

Production Insight

Solutions for Critical Environments & Manufacturing Processes



PROTECTIVE APPAREL • CHEMICALS • PRODUCTION SUPPLIES

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VWR Production: Focused On YOU!

Structured Choice

- Reduce Your Acquisition Costs – Along with products from our preferred branded supplier portfolio, the VWR Collection line provides high-quality products at competitive prices.
- Reduce Your Transaction Costs – Significantly reduce order time and resources dedicated to vendor management with VWR's Market Source Procurement Services.
- Access a Comprehensive Portfolio – Multiple options for raw materials provide you with the capability to have a primary and secondary source from the same distributor. Also, the VWR product portfolio allows you to purchase all of your requirements, whether raw materials or critical environment consumables, from a single source.

Operational Excellence

- Effectively Manage Raw Material Changes – Contractual agreements with selected suppliers support our robust change notification verification program.
- Achieve Regulatory Compliance – VWR's Global Regulatory Affairs team provides additional security regarding governing laws and regulations.
- Achieve Supply Chain Security – VWR's unmatched global distribution network features inventory located in over 20 locations throughout North America.
- Reduce Your Working Capital – Next day service into virtually every major market in North America & Puerto Rico minimizes your need for on-hand inventory.

Differentiated Services

- Streamline Existing Processes – VWR has a team of Business Process Consultants available to assess your "order-to-cash" process as well as your on-hand inventory requirements.
- Optimize Your Inventory – Customized consignment and vendor managed inventory solutions allow you to optimize your on-hand inventory and reduce working capital.
- Secure Your Supply Chain – Integrate your operations directly into VWR's operational infrastructure to maintain supply chain security.



VWR® Safety & Industrial Supplies Solutions to Enhance Your Safety Program

Our comprehensive Safety and Industrial Supplies help you reduce hazards, protect workers, and comply with all relevant safety requirements. Request your free Safety & Industrial Supplies Catalog online at www.vwr.com/safetyandindustrial. For more information shop vwr.com or call 800.932.5000.



VWR® Irradiated Coveralls

- Excellent Fluid and Particulate Barrier
- Extremely Low Level of Particle Shedding
- Superior Breathability and Water Vapor Transmission Rate
- Soft, Cloth-Like Fabric



Coveralls are manufactured from a specially formulated breathable microporous fabric that provides significant fluid and barrier protection. Garments exhibit excellent water vapor transmission to optimize user comfort. Coveralls are gamma irradiated to a Sterility Assurance Level (SAL) of 10^{-4} to address the concern of bio-burden contamination. Manufactured and packaged in an ISO Class 8 (FED-STD-209E Class 100,000/M6.5) cleanroom.

Color: white

Size	Cat. No.	Case of 25
Coveralls with Attached Hood and Fluid-Impervious Boot Covers		
Small	414004-449	224.29
Medium	414004-450	223.89
Large	414004-451	224.22
X-Large	414004-452	224.20
XX-Large	414004-453	237.54
3X-Large	414004-454	251.63
4X-Large	89136-080	259.99
5X-Large	89136-082	253.80
Standard Coveralls		
Small	414004-443	200.25
Medium	414004-444	200.05
Large	414004-445	200.09
X-Large	414004-446	200.23
XX-Large	414004-447	211.59
3X-Large	414004-448	225.11
4X-Large	89136-084	227.12
5X-Large	89136-086	224.65



VWR® Sterile Disposable Goggles

- Fog-free Exxene® -coated lenses are manufactured of 100% polycarbonate in a cleanroom and meet ANSI Z87.1 standards
- Lightweight goggles are durable enough to withstand temperatures up to 100°C (212°F)
- Individually bagged in a sealed Tyvek® pouch

Safety and comfort combined with an exceptionally high sterility level make these goggles the optimum choice for critical environments and other applications. Direct venting goggles feature a 48.3cm (19") blue adjustable non-linting rubber headband. Indirect venting goggles feature a black adjustable headband. Goggles are supplied with a certificate of sterility, ensuring that residuals are close to undetectable levels over an eight-hour exposure period.

Description	Cat. No.	Case of 50
Direct Venting Goggles	46600-610	539.02
Indirect Venting Goggles	69100-210	495.29





VWR Signature™ Coveralls made with DuPont™ Tyvek® IsoClean® Material

Protective, durable, and comfortable coveralls provide an excellent barrier against dry particulates, nonhazardous liquids, and microorganisms. Garments are chemically and biologically inert, low-linting, and static-free until laundered.

All coveralls feature serged seams, laydown collar, front zipper closure, and elastic wrists. Available with elastic ankles, with attached Gripper™ boots, or with attached boots and hood. Boot attachments combine an embossed PVC exterior sole with a coarsely textured interior to ensure a secure, nonslip fit and feel.

Color: white

Size	Cat. No.	Case of 25
Coveralls with Elastic Ankles		
Small	89012-822	262.54
Large	89012-826	293.05
X-Large	89012-828	303.59
XX-Large	89012-830	312.99
3X-Large	89012-832	363.64
4X-Large	89012-834	404.80
Coveralls with Attached Boots		
Medium	80200-620	390.58
Large	80200-622	427.52
X-Large	80200-624	447.68
XX-Large	80200-626	464.97
3X-Large	80200-628	519.51
Coveralls with Attached Boots and Hood		
Medium	89127-188	555.38
Large	89128-782	568.92
X-Large	89128-784	575.95
XX-Large	89128-778	595.84
3X-Large	89128-780	606.06



VWR® Maximum Protection Face Masks

- Superior Protection Against Bacteria and Particles
- Highly Breathable and Fluid-Resistant
- Soft and Hypoallergenic
- Equipped with Multiple Comfort Enhancing Features
- Latex-free

Masks feature three-ply construction for superior particle and bacterial filtration efficiency. Available with spandex ear loops or polypropylene ties that are ultrasonically welded to maintain softness and protect against particulates. A full-length arch within the mask's protective layers holds the fabric away from the wearer's mouth to allow cooler, more comfortable breathing without restricting downward vision. An encased 12cm (4¾") malleable steel noseband creates a secure facial seal and improves comfort.

