v to 100v)	
	(60 + 5% R.H)	



#### » ESD Vinyl Flooring Tiles

With ESD Vinyl Tiles, static charge flow easily through the dense network of tiny conductive venis that run through the whole thickness of the tile.

The charge is transmitted through the conductive glue and securely discharged to earth via the copper tape. It's a completely natural system that needs no volatile, chemical antistatic additives to aid conductive is not affected by changes of temprature or humidity. it is homogeneous from top to bottom, that is, from the surface to the bottom, from the top to the bottom, the same color. Homogeneous PVC floors come as an economical solution because of their long-term life and therefore they are good in high-traffic and industrial areas such as hospitals, schools, libraries, supermarkets, warehouses and so on.

#### How these ESD Vinyl Tile works?

Reducing the generation of electrostatic charges is the main purpose of control measures in ESD protected areas(EPA). In such areas like electronics assembly, mechatronics and data centers the right floor covering plays a crucial role. It does not only drain electrostatic charges for personnel and equipment, but it also reduces the generation of charges where they occur, for example at the interface between the soles of shoes of shoes and the floor.

the entire purpose is to create a floor that won't generate static electricity. Rubber is a natural insulator, which means that anything that rubber touches won't conduct electricity. The coating is made specifically so that electricity cannot pass through it. The reason why electricity can pass through us is because we have a large amount of water in our bodies. Water by itself doesn't conduct electricity, however, water tends to have a lot of smaller metals which easily conduct electricity in the blink of an eye. Generally there are particles in the ESD flooring that direct the current to a different place. This works out to make sure that anything that could get damaged wouldn't be in contact. The current is being directed in a place that won't touch a person or any other electronics that could've been damaged. There are times when not all of the static can be dispersed. However, it works well enough to make sure that unsuspecting users that have no idea what's going on, have safe electronics. This coating is effective over 99% of the time.

#### Where can you use ESD tiles?

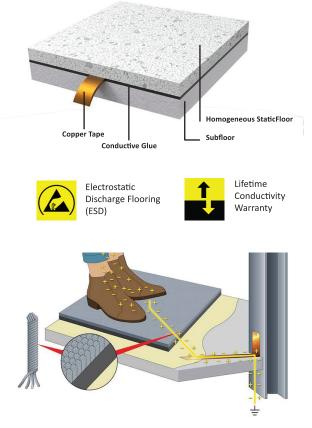
ESD Flooring can be very expensive so you want to make sure what you are doing is actually worth the price tag. One place where you want to use these tiles is a factory. This is a great place because there is already a lot of metal in the building. Even though there are a lot of regulations throughout most factories, they are still worth millions of dollars. Flooring would make sure that it would protect the people that are working there. It would also make sure that the expensive electronics wouldn't be damaged and static electricity wouldn't happen. Karate is also another place where ESD tiles could be used. This could happen for any martial arts class, but generally, people are going to be generating a lot of energy and weight in their movements. They have to be in a situation where they can be confident in each of their moves. You also want to prevent potential injuries from happening and the sliding on the floor is going to be kept to a minimum. A lot of people are going to be on this floor and it will more than likely be cleaned almost daily or at least once every few days. ESD flooring is some of the best money that you'll ever spend when working on a room. There are multiple different colors that allow you to create a different tone. The real value lies on where you use these tiles. It's a great product that might set you back hundreds or potentially thousands of dollars. But the most important thing that you need to do remember is that it will be worth the investment.

The power of making sure that your electronics are safe is something not to be taken for granted. You also should look at potential deals that you can get for the less than what is retail. There are a lot of complex things that go on to make sure that this product reduces static electricity. This is something that makes sure that static energy will be kept to a minimum.

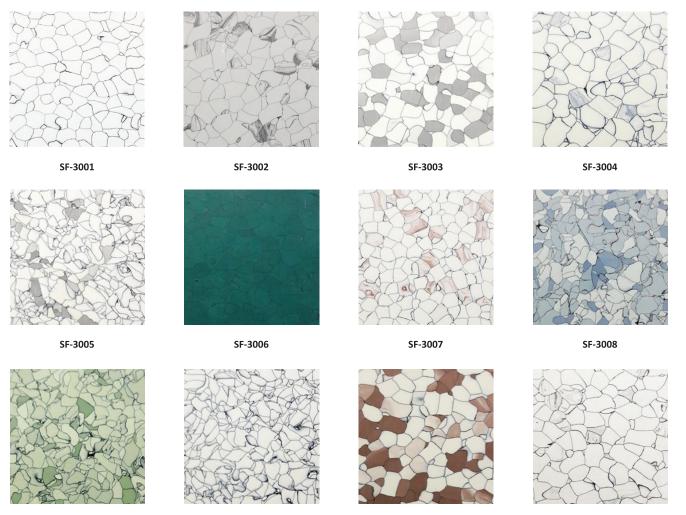
#### **Guarantees Consistent Performance**

Reducing the generation of electrostatic charges is the main purpose of control measures in ESD protected areas(EPA). In such areas like electronics assembly, mechatronics and data centers the right floor covering plays a crucial role.

