

## SPECIFICATION

### WTI 21-539 Class 1000 Frocks

#### Part Number 21-539(S/M/L/XL/2XL) Class 1K Frocks

WTI-100 fabric was developed specifically for the demands of the clean room industry. It offers the highest barrier of protection, best static control along with unsurpassed comfort, service life, reduced heat stress, and decontamination properties. WTI frocks are more cost effective than traditional designs and readily accepted by workers.

#### MATERIAL:

100% synthetic fabric: Polyester and 5% Carbon suffused Nylon  
Design: 5mm Grid (0.20 inch)  
Weight: 105 g/m<sup>2</sup> (3.25 oz/yd<sup>2</sup>)  
Air Permeability: 8cc/cm<sup>2</sup>/sec (15.74 cfm/ft<sup>2</sup>)  
Particle Filtration (<0.3µm): 85%  
Particle Filtration (<0.5 µm): 90%  
Surface Resistance: 10<sup>5</sup>-10<sup>6</sup>Ω  
Static Decay: (5000V to 50V): <0.2 seconds  
Friction Charged Static Voltage: 0.05 – 0.10 KV  
Clean Room Class: 1000 or better.

#### ESD:

Panel to panel resistance: <1 x 10<sup>7</sup> ohms – ANSI/EDA 2.1  
Sleeve to sleeve resistance: <1 x 10<sup>7</sup> ohms – ANSI/EDA 2.1  
Resistance after 100 washes: <5 x 10<sup>7</sup> ohms – ANSI/EDA 2.1

#### POCKET:

There is no pocket in this class of garment due to concerns with particle collection in the pockets.

#### COLOR:

White with thin black grids

#### MARKINGS:

Sizes shall be marked with tags (S, M, L, XL, 2XL, 3XL, 4XL) inside collar.

#### COLLAR:

Collar shall be double thickness, unlined, fitted military collar, having a 1-1/2" finished width.

#### LABEL:

Each garment shall have a laundry proof label stitched to the inside back below the neck band. This label shall specify "WTI Logo" and the garment size.

#### CLOSURE:

Garment shall have a #5 coil zipper with fly stiffener & snaps at top and bottom.

#### THREAD:

Thread shall be V-30 Polyester Filament except at raglan sleeve joints and cuffs (in used). Thread at raglan sleeve joints and cuffs shall be conductive type.

#### SEAMS:

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Seams and joinings shall be sewn with two needle serged and safety stitching, Federal Specification LSC-2, at sleeve, side and waist. All joints shall be bound with conductive fabric (same as garment) using 1.25" width double bind. Single row of stitching shall be limited to hems at wrist and ankle openings. Bartacks, consisting of at least 28 stitches, shall be placed at all stress points. Each original seam shall possess at least 85% of the breaking strength of the filling of the fabrics joined. Seams and joinings shall be finished flat, smooth and with minimum puckering or twisting of the joined fabric.

### SLEEVES:

One or two piece set-in sleeves. Cuffs are to be hemmed with elastic or fitted with snaps (1 female; 2 male).

### STITCHING:

All stitches shall be lock stitched or multi-thread chain stitch (type 301 or type 401 Federal Standard #751). The number of stitches shall be 8 to 12 per inch in accordance with good commercial practice. Each end of a row of stitches shall be back stitched a minimum of 1/2" for reinforcement.

### WORKMANSHIP:

All garments are to be made in a workmanlike manner, to show no raw edges, defective stitching, or material in any part of the garment. All garments are to be inspected during manufacturing and at final trimming and packing.

### STANDARDS:

Any of the following defects in the completed garment shall be cause for rejection:

- a. Garments not made in accordance with specifications and materials specified.
- b. Broken stitching threads, unsecured thread ends, long unclipped thread ends, defective stitching, drawn seams or raw edges.
- c. Objectionable soiled or dirty.
- d. Defective front closure.

SIZE	X-Small	Small	Medium	Large	X-Large	2X-Large	3X-Large
Shirt Size	34	36-38	40-42	44-46	48-50	52-54	56-58
Chest	40	42-44	46-48	50-52	54-56	58-60	62-64
Back Length	42	36-36	38-38	40-40	42-42	44-44	46-46
Back @ Shoulder	15	16-17	18-19	20-21	22-23	24-25	26-27
Sleeve Length	32	32½-33	33½-34	34½-35	35½-36	36½-37	37½-38