

NEW

MICROMAX[®] VP

Bloodborne Pathogen and
Chemical Protection

 **Lakeland[®]**

MicroMax[®] VP Applications

- Crime Scene Cleanup
- Research Laboratories
- Emergency Medical Response
- Embalming / Forensics



Serged Seam

Passes ASTM F1670/F1671

MicroMax[®]VP is specifically designed to protect when the risk of blood, body fluids, bloodborne pathogens and viral contamination are the greatest. Ideal for use in crime labs, crime scene clean up and by emergency response personnel.

- Protective hood
- Seamless front reduces risk of contaminant exposure
- Taped storm flap protects zipper
- Elastic back for more comfortable fit
- Passes ASTM F1670/F1671 for Blood and Viral Protection

MicroMax[®] VP Configurations



Coverall MVP414

- Zipper closure
- Attached hood
- Boots
- Elastic wrists
- Sizes: S – 5X
- Case Pack: 25



Coverall MVP428

- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles
- Sizes: S – 5X
- Case Pack: 25



Protective hood

Seamless front reduces the risk of possible contamination from liquid penetration

Taped storm flap keeps contaminants away from zipper

Elastic back gives a more comfortable fit and helps prevent rip-outs

Available with attached boots to help prevent cross-contamination during an event

MicroMax® VP Physical Properties

| Physical Property | Test Method | Units | Test Results |
|--|-----------------|----------|---|
| Material Thickness | ASTM D1777 | | 15 mil |
| Material Weight | ASTM D3776 | | 80 gsm |
| Tensile Strength MD | ASTM D5034 | lbs. | 36.30 lbs. |
| Tensile Strength CD | ASTM D5034 | lbs. | 24.15 lbs. |
| Elongation MD | ASTM D5034 | % | 59 Avg. |
| Elongation CD | ASTM D5034 | % | 71 Avg. |
| Water Vapor Transmission Rate | ASTM E96 | | 16 g/sq. meter/ 24 hrs. avg. |
| Bursting Strength Hydraulic Method | ISO 13938-1 | | 29.4 psi avg. |
| Burn Test 45° | CPSC16 CFR 1610 | | Pass |
| Surface Resistance Requirement for BS EN1149-5:2008 is $\leq 2.5 \times 10^9 \Omega$. | EN1149 | Ω | The test sample meets the requirement 2.4×10^8 |

MicroMax® VP Liquid Penetration Data

| Physical Property | Test Method | Test Results |
|--|-------------|--------------|
| Liquid Penetration Using Synthetic Blood | ASTM F1670 | Pass |
| Viral Penetration using ϕ X174 bacteriophage suspension | ASTM F1671 | Pass |

MicroMax® VP ASTM F903 Liquid Penetration Data

| Physical Property | Test Method | Test Results |
|---------------------|-------------|--------------|
| Methanol | ASTM F903 | Pass |
| Ethyl Acetate | ASTM F903 | Pass |
| Sulfuric Acid (97%) | ASTM F903 | Pass |
| Tetrahydrofuran | ASTM F903 | Pass |
| Sodium Hydroxide | ASTM F903 | Pass |
| Acetone | ASTM F903 | Pass |
| Hydrofluoric Acid | ASTM F903 | Pass |
| Acetonitrile | ASTM F903 | Pass |

Fentanyl - Testing per ASTM D6978

| Lakeland® Brand | Test Drug and Concentration | Minimum Breakthrough Detection Time (Specimen 1/2/3) (Minutes) | Steady State Permeation Rate (Specimen 1/2/3) ($\mu\text{g}/\text{cm}^2/\text{minute}$) | Other Observations |
|-----------------|---|--|---|---------------------------------|
| MicroMax VP* | Fentanyl Citrate Injection, 100 mcg/2mL | >240 | NA | Slight swelling; no degradation |

***MicroMax® VP fabric holds out liquid Fentanyl, but is only recommended for Fentanyl in powder form due to serged seam construction**

Users should also ensure the gloves they are using for chemotherapy have been tested against the most recent standards. The current standard for exam gloves used in chemotherapy is ASTM D6978-05 "Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs."

Prior to ASTM D6978-05 many exam gloves were tested against ASTM F739 "Resistance of Protective Clothing Materials to Permeation by Liquids or Gases Under Conditions of Continuous Contact". ASTM D6978-05 uses ASTM F739 as a test method, but has a chemical permeation requirement that is 10 times more stringent than what is required by ASTM F739. Users of gloves tested under ASTM D6978-05 have a higher level of confidence that the gloves they are using are tested to the current, more stringent ASTM standard."