It does not only drain electrostatic charges for personnel and equipment, but it also reduces the generation of charges where they occur, for example at the interface between the soles of shoes of shoes and the floor.



#### Models



SF-3009

SF-3010

SF-3011

SF-3012

#### Technical Specifications

CE Marketing	EN 14041	Compliant
ASTM**	-	Compliant
Total thickness	ISO 24346 / EN428	2.0mm / 3.0mm
Tile Size	EN 427	600x600mm 900x900mm 610x610mm 915x915mm
Commercial very heavy	ISO 10874 / EN 685	34
Industrial heavy	ISO 10874 / EN 685	43
Electrical Resistance	IEC 61340-4-1 EN 1081 (100 V) ANSI/ESD 7.1	$1.0 \times 106 \le R \le 108 \Omega$ $2.5 \times 104 \le R \le 106 \Omega$
Electrical Resistance in combination with ESD Shoes	IEC 61340-4-5 / ESD STM 97.1	<35MΩ
Outgassing	IDEMA M11-99	Total <1µg/cm2
Total TVOC 28 day Total TSVOS 28 days	AgBB guidelines	<1 mg/m3 / <0.1 mg/m3
Bacteriostatic	SNV 195 920	Pass
Chemical Resistance	ISO 26787 / EN 423	Excellent
Slip resistance	DIN 51130	R9
Total weight	ISO 23997 / EN 430	3.2kg / m 2
Dimensional stability	ISO 23999 /EN434	0.05%
Residual indentation	ISO 24343-1 / EN433	0.035mm
Abrasion resistance	EN 660-2	Group M
Castor chair continuous use	ISO 4918/EN425	No effect
Light fastness	EN ISO105 B02	≤ 6
Impact sound reduction	EN 140-8	2dB
Slip resistance	EN 13893	μ = 0.60
Thermal Conductivity	EN 12524	0.28 W/(m.k)

#### » Nitrile Surgical Gloves

Medical gloves are disposable gloves used during medical examinations and procedures to help prevent cross-contamination between caregivers and patients. Medical gloves are made of different polymers including latex, nitrile rubber, polyvinyl chloride and neoprene; they come unpowdered, or powdered with cornstarch to lubricate the gloves, making them easier to put on the hands.

ornstarch replaced tissue-irritating Lycopodium powder and talc, but even cornstarch can impede healing if it gets into tissues (as during surgery). As such, unpowdered gloves are used more often during surgery and other sensitive procedures. Special manufacturing processes are used to compensate for the lack of powder.

There are two main types of medical gloves: examination and surgical. Surgical gloves have more precise sizing with a better precision and sensitivity and are made to a higher standard. Examination gloves are available as either sterile or non-sterile, while surgical gloves are generally sterile.

Offers an outstanding selection of industrial grade and medical grade for varied industries.

- Enhanced tactility, reduced fatigue and puncture resistance.
- Advance formulation with soft finish facilitates optimum tactility and grip providing superior touch & feel experience and high dexterity.
- High elasticity and good memory marks excellent adaptation to wearer's hand.
- High tensile strength and exceptional protection feature, providing tear and puncture resistance.
- These gloves are soft, latex-free and powder-free.

Specifications			
Nitrite Compound	95.5%		
Chemical	4.5%		
Coating	Chlorinated Clean Room Class 100		
Туре	Ambidextrous		
Surface Finish	Finger Textured		
Colour	Blue/Purple/White		





#### » Cleanroom Sticky Mat

Cleanroom sticky helps trap impurities for controlled environments that require stringent dust and dirt control. Our clean room sticky mats feature a tacky surface which removes dirt and dust from shoe surfaces before they can contaminate a cleanroom. Remove dirt, dust and other impurities in areas that have high cleanliness standards. Sticky mats act as a barricade for sterile environments. Placing a sticky mat in the entrance of shopflor will help protect and extend the life of floor.