Bacterial Filtration Efficiency: 99.0-99.5%

Particle Filtration Efficiency: 99.02-99.15%

Dimensions (L x H): 6¾" x 3¾"



Color	Cat. No.	Case of 500
Mask with Ear Loops		
Blue	414004-670	235.11
Pink	414004-672	235.11
White	414004-673	235.11
Mask with Ties		
Blue	414004-675	238.95

NOTE: Packaged 50 masks per pack, 10 packs per case.



VWR North American Technical Product Support



**YOUR ANSWER
IS JUST A
CLICK AWAY!**



NEED HELP?
Click to Chat
with a Representative.

Click-to-Chat Online
Support available on
select products
Monday through Friday,
8:30 a.m. - 8:00 p.m. (EST)

The Multiple Benefits of Single-Use Garments Made with DuPont™ Tyvek®

The DuPont Controlled Environments portfolio offers a comprehensive selection of single-use cleanroom garments and accessories designed for use in pharmaceutical, medical device, and biotech facilities that require high standards for microbiological contamination control.

Garments made with DuPont™ Tyvek® have a long history of use in cleanrooms due to their excellent barrier to particles, microorganisms, and non-hazardous light liquid splash. They are comfortable, durable, and available for different cleanroom applications.

Quality - Single-use apparel provides consistent and reliable quality and eliminates concerns about cross-contamination that can occur with laundering or compromised performance due to multiple wash and sterilization cycles.

Flexibility - The DuPont single-use apparel program allows you to order only the quantities that you plan to use, which offers flexibility as your needs change.

Cost Control - Single-use garments eliminate budget uncertainties associated with garment repair, damage, and loss, helping you to better predict expenditures.

Reusability - There are companies interested in recycling DuPont™ Tyvek® IsoClean® single-use garments and accessories, such as coveralls, lab coats, aprons, sleeves, pants, shoe covers, and boot covers.

Two of the most popular products in the DuPont Controlled Environments portfolio of single-use garments and accessories are:

DuPont™ Tyvek® IsoClean® Garments

DuPont™ Gripper™ Shoe Covers and Boot Covers

Description	Packaging	Cat. No	Case of
Coverall*	Individual	89127-208	25/ 470.99
Coverall w/Elastic Ankles	Bulk	80076-948	25/ 209.09
Frock w/5-Snap Front & Bound Neck	Bulk	80077-266	30/ 317.92
Boot Cover w/Ankle Ties & Serged Seam	Bulk	89127-326	100/ 204.62
Hood*	Individual	89127-356	100/ 546.00

*Clean-processed - processed to minimize particle shedding and individually packaged in an ISO Class 4 (FED-STD-209E Class 10/M2.5) cleanroom.

All items listed above are DuPont™ Tyvek® IsoClean®

Visit vwr.com for sizes, additional information, and options.



The miracles of science™

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VWR® Protection Apparel

The competitively priced VWR Protection Apparel portfolio has been engineered to meet the demands of cleanrooms, critical environments, manufacturing facilities, research and clinical labs, and other specialized environments.

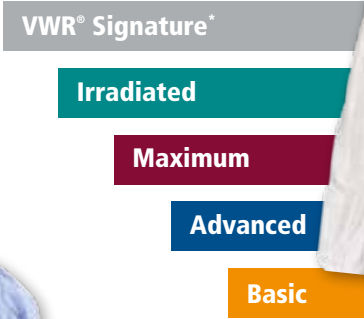
Our complete head-to-toe collection of single-use apparel offers comfort, durability, and the freedom to choose appropriate levels of protection for your environment's specific needs.



The VWR Protection Apparel Portfolio Includes:

- Beard Covers
- Boot Covers
- Bouffant Caps
- Coveralls
- Face Shields
- Frocks
- Gloves
- Gowns
- Hoods
- Lab Coats
- Masks
- Shoe Covers
- Sleeves

Levels of Protection



*Made with Dupont™ Tyvek® IsoClean® Material

For more information about VWR Protection Apparel, contact your VWR Sales Representative, call 800.932.5000, or visit vwr.com today.



VWR® Maximum Protection Class 10 Nitrile Gloves

- Provide reliable, durable, and comfortable hand protection during demanding cleanroom applications
- Textured fingers enhance grip on components
- Tapered, beaded cuff provides secure fit
- Static-dissipative to inhibit harmful static discharge
- Silicone-free material minimizes ionic contaminants and nonvolatile residue (NVR) transfer
- No natural rubber latex
- AQL level of 1.5 for pinholes
- For single use
- Color: white

VWR Protection Nitrile Gloves are manufactured from a synthetic copolymer of acrylonitrile, butadiene, and methylacrylic acid (components that comply with FDA CFR 21). These gloves exhibit

high tensile strength and strong permeation resistance against a wide variety of solvents, acids, and bases. Non-staining, non-smudging gloves reduce the risk of contamination to parts or components being handled by the user, even during prolonged wear.

Gloves are rigorously tested and manufactured in an ISO Certified facility under stringent process controls to ensure that each product meets exacting quality standards and performs to specification. Our products are lot controlled and validated through independent lab testing.

Size	Cat. No.	Case of 1,000
X-Small	89130-848	489.50
Small	89130-846	489.50
Medium	89130-850	489.50
Large	89130-852	489.50
X-Large	89130-854	489.50
XX-Large	89130-856	489.50

ISO Class 4 (FED-STD-209E Class 10/M2.5) or higher cleanrooms





DuPont™ Gripper™ Shoe and Boot Covers

A Durable Slip-Resistant Solution

Part of the comprehensive DuPont Controlled Environments product portfolio, DuPont™ Gripper™ shoe and boot covers feature a highly engineered PVC sole material that helps resist slipping on slick surfaces. It's reinforced with a coarsely textured interior so your feet stay put on the inside as well as on the outside.

