

DEN/INE Protection Plus⁺ Apparel

Quasi-Clean Room Applications

Ideally suited for applications where employees are working in room temperatures and require a Clean/No Lint, Air Permeable, Anti-static Lab Coat.

Suitable Applications

- Pharmaceutical Research
- Pharmaceutical Production
- Pharmacy Clean Room
- Electronics Production
- Electronics Testing
- Food Production
- Meat Plants

Designed Using Clean/Non-Linting Fabric & Accessories

- Clean, Non-linting Fabric & Accessories... Fabric made of 99% Textured Polyester/1% Carbon Threads. Cuffs made of 100% Spun Woven Polyester.
- Particle Filtration Efficiency... Particles > .3 Micron @ 90% Efficiency; .5 Micron @ 91% Efficiency – tested to VDI 3926 Denkendorf Institute.

Designed Anti-Static

The black carbon filaments woven throughout the garment dissipate static emanating from all surfaces (front and rear panels, as well as arms) of **Denline Protection Plus⁺** apparel... preventing false instrument readings, as well as damage to computers and x-ray film.

- Surface Resistivity measures 10^9 using Test Method 76.
- Carbon fibers evenly spaced across the width of the fabric provides a controlled discharge of static electricity.
- Static Decay <.01 sec. using Test Method FTMS 4046-101C.

Surface Resistivity

Test Method 76

The surface resistance to static electricity. Measured at 65 degrees F with 20% and less humidity. The lower the test result (i.e., 10^7), the greater the static resistance of the material. The higher the test result (i.e., 10^{12}), the lesser amount of static control. Desirable test result scores for static control range from 10^7 to 10^{10} .



Designed for Employee Comfort

Breathable Material for User Comfort

- Air Permeability tested at 15.4 cu. ft./min. under ASTM D-737-96.
- 10x the air permeability of clean room fabric, comparable to a polyester/cotton blend.

Air Permeability

ASTM D 737-1996

The rate of air flow through textile fabrics, measured in cu. ft. of air that passes through the fabric per minute. The greater the cu. ft. air flow, the greater the user comfort.

Sleeves Designed to Minimize Accidental Spills and Contamination

Tapered Sleeves with Spun Woven Polyester Cuffs

Tapered sleeves reduce accidental spills when reaching vs. rolled sleeves and open cuffs that catch on things. With the cuffs over-gloved, the pathway for lint, hair and other contamination from the employee's forearm under the sleeve is eliminated.



Designed Splash & Spray Resistant

Tested Splash & Spray Resistant to **all Aqueous Fluids** (blood, bleach, iodine, fixer, developer, etc.) through 225 Hot Water Commercial Washes.

Water Repellency; Spray Test (AATCC 22-2001)

Results: Scored 100 (ISO 5). Fluid suspended on fabric surface without absorbing during all tests.

Water Resistance: Hydrostatic Pressure Test (AATCC Test Method 127-1998)

Results: >300.0 mm through 225 commercial wash and dry cycles.

Spray Rating AATCC 22-2001

The resistance of the fabric to wetting by water. A test result of 100 indicates no wetting of the upper surface of the material; score of 90 indicates slight random wetting of upper surface and a score of 50 indicates complete wetting of whole upper surface. A score of less than 50 indicates the wetting through to the underside of the material tested. Desirable test results for material used in splash and spray resistant applications is 90 or 100.

Hydrostatic Pressure Suter Rating AATCC 127-1998

The resistance of the fabric to the penetration of water under hydrostatic pressure. Hydrostatic pressure is the force distributed over an area exerted by water. The higher the test result (expressed in mm), the greater the resistance to fluids passing through the material under pressure.

Note: The hydrostatic rating of a material is the inverse to air permeability...the greater the hydrostatic rating, the less the air permeability and comfort of the coat.

View Protection Level Provided from [Aqueous Fluids](#), [Chemicals](#) and [Oils: Liquid Hydrocarbons](#) based on ASTM Tests

[Click Here for Aqueous Fluid Observations](#)

[Click Here for Chemical Test Results](#)

[Click Here for Oils: Liquid Hydrocarbons Test Results](#)

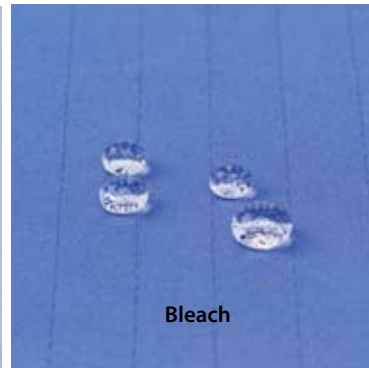
DenLine Protection Plus® is available in 4 color choices



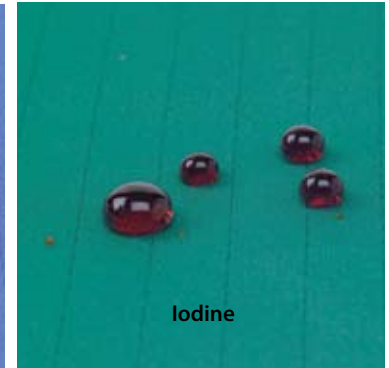
White



Ceil Blue



Royal



Emerald Green

Hot Water Wash (160° F / 71° C)

Hot water disinfects garment without the use of bleach. Garment may be autoclaved (274° F / 135° C).

- Meets Centers for Disease Control and Prevention (CDC) recommendations for processing and disinfecting medical linen.
- Hot water helps remove body oils which have potential to yellow fabric, particularly around the neckline.

Variety of Styles... Sizes for All Employees

Eleven Styles from which to choose, and select styles available from 2XS to 6XL.

Full-length Lab Coats 39.0" and 41.0" lengths. Lab Jackets in 31.5" and 34.0" lengths.

Designed for a 200+ Wash Life (Industry Exclusive)

Durable Fabric Maintains Strength Over Wash Life of Garment

- Tested to ASTM D 5034-1995 Fabric Break Strength tested 180.8 lbs. when new, about 2.2 to 3.5 times the strength of Polyester/Cotton.
- After 225 hot water commercial wash and dry cycles, the fabric tested 174.1 lbs., a negligible 3.7% loss of strength.

	Rated Maximum Washes																					
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
Poly/Cotton					40 – 70 Range																	
Typical Clean Room Garment (100% Poly)								70 – 100 Range														
DenLine Protection Plus®	Tested Through 225																					

Stain Resistant Fabric

- Tested to AATCC 130-2000. Rated top score of 5 (No Stains) after 225 Hot Water Commercial Washes.
- Fabric resistant to stains from blood, bleach, betadine, hydrogen peroxide, fixer and developer, and all aqueous laboratory stain agents (Wright’s Stain, Alcian Blue, Brilliant Blue, Gram Iodine, Hematoxylin, etc.).

Reinforced Pockets (Pocket Delete Option Available)

- Double-Stitched Pockets provide extra strength for heavy loads.
- All Pockets “Bar Tack” Reinforced in the upper corners to prevent pockets from coming off.

Durable Cuffs

- Spun Woven Polyester Cuffs tested to AATCC 143-2001.
- Tested as being durable with minimal pilling after 225 wash cycles. All color cuffs are stain and bleach safe. Comfortable “cotton-like” feel.

E-Z Snap Stainless Steel Closures (Lifetime Guaranteed)

- High tolerance snaps release with a light pull force to minimize stress on the fabric. Stainless material withstands exposure to chemicals during commercial washes.



Designed to be 25% to 50% Lower Cost than Cotton/Polyester or 100% Polyester Lab Coats over the Life of the Garment(s).