\_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Reliable way to clean shoe soles before entering a cleanroom. Peel-off sheets eliminate the need for messy cleaning and make it easy to maintain a clean surface. These sticky mats have proven themselves effective in a wide variety of industries, including microelectronics, aerospace, pharmaceuticals, and food processing. It is also widely used in keeping your pet or construction worker from dragging in dirt from the outside or to simply keep sensitive floors clean such as basketball courts or dance floors.

#### **Technical Specifications**

First cover sheet	60 µm	
30 disposable sheets	50 μm	
Self-adhesive sheet	80 µm	
Last cover sheet	60 µm	
Numbering	Mark numbers (30 to 1) on the 30	
	peel tags of the mat	
Pad thickness	2 mm	
Stickiness		
Grade A	300 +/- 50 (g / 25 mm)	
Grade B	400 +/- 50 (g / 25 mm)	
Properties		
Ability of dust removal	99.9% in five step (weight 100 Kg)	
Sizes available	24" x 36", 26" x 45"	
Colour available	Blue, other colour on indent basis	
Tensile Strength	More than 1.2 (kg/10mm)	
Heat Resistance	Pass at 70 +/- 3 (°C / 48 hr)	
Cold Resistance	Pass at - 13 +/- 3 (°C / 48 hr)	



#### Applications

• Used at doorway to remove dirt and dust from footwear before personal enter into the production area.

- Comes in 30 peel able sheets per mat
- Used in electronic manufacturing, hospital, theatre, cleanroom, bio lab, wafer fab, solar manufacturing and pharmaceutical manufacturing company



ESD Access Control Flap Barrier is designed to measure the ESD Footwear and Wrist Strap resistance. It is a good security system for entry of personnel into the restricted ESD Safe Area. Designed reasonable and reliable movement, smooth running, long service life. Wing to open very quickly, effectively prevent the tail, and improve the access speed. After power-off, wing automatically open, forming a transparent channel. Prompted with the direction of LED lights. Adoption of a number of infrared sensors, to prevent illegal entry into the pedestrian access, to protect pedestrians safe and smooth through the channel. Anti-recoil, a pedestrian entering the channel from the opposite direction, immediately report to the police. Anti-tail, too many people to prevent a situation of non-permit. With automatic reset function, namely to obtain permission lock after the set time There is no lock, wing gates automatic cancellation of this authority back to the initial state. waterproof, sunscreen, cold and high temperature. Installation with personalized interface, compatible with IC, ID cards and other smart cards. A unified, standard external electrical interface, read and write device with a variety of freely Articulated, easy system integration. Can be extended to automatic identification systems, achieve access control, attendance, fees and other functions. Be integrated with other types channels with the use of product.

#### Applications

- Entertainment Places Movie theatres, Fitness halls, Country clubs,
- Fairground, Clubs, Swimming Hall, Fitness Gym.
- Public Places Subway, Airports, Stations, Library, Bookstores, Parks,
- Exhibition halls, Stadiums, Museums, Apartments, Residence Area, Offices, Commercial buildings.
- Business Organizations Hotel, Factory, Bank, Prison, Hospital, School, Enterprise's Entrance and Exit Attendance.

#### **System Integration**

This equipment is subtly integrated with machine, electronics, micro- processor control and ID identification, provides convenience for the use of card reader identification equipment, such as IC card, ID card, bar code and fingerprint. It can carry out intelligent control and management to the passageway through choosing various identification equipment and adopting fair, reliable security protection, alarming equipment and direction indicating equipment.

#### **Access Control System**

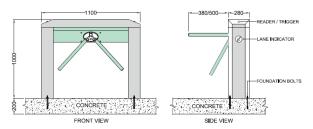
- we can offer the access control system: fingerprint/ face recognition/ card reader/ QR code/ barcode ticket system.
- support special function: counter, coin- operation.
- ESD tester system and function.

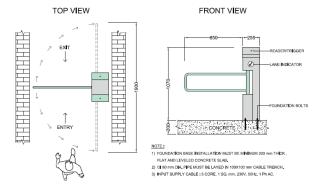
#### **ESD Installment**

ESD based testers are installed over the security barriers by the various range of resistance to allow personals to the cleanroom or ESD protected areas. A suitable footplate will be attached to the ESD tester and the footplate to detect the resistance values so as to signal the barriers. The ESD testers comes with the touch sensors, RFID detectable sensors, optional wrist strap.

#### **Special Functions**

- LED counting function
- Box house can lengthen, swing arm lengthen
- Infrared logical judgment function (you can choose 8 pairs or 10 pairs Infrared) Voice Prompt Function
- · Normally open or closed can be adjusted to meet the requirements of the different place. Sound and light alarm prompt functions
- · Stroboscopic lamp prompt function: site administrator can find the turnstile problem quickly and accurately.