Product Features of DuPont™ Gripper™ Shoe and Boot Covers

- Excellent durability and slip resistance, both wet and dry
- PVC sole material provides excellent barrier to liquid penetration
- Inside texture helps keep foot in place
- Available in DuPont™ Tyvek® IsoClean®
- Available gamma sterilized
- Available individually packaged or in bulk

Description	Packaging	Cat. No.	Case of 100
Shoe Cover	Bulk	89127-322	113.85
Boot Covers w/Ankle Ties			
Nonsterile Clean-Processed, Bound Seam	Individual	89127-334	247.93
Sterile Clean-Processed, Bound Seam	Individual	89127-336	291.98
Nonsterile Clean-Processed,	Bulk	89125-640	188.79

Note: Clean-processed garments are processed to minimize particle shedding and individually packaged in an ISO Class 4 (FED-STD-209E Class 10/M2.5) cleanroom. Sterile garments are gamma sterilized to a Sterility Assurance Level (SAL) of 10⁻⁶.

Visit vwr.com for sizes, additional information, and options.



The miracles of science™

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KIMTECH PURE® A5 Cleanroom Coveralls, Boot Covers, and Hoods, Kimberly-Clark®

- Provide a cloth-like and comfortable fit
- Material is 7.5 times more tear-resistant than minimum levels required by ANSI
- Feature a high mandarin collar for additional protection
- 25 times more breathable with comparable particle holdout to Tyvek®
- Elastic wrists and ankles

KIMTECH PURE® A5 cleanroom apparel incorporates innovative design features to provide an exceptionally high standard of protection. Developed to provide a secure guard against contamination, coveralls are manufactured from SMS (spunbond-meltblown-spunbond) material.

KIMTECH PURE A5 apparel is ideally suited for applications in pharmaceutical, biotech, and medical device industries. These garments are manufactured in an ISO certified facility, clean processed, and individually packaged under cleanroom conditions. They contain no natural or rubber latex. Optional hoods and boot covers are designed for use with coveralls. Coveralls and optional garments are available in sterile or nonsterile formats.



Size	Cat. No.	Case of 25
Sterile Coveralls		
Small	89092-898	523.57
Medium	89092-900	523.57
Large	89092-902	523.57
XL	89092-904	523.57
2XL	89092-906	554.81
3XL	89092-908	588.21
4XL	89092-910	625.36
5XL	89166-188	633.98
6XL	89166-190	700.53

Please see vwr.com for a complete list of styles and accessories.



Microflex® HSCE4-899

12" Class 10 Hand-Specific Sterile Nitrile Gloves

HSCE4-899 sterile nitrile gloves are hand-specific and provide the very highest levels of consistent cleanliness and sterility for comprehensive compliance with AAMI sterilization guidelines and ASTM standards.

- Certified to ISO 9001 standards
- AQL 1.5
- Less than 20 Units/Pair Endotoxins
- Powder Free/Silicone Free
- Textured Fingertips
- Packaged to allow aseptic donning
- 200 pair per case



Sizes	Catalog Number	Case of 400
6.0	89202-650	334.10
6.5	89202-652	334.10
7.0	89202-654	334.10
7.5	89202-656	334.10
8.0	89202-658	334.10
8.5	89202-660	334.10
9.0	89202-665	334.10

Visit www.microflex.com to request **FREE** samples!

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VWR® Hood and Face Cover

- Polypropylene head covering to protect product and environment from contamination
- Bulk-packed as a case of 500 with polybag and case liner
- Color: white

Description	Cat. No.	Case of 500
VWR Hood and Face Cover	89187-796	99.84



VWR® Sterile Sleeves

- Excellent breathability and water vapor transmission rate
- Superior fluid and particulate barrier
- Lowest level of particle shedding
- Durable yet soft, cloth-like fabric

Sleeves are manufactured from a specially formulated, breathable microporous fabric that provides significant fluid and barrier protection. Garments exhibit excellent water vapor transmission to optimize user comfort. Sleeves are gamma irradiated to a Sterility Assurance Level (SAL) of 10⁻⁶ to address the concern of bio-burden contamination. Manufactured and packaged in an ISO Class 8 (FED-STD-209E Class 100,000/M3.5) cleanroom.

Sleeves feature elastic openings and sonically welded seams.

Sleeves are rigorously tested and manufactured in an ISO Certified facility under stringent process controls to ensure that each product meets exacting quality standards and performs to specification. Products are validated through independent lab testing. Color: white.

Ordering Information: Sleeves are pair-packed in sealed polyethylene bags contained within a double carton liner. Each case is supplied with a certificate of irradiation.

Size	Length, cm (in.)	Cat. No.	Case of 300
Universal	49.5 (19½)	414004-510	396.39
X-Large	54.6 (21½)	414004-511	441.54



What's New With ISO?

by Anne Marie Dixon, Cleanroom Management Associates, Inc.

Aimed at achieving an optimal degree of order in a given context, standardization establishes common ground and repeated use with regard to potential or actual problems. In May 1993, the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO) established Technical Committee 209 (TC 209) for cleanrooms and associated controlled environments to address the need for globally applicable standards and the desire to eliminate trade barriers. At the time, there were more than 40,000 cleanroom-related standards in the world. Over the last 20 years, ISO TC 209 has worked to define procedural limits, operational limits, and testing procedures to minimize contamination through a family of standards involving more than 40 countries and 1,000 participants.

The ISO requires a review of standards every five years to ensure that current references and technologies are reflected. As a part of this process, several standards are currently in review:

- ISO 14644-1 provides nine classes of cleanliness in which maximum particle concentration is specified as a function of the particle size for each class. This standard also specifies the number of sample locations for classification and the acceptable criteria for the data. The number of sample locations is not based on statistical principles, but rather as the square root of the area of the cleanroom. The acceptance criterion is based on a statistical test, but only when the number of sample locations is less than 10. The proposed new approach is based on the assumption that the particle distribution is generally not homogenous across the cleanroom, and seeks to ensure with 95% confidence that at least 90% of the cleanroom complies with the class limit. A final decision on the number of samples will not be finalized until after October 2012.
- ISO 14644-2, which establishes specific criteria for the timely monitoring and/or continuously evaluating the cleanliness of cleanrooms,

should be released from committee for an additional vote in 2013.