#### » Elegant Tripod

#### » Slim Tripod



An electromechanical variant operated with a solenoid locking mechanism, as well as a motorized model run by a BLDC motor with a locking mechanism Tripod Turnstile range is an excellent solution for a wide range of industries, corporate offices, public areas, government buildings, airports, etc.

- Bi-directional operation
- Positive Action Lock
- Arm is free to rotate or drop in case of power failures or emergencies
- Self-centering arm
- Built-in hydraulic damper for smooth operation
- Anti-backup technology to prevent reverse operation once the tripod has moved 30° from its home position



An electromechanical variant operated with a solenoid locking mechanism, as well as a motorized model run by a BLDC motor with a locking mechanism Tripod Turnstile range is an excellent solution for commercial complexes, industrial units, government offices, banks, and IT parks.

- Positive Action Lock
- Bi-directional operation
- Arm is free to rotate or drop in case of power failures or emergencies
- Self-centering arm
- Built-in hydraulic damper for smooth operation
- Anti-backup technology to prevent reverse operation once the tripod has moved 30° from its home position

#### » P Type Swing Gate

#### » Retractable



Flap Barriers are built for India's extreme weather conditions and rough and tough usage. Equipped to tackle dust, rain, and drastic temperature changes, the product also effortlessly handles challenges such as tailgating, piggy-backing, or wrong entry.

- Highly Reliable Inline direct drive brushless DC motor
- Alarm function in case of illegal intrusion, illegal or reverse intrusion
- Short opening times
- Simple integration with all access control systems
- Automatic opening during power failure
- Dynamic LED Lane indication
- Long lifecycle with low operating cost
- · Anti-tailgating feature with alarm to detect unauthorized personnel



P Type Swing Gates are a simple yet affordable solution to provide access control for people with special needs or disabilities, luggage trolleys, or for the transportation of building materials. Embedded in an intuitively designed interface, our products are built with the latest PWM technology, allowing our clients to steer a wide range of entrance control systems, with easy-to-use push button functionalities.

- DC brushless motor-based drive for greater reliability
- Passage clearance of up to 900mm
- Cabinet in mild steel powder coat or stainless steel
- Bi-directional operational control
- Low impact forces for maximum personal safety
- Battery backup in case of power failure
- Suitable for wheelchairs, bicycles, and building materials
- Successful combination of affordable price and high quality



#### » Acetone

Acetone is a chemical solvent used across many industries, including industrial manufacturing, in which the most common industrial use of acetone is as a cleaning and degreasing agent. Acetone is often considered to be an ideal solvent for its high evaporation rate. Acetone is extremely effective when breaking up build-up and cleaning, and it evaporates quickly preventing pooling or damage. Acetone is a preferred chemical solvent is due to the fact that it is affordable and it can be sold and shipped in large bulk quantities. In addition to cleaning and degreasing, acetone has many other uses in the industrial realm, including uses as an additive ingredient and as a solvent for the production of many goods. If you are in need of a versatile, affordable, and effective industrial solvent, acetone may be the best option for your business.

#### Applications

Acetone is often used to wipe down industrial machinery after uses to wash away build up and prevent gumming, keeping machinery clean and in proper working order. Acetone is used as an additive in many manufactured goods such as cosmetics and skin care products. A reliable bulk supplier of acetone can help to keep production costs down in industrial facilities that produce these products. Acetone is very commonly used as a solvent in the industrial production of plastics. High production facilities could benefit from using high quality acetone not only in their production, but also in the cleaning and maintenance of their manufacturing machinery.

Specification		
Parameters	Details	
Appearance (Color)	Colorless	
Appearance (Form)	Liquid	
Infrared Spectrum	Conforms to Structure	
UV Absorbance 400nm	≤ 0.01	
UV Absorbance 350nm	≤ 0.02	
UV Absorbance 340nm	≤ 0.10	
UV Absorbance 330nm	≤ 1.00	
Purity (GC)	≥ 99.90 %	
Water (by Karl Fischer)	≤ 0.5 %	
Residue on Evaporation	≤ 0.0002 %	

#### » Isopropyl Alcohol

IPA is a cleaning solvent which is internationally approved to standards required by the major electronics manufacturers. The product is designed for use where the application of CFC based solvents is undesirable.