- ISO 14644-3 contains the 14 specific test methods that can be utilized for evaluating cleanrooms. Several test methods will be transferred to ISO 14644-1. Revisions to this standard, which will also include newly available test methods, will be released in 2013.
- ISO 14698-1 outlines the principles for dealing with biocontamination in cleanrooms, and ISO-14698-2 outlines the methods for evaluating and interpreting this biocontamination data. Both of these standards are currently in committee and will be totally revised. A draft may be available for comment in 2013.
- Several new items were considered at the most recent ISO TC 209 meeting in 2011. More information will be released on these groups as delegates are selected.
- The work effort in the field of Nanotechnology is a coordinated effort between TC 209 and TC 229 (Nanotechnologies). While TC 229 has a broad scope, including terminology, metrology, and environmental health and safety, it does not include facilities and controlled environments. The ISO TC 209 Working Group 10 committee has completed work on the first in a series of documents on Nanotechnology, which focuses on the classification of air cleanliness by particles (ACP) in terms of concentration of airborne nanoscale particles. This document was submitted as a Committee Draft to the Technical Committee on May 1, 2012.

We live in a global economy driven by global quality needs, and the standards set by ISO Technical Committee 209 provide quality levels for cleanrooms today and tomorrow. The Institute of Environmental Sciences and Technology (IEST), which serves as the secretariat of the ISO Technical Committee, continues to provide leadership for this critical function. Standards are available from the IEST headquarters at www.iest.org or 847.981.0100.

Current ISO Standards

In addition to meeting the scope and objective, these ISO standards offer many benefits to users:

- The information contained in the standards can provide the basis for protocols and standard operating procedures
- Some of the documents contain useful checklists to assist with implementation
- The standards can be applied to produce user specification and validation document
- The standards provide a collective reference of contamination control documents

ISO 14644-1 establishes specific classes of air cleanliness.

ISO 14644-2 establishes specific criteria for timely monitoring and/or continuously evaluating the cleanliness of cleanrooms and clean zones.

ISO 14644-3 contains the 14 specific test methods that can be utilized for evaluating cleanrooms and clean zones.

ISO 14644-4 outlines the criteria for the design and construction of cleanrooms and clean zones.

ISO 14644-5 covers all aspects of operating a cleanroom including such issues as operational systems, personnel clothing, training and behavior, installation of stationary equipment, handling of portable equipment and cleanroom cleaning and maintenance.

ISO 14644-6 is a compendium of terms and definitions specific to cleanrooms and clean zones.

ISO 14644-7 covers separative devices – isolators, minienvironments, glove boxes, and clean-air hoods.

ISO 14644-8 addresses classification of airborne molecular contamination.

ISO 14644-9 addresses the classification of surface particle cleanliness.

ISO 14644-10 addresses surface chemical cleanliness.

ISO 14698-1 outlines the principles for dealing with biocontamination in cleanrooms and clean zones.

ISO 14698-2 is a companion document to **ISO 14698-1**, outlining the methods of evaluation and interpreting biocontamination data.



Macco Organiques Inorganic Salts

Your mineral source for cGMP biopharmaceutical, pharmaceutical, diagnostic, and medical device applications.

High quality products for a wide variety of applications in life sciences. Chemicals are produced in contamination free areas and are packed in cleanrooms to ensure the highest possible level of quality is maintained at all stages. They are certified to ISO, GMP, Halal, and Kosher standards.

Product List – Fine Chemical

Calcium Chloride Dihydrate	Magnesium Sulphate Heptahydrate
Calcium Sulphate Dihydrate	Potassium Chloride
Magnesium Chloride 4.5-Hydrate	Sodium Acetate Trihydrate
Magnesium Chloride Hexahydrate	Sodium Chloride
Magnesium Hydroxide	Sodium Hydrogen Carbonate
Magnesium Oxide	Sodium Sulphate, Anhydrous
Magnesium Sulphate, Anhydrous	Zinc Sulphate Monohydrate and Heptahydrate



Description	Size, kg (lbs.)	Cat. No.	Each
Ammonium Sulfate	12 (26.5)	89221-790	142.23
Calcium Carbonate	12 (26.5)	89221-796	258.13
Calcium Carbonate	200 (440.9)	89221-768	179.28
Calcium Chloride Dihydrate	12 (26.5)	89221-782	140.40
Calcium Chloride Dihydrate	25 (55.1)	89221-800	262.50
Magnesium Chloride Hexahydrate	25 (55.1)	89221-798	262.50
Magnesium Sulfate, Anhydrous	12 (26.5)	89221-786	104.58
Magnesium Sulfate, Anhydrous	200 (440.9)	89221-758	8.51
Potassium Chloride	12 (26.5)	89221-784	145.20
Sodium Acetate Trihydrate	12 (26.5)	89221-788	105.58
Sodium Acetate Trihydrate	50 (110.2)	89221-808	381.80
Sodium Carbonate Monohydrate	12 (26.5)	89221-806	263.94
Sodium Chloride	12 (26.5)	89221-776	71.71
Sodium Sulfate, Anhydrous	12 (26.5)	89221-792	202.80
Zinc Sulfate Heptahydrate	12 (26.5)	89221-794	191.23
Zinc Sulfate Monohydrate	12 (26.5)	89221-804	272.90

For more information shop vwr.com or contact your Production Specialist.



VWRCATALYST™

Powering Productivity. Delivering Results.

Chemical Tracking & Management

With the industry's leading chemical tracking and management technology, **VWRCATALYST** can make sure you know the location and usage of every chemical at your site. We provide the information you need to comply with all federal, state, and local regulations.

Our Programs Include:

- Planning and Implementation
- Procurement
- Staging
- Sourcing
- Management
- Safety
- Tracking
- Metrics



Call **888.793.2300** or email VWRCATALYST@vwr.com for more information.