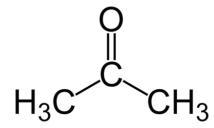
#### Applications

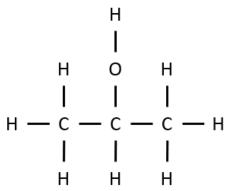
- Used for manufacturing of hand sanitizers.
- Used in cleaning of PCB
- Used for making perfumes
- Used in lacquer formulations, dye solutions
- It helps in manufacturing of soaps
- Major component in household cleaners

• Isopropyl alcohol (also called as isopropyl, isopropanol, or 2-propanol) is a colorless, flammable chemical compound (chemical formula CH3CHOHCH3) with a strong odor. As an isopropyl group linked to a hydroxyl group, it is the simplest example of a secondary alcohol, where the alcohol carbon atom is attached to two other carbon atoms.

#### Applications

- Vapors cause mild irritation of eyes and upper respiratory tract
- High concentrations may be anesthetic
- Liquid irritates eyes and may cause injury
- Highly flammable







#### » Industrial / Cleanroom Laundry Services

■Being one of the pioneer in the cleanroom laundry industry, our class 100 cleanroom laundry in both Singapore & Batam offer a highly professional package to industries where attention to detail is of utmost importance. we also ensures complete compatibility with the operations of your cleanroom. Currently, our laundry is capable of supporting filtered water requirements and DI water requirements.

At Statfree we take an uncompromising attitude to cleanliness & garment tracking for our cleanroom services. We manage our customers garments through barcoding & have reports on no. of washes to allow monitoring of garments lifespan. We make use of high quality ESD chemicals to wash all garments



and footwear. The amide silicon free bags used for product packaging are of the highest quality available and are approved by our customers, so as to assure our customers of the highest product quality possible. From our daily pickups to emergency deliveries on weekends, Statfree is dedicated to provide the best possible service to our customers. We can make special arrangement of daily pickups and deliveries to your facilities. Once cleaned, we package and box the garments according to your specification.

#### » Process Flow



Our trained, uniformed personnel with eco-friendly bags will **PICK UP** your clothes for laundry at allotted time.



#### **SORTING & BARCODE**

Scanning incoming soiled garments and shoes. Soiled garments and shoes are inspected before being sorted into groups of similar items for washing & damaged uniforms and shoes are weeded out for repair or replacement. 02

#### DRYER

Unloading dedicated the cleanroom pass thru dryer HEPA filtered system to guarantee the cleanest air for the drying.

03

05

#### **PRE-TREATMENT**

Garments and Shoes are pre-treated by general washer to reduce soil and dust before loading into barrier washer (cleanroom washing).

#### 04

#### **PARTICLE TEST**

Measuring the number of particles per minute. Testing of the surface resistivity of garments and shoes.

#### \_ . . .

Garments & shoes are loaded into large capacity (200 lb.) barrier pass-thru washers, washed with a solution of purified water and special non-ionic surfactants with Microprocessor controlling to ensure the stable quality processing.

WASHER

#### 06

#### **INSPECTION & FOLDING**

After particle testing, garments and shoes are inspected for defects such as split seams and broken zippers or snaps, and then folded, packed and sealed in polyethylene bags.

Once sealed, the garments and shoes are placed in a pass-thru and **SENT OUT** of the clean-room to the shipping area, which is itself often Class 100.





#### **Statfree Private Limited**

No. 334, 2nd Street, North Phase, SIDCO Industrial Estate, Ambattur, Chennai - 600 098, Tamilnadu, India.

Sales - Chennai	Supply Chain - Chennai	Accounts - Global	
044-4238 2215	S 044-4865 0167	🗞 044-4302 3010	
lese sales@statfree.com	🖄 sct.chn@statfree.com	legender accounts@statfree.com	
Sales - Bengaluru	Supply Chain - Bengaluru		
\$\lambda\$ +(91)-98864 39235			
Sales.blr@statfree.com	Sct.blr@statfree.com		
Production	Quality		
🗞   044-4238 2215			
Production.01@statfree.com	m 🦉	<ul> <li>044-4238 2215</li> <li>quality@statfree.com</li> </ul>	
Production.02@statfree.com		e stati celositi	



© Copyright 2023 Statfree Private Limited



For more details please visit *www.statfree.com* 

No part of this catalogue may be reproduced in any written, electronic, recording, or photocopying without written permission of the publisher or author. The exception would be in the case of brief quotations embodied in the critical articles or reviews and pages where permission is specifically granted by the publisher or author.

Although every precaution has been taken to verify the accuracy of the information contained herein, the author and publisher assume no responsibility for any errors or omissions. No liability is assumed for damages that may result from the use of information contained within.