Dehol[®] ST

Sterile 70% Isopropyl Alcohol, USP

Now Made with Water-For-Injection

- Ready-to-use, 70% IPA solution for Cleanroom use
- Filtered to 0.2µm and individually double-bagged in a Class 100 cleanroom
- Gamma-irradiated and validated sterile to SAL 10⁻⁶
- Each lot tested for sterility and endotoxin
- Each case is shipped with a lot specific document detailing QC, irradiation, sterility & bacterial endotoxin



SIZE	CAT. NO.	EACH
12 x 16 oz.	89125-194	307.18
12 x 32 oz.	89125-196	563.00
4 x 1 gal.	89125-198	443.57

Honeywell Fine Chemicals

Honeywell Specialty Chemicals Seelze GmbH in Seelze, near Hanover (Germany), offers a wide variety of products manufactured for applications in the oral care, healthcare, food and nutrition industries. Honeywell's strengths cover a wide range of technical capabilities such as complex inorganic chemistries, ultra high purification, as well as flexible batch manufacturing, global logistics and innovative application support. Honeywell specializes in consistently delivering very high batch-to-batch product quality.

Inorganic minerals are used in the production of pharma and bio pharma industry. These high purity products have a standard level of consistency guaranteed for specialized applications. Honeywell Riedel-deHaën® inorganic fine chemicals comply with the analytical standards and specifications of all important internationally recognized pharmacopoeias. Honeywell considers the most exacting market demands and individual customer requirements, such as GMP, purity standards and tailor made packaging.

For further information please visit vwr.com or contact your VWR Production Specialist.



Honeywell

KOPTEC Pure Ethanol-190 and 200 Proof



- Meets USP specs
- Available to customers both tax-free and tax-paid in 1, 5, 55gal., and pint sizes
- All licensing and permit issues handled by VWR

Size	Packaging	Cat. No.	Price
Assay 190 Proof (95%) Tax-Paid Ethanol			
1pt.	Poly Bottle	89125-178	Cs. 24/ 418.06
1gal.	Poly Bottle	89125-180	Cs. 4/ 463.04
5gal.	Poly Bottle	89125-182	Ea./ 524.77
55gal.	Poly Drum	89125-184	Ea./ 5488.11
Tax-Free Ethanol (Permit Required)			
1pt.	Poly Bottle	89125-162	Cs. 24/ 127.10
1gal.	Poly Bottle	89125-164	Cs. 4/ 111.97
5gal.	Poly Bottle	89125-166	Ea./ 143.81
55gal.	Poly Drum	89125-168	Ea./ 989.56
Assay 200 Proof (100%) Tax-Paid Ethanol			
1pt.	Poly Bottle	89125-186	Cs. 24/ 409.52
1gal.	Poly Bottle	89125-188	Cs. 4/ 408.16
5gal.	Poly Bottle	89125-190	Ea./ 524.77
55gal.	Poly Drum	89125-192	Ea./ 5488.11
Tax-Free Ethanol (Permit Required)			
1pt.	Poly Bottle	89125-170	Cs. 24/ 115.70
1gal.	Poly Bottle	89125-172	Cs. 4/ 116.22
5gal.	Poly Bottle	89125-174	Ea./ 143.00
55gal.	Poly Drum	89125-176	Ea./ 993.24

For more information or to place an order, contact your VWR Sales Representative, call 800.932.5000, or visit vwr.com.



ANGUS Buffers and Biochemicals

Your Trusted Source for Buffers and Biochemicals



- Commercial-scale biological buffers, biochemicals, primary amino acid/derivatives, and vitamins for the life science industry
- The highest levels of quality assurance and supply chain transparency
- Trusted supplier and partner—cGMP quality systems, production, packaging, and warehousing

ANGUS is the inventor, the leading manufacturer, and only fully back-integrated manufacturer of TRIS AMINO™ Tromethamine products.

Description	Grade	Packaging	Size	Cat. No.	Each
TRIS	ACS	Poly Pail	25 kg	71002-040	1467.06
TRIS AMINO	Ultra Pure	Poly Pail	25 kg	71002-022	1908.94
TRIS AMINO	Ultra Pure, USP, EP	Poly Pail	25 kg	71002-024	2270.06
TRIS AMINO	USP, EP, JP	Poly Pail	25 kg	71002-032	2270.06
TRIS AMINO	USP, EP	Poly Pail	5 kg	71002-030	749.11
TRIS AMINO	USP, EP	Poly Pail	12 kg	71002-028	1289.72
TRIS AMINO	USP, EP	Poly Drum	50 kg	71002-026	4297.39
TRIS AMINO, Base	—	Poly Pail	25 kg	71002-016	1257.86
TRIS AMINO, Buffer	—	Poly Pail	25 kg	71002-018	1000.17
TRIS AMINO, Crystals	—	Bag	50 lbs.	71002-020	748.17
TRIS Hydrochloride	Ultra Pure	Poly Pail	25 kg	71002-034	2466.50

For more information about our full line of ANGUS buffers and biochemicals, please contact your VWR Sales Representative, or shop vwr.com.

ANGUS Buffers and Biochemicals is a subsidiary of ANGUS Chemical Company, a wholly owned subsidiary of The Dow Chemical Company.™ Trademark of The Dow Chemical Company ["Dow"] or an affiliated company of Dow.





One step forward, NO steps back.

Improve your development processes with solutions from RICCA CHEMICAL COMPANY.

RICCA CHEMICAL COMPANY Product Offerings Include:

- Buffers
- Compendial Solutions
- Reagents
- Cleaning Solutions
- Acids
- Bases
- Standards
- Titrants
- Indicators



The Ricca Solutions Advantage:

- Save expenditures in manpower costs
- Free up personnel for productive activities
- Avoid hazardous operations and the need to handle/store hazardous chemicals
- Simplify purchasing
- Eliminate the need to purchase multiple raw materials to make one solution
- Reduce paperwork and overhead



Part numbers for products in the categories listed above are available online at www.vwr.com.

RIGHT • READY • RICCA



Production BioChemicals and Custom Manufacturing

AMRESCO is a leading manufacturer and supplier of high purity biochemicals and reagents, specializing in providing products and infrastructure support to growing companies in the Diagnostic, Molecular Diagnostic, Molecular Biology and BioPharm markets.

AMRESCO Product Categories

4,000 Different Biochemicals - Compendial Grades - Custom Testing - Standard & Custom Package Sizes

- | | |
|--------------|---------------|
| • Salts | • Detergents |
| • Buffers | • Antibiotics |
| • Sugars | • Amino Acids |
| • Chelators | • Substrates |
| • Phosphates | • Enzymes |

For more information, contact your VWR Production Specialist or call **800.932.5000**.

pure | precise | performance

PURE

Look to AMRESCO for high purity production biochemicals and reagents, as well as customized solutions for sensitive applications in the fields of diagnostics, molecular diagnostics, molecular biology, and biopharmaceutical.

PRECISE

AMRESCO meets industry demands for custom and specialized manufacturing, delivering quality, flexibility, and value through strategic partnerships.

- | | |
|---------------------------------|---------------------------------|
| • OEM and Custom Manufacturing | • Custom Packaging |
| • Quality System | • Precision Dosing & Processing |
| • Regulatory Expertise | • Label Control |
| • Liquid & Powder Manufacturing | |

PERFORMANCE

More and more companies are turning to AMRESCO for solutions to their challenges, including infrastructure support, risk mitigation, production capacity, and competitive pressures.

- | | |
|---------------------------|-----------------------|
| • Inventory Management | • Process Improvement |
| • Supply Chain Management | • Documentation |
| • Global Logistics | • Cost Improvement |

CONTEC® MOPPING SYSTEMS

More than 40 options for floors, walls, and ceilings

Over the past 20 years, Contec, Inc. has developed the most complete line of mopping and cleaning products for critical environments. Whether disinfecting or cleaning floors, walls, ceilings, or inside biosafety cabinets and isolators, Contec has more than 40 mops and cleaning tools that meet the demanding requirements of today's high-tech industries. Many are available validated sterile to a 10^{-6} SAL. For more sizes, options, and compatible hardware and bucket systems, visit vwr.com.

Description	Cat. No.	Case of
Edgeless® Mop Head	68300-353	20/ 556.89
Edgeless Mop Head, Sterile	68310-119	20/ 656.95
Textured Edgeless Mop Head	80080-578	30/ 942.71
Textured Edgeless Mop Head, Sterile	80080-582	30/ 1079.17
Long Textured Edgeless Mop Head	94002-784	20/ 523.86
VertiKlean® MAX™ Mop Head	89073-992	48/ 352.75
VertiKlean MAX Mop Head, Sterile	89073-994	48/ 600.73
VertiKlean® Large Mop Head	68310-139	32/ 384.73
VertiKlean Large Mop Head, Sterile	12777-966	32/ 647.80
Textured VertiKlean Medium Mop Head	33501-062	32/ 358.48
EasyCurve™ Mop Head	89073-988	48/ 459.61
EasyCurve Mop Head, Sterile	89073-990	48/ 729.07



VWR® Spec-Wipe® 3 and Spec-Wipe® 3e Wipers

- Hydroentangled blends produce durable wipers that pick up liquids quickly
- Low extractables and metallic ions are ideal for use where chemical purity is of prime importance
- Creped fabric provides extra softness and bulk

These nonwoven wipers are suitable for use in critical environments, for absorbing spills of water and most common solvents, and for tasks such as cleaning laminar flow benches. Spec-Wipe 3 wipers are made from a blend of 45% polyester and 55% cellulose fibers. Spec-Wipe 3e wipers are made from a creped fabric that is a blend of 46% polyester and 54% cellulose fibers.

W x L	Cat. No.	Pack of	Case of
Spec-Wipe 3 Wipers			
22.9 x 22.9 cm (9 x 9")	21914-758	300/ 38.28	6000/ 636.83
30.5 x 30.5 cm (12 x 12")	21912-042	150/ 39.88	3000/ 612.80
Spec-Wipe 3e Wipers			
22.9 x 22.9 cm (9 x 9")	89065-956	300/ 28.00	6000/ 398.10
30.5 x 30.5 cm (12 x 12")	89065-958	150/ 28.00	3000/ 398.10

For more information shop vwr.com or call 800.932.5000.



Do You Really Know the Mop You're Using?

Cleanroom Mops: Disposable vs. Reusable

by David P. Nobile, Senior Technical Service Engineer, Contec, Inc.

Production Supplies

With pharmaceutical and medical device customers demanding cost reductions, attention is often given to consumable products such as gloves, wipes, and mops that are used in their controlled environments every day and in large quantity.

Mop cleaning in these environments is critical: to clean and maintain the production environment at a level (of cleanliness, biologic control, sterility, etc.) which ensures the required product quality. Without such cleaning, producing the desired product would be impossible.

The task then is to reduce cost while maintaining the required environmental standards. Customers often look to their suppliers for savings, but are unaware of the consequences of some of these efforts. A good example of this is the consideration to use disposable mops versus laundered reusable mops for cleanroom cleaning.

Use of disposable mops is very straightforward: a new mop is used to clean a specified area (floors, walls, etc.), then downgraded (for use in less critical areas), or discarded outright after the primary use. The surface area cleaned per mop is determined by sampling of critical metrics, and validated if the area is sterile.

Laundering and reuse of mops can seem like a cost effective alternative to disposable mops. Laundering typically involves a contract with an industrial laundry company such as Aramark Services or Prudential Cleanroom. These companies already launder other items such as garments, smocks, and shop rags for the customer. The laundry may sell mops directly to the customer, or rent them at a negotiated rate. Each mop is barcoded with customer and mop identification to enable tracking and control through the laundering process (and sterilization if needed) in order to return the same mops back to the customer through repeated processing.

As with disposable mops, reusable mops require the same initial testing and validation to

ensure they meet the application and environment requirements. But there can be real concerns regarding long-term performance and risk that must be considered.

Since disposable mops are made from new materials, they provide very consistent and predictable performance and results. While disposable mop manufacturing and material variables surely exist, their sources are generally few and well understood. This is especially critical for sterile applications, as the use of virgin materials that are less likely to have been exposed to unknown or potentially variable conditions and contaminants simplifies and benefits the validation.

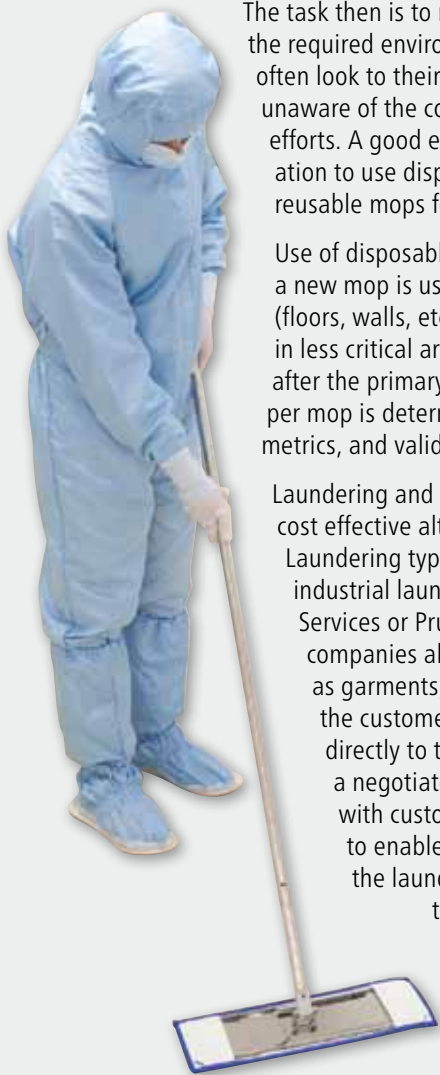
With laundered reusable mops, unless the customer is large enough to fill a washer with enough of their own mops, mops from multiple customers are processed together. While the laundry makes every attempt to sort mops into wash loads by application, customers' cleaning solutions, or by industry, there is no way for the laundry to fully know or control the conditions and contaminants to which mops from various customers have been exposed. In the case of non-sterile mops, they may even be processed in a less controlled industrial laundry process rather than a cleanroom laundry process, resulting in a wider range of potential cross-contamination sources.

Another important consideration is the quality of mops as received by the customer. With disposable mops, since each mop is newly manufactured, the mops used during evaluation and validation will be essentially the same as the mops used over many months. In the case of laundered reusable mops, the performance and quality of the mops will change over time due to the inevitable degradation of the reused mop.

During the evaluation of reusable mops, it is necessary to project the performance and quality over time in order to estimate the life cycle and related costs of the mops. Because conditions (surfaces, solutions, protocols, frequency, etc.) for each customer are different, these projections cannot be any more than "guesstimates" of actual mop performance and life.

As a result, the actual quality, contamination profile, and performance of reusable mops will deviate over time from what was evaluated and predicted. Such deviation can certainly result in unintended and potentially unacceptable risk to the customer's environment and processes. Understanding the real risk of using reusable mops can only be accomplished through repeated periodic revalidation.

So the decision whether to use disposable versus laundered reusable mops may boil down to a simple question: "Do you really know the mop you're using?"



TruCLEAN® Cleaning Systems, Sponge Mops, and Microfiber Mops, Perfex

TruCLEAN Cleaning Systems work to capture and isolate contaminants, ensuring the delivery of unadulterated cleaning and sanitizing agents. TruCLEAN components are constructed of high-grade stainless steel, are easy to maintain, and guaranteed to deliver reliable cleaning results time after time.

- Reduce the risk of cross-contamination
- 100% compatible with gamma, ETO autoclave sterilization
- Avoid run-off contaminants, common with steam-sterilizers

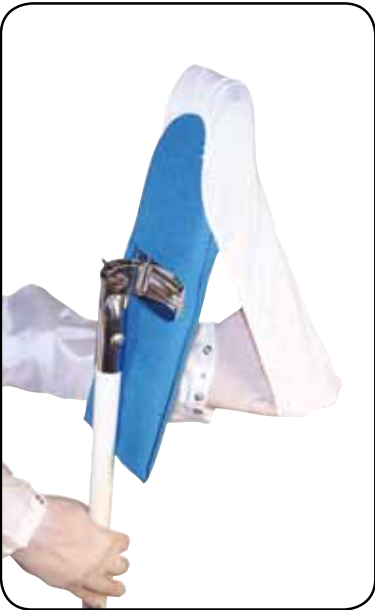
Color	Cat. No.	Each
TruCLEAN Triple Bucket Mopping System*		
Red	22940-012	1684.15
White	22940-015	1638.27
Blue	22940-014	1684.15
TruCLEAN II		
Red	89095-990	488.12
White	89095-994	488.12
Blue	89095-992	488.12

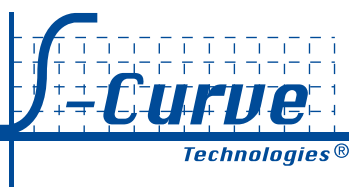
*Also available in green and yellow

Designed specifically for use in a cleanroom or sterile environment, TruCLEAN Sponge Mops and Microfiber Mops are ideal for applying disinfectants and sterilants. In today's cleaning industry the most environmentally friendly, non-chemical tool on the market is microfiber. Autoclave or launder for cleaning.

- Specially formulated polyurethane foam has excellent chemical and microbial resistance
- Microfiber mops can absorb up to seven times their weight in liquids
- Low particle generation; excellent surface coherence
- Can be reused up to 500 times

Description	Cat. No.	Each
TruCLEAN Clean Room Mop	89096-038	221.96
TruCLEAN Microfiber Mop	89096-040	134.23
TruCLEAN Anti-Microbial Mop	89096-036	174.80
TruCLEAN Sponge Mop	22940-023	392.15
TruCLEAN Mop Cover	22940-191	158.82





Dispensers for Controlled Environments

For Use in Cleanrooms, Laboratories, and Safety Applications

- Designed to protect the cleanroom supplies from contamination
- Provide "ease-of-access" for the cleanroom workers
- Maximize space utilization for supplies in the production gowning room
- Available with wall mount brackets

Cleanroom Dispensers for Every Need:

Apparel, Beard Covers, Booties, Bottles, Bouffants, Coveralls, Documents, Ear Plugs, Face Masks, Finger Cots, Frocks, Gloves, Hairnets, Safety Glasses, Shoe Covers, Smocks, Tissues, Wipers, and Custom designs for specific requirements.

Dispenser	Cat. No.	Each
Gloves, Three Compartments	14007-100	309.36
Gloves, Four Compartments	89140-762	317.01
Multiple Use, One Compartment	32948-830	196.53
Wipers, 9 x 9" Wipers	14007-110	109.19



14007-100



89140-762



32948-830



14007-110

VWR® Silicone Tubing

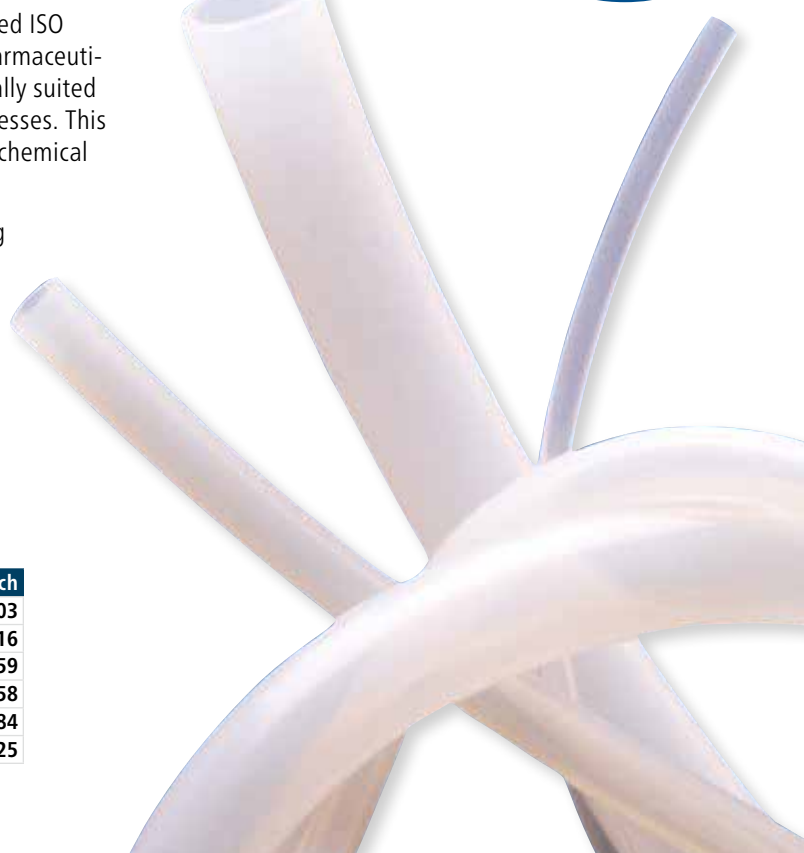
Low-volatile grade, platinum-cured silicone tubing is produced in a certified ISO Class 6 (FED-STD-209E Class 1000/M4.5) cleanroom for use in critical pharmaceutical, biomedical, laboratory, food, and cosmetic applications. It is also ideally suited for single use/disposable research and development and production processes. This extremely flexible tubing resists temperature extremes, compression set, chemical attack, ozone, radiation, moisture, and environmental exposure.

Tubing has undergone extensive physical, chemical, and biological testing and meets USP Class VI, FDA CFR 177.2600, ISO 10993, European Pharmacopoeia 3.1.9., and 3-A standards.

- Sterilizable/autoclavable
- Certified free of animal-derived ingredients
- Imparts no taste or odor to critical stream
- Translucent for visual contact with the flow
- Stocked in sizes from .012" through .625" I.D. in 50 ft. coils
- General temperature range: -73.3 to 204.4°C (-100 to 400°F)

I.D. x O.D., in.	Wall Thickness, in.	Cat. No.	Each
0.062 x 0.125	0.032	89068-468	72.03
0.188 x 0.375	0.094	89068-480	151.16
0.250 x 0.500	0.125	89068-484	273.59
0.375 x 0.563	0.094	89068-458	264.58
0.500 x 0.688	0.094	89068-460	307.84
0.625 x 0.875	0.125	89068-494	484.25

Shop vwr.com for more information and additional sizes.



Performance product for the cleanroom environment



Introducing **CapSure™** Technology
for the cleanroom wiper



The Cleanroom wiper that you can be **Sure** of

CapSure™ is a patent pending technology developed by Berkshire to enhance a cleanroom wiper’s ability to capture and retain contaminant particles

SUPERIOR CLEANLINESS

CapSure™ wipers have extremely low fibers and particles. Wipers release **80% fewer** airborne particles than competitive wipers.

EFFECTIVE

CapSure™ wipers capture **42x** more particles than competitive wipers

ASSURANCE

CapSure™ wipers retain 93% of contaminant particles, reducing the risk for recontamination.

Recommended Applications:

- Recommended for use in ISO Class 3-5 cleanroom environments
- Suitable for Semiconductor, Electronics, Medical Device, Pharmaceutical, and other Life Sciences

Name	Size	Cat. No.	Pack	Case of
CapSure™ -LP	9x9	89129-850	8/ 64.20	64/ 513.61
CapSure™ -LP	9x9	89129-852*	8/ 61.78	64/ 475.16
CapSure™ -LP	12x12	89129-854	14/ 64.90	196/ 908.59
CapSure™ -LP	12x12	89129-856*	14/ 63.06	196/ 848.66
CapSure™ -VP	9x9	89129-842	8/ 54.09	64/ 432.73
CapSure™ -VP	9x9	89129-844*	8/ 49.52	64/ 396.18
CapSure™ -VP	12x12	89129-846	14/ 56.82	196/ 764.85
CapSure™ -VP	12x2	89129-848*	14/ 49.74	196/ 696.40

*Bulk Packed

vwr.com
800.932.5000

Enhance your cleaning **PERFORMANCE** Try **CapSure™** Today

VWR® Bottle Tote™ Safety Carriers



- Designed for the safe transport of acids, alkalis, and solvents
- High in tensile strength, can be used in temperatures from -45 to 110°C (-49 to 230°F)
- Can be steam sterilized
- Centering ring in base assures a 2.54cm (1") clearance between bottle and wall of carrier
- Molded-in handle gives a comfortable grip
- Small carriers can accommodate

500mL (16.9oz.) or 1L (33.8oz.) bottles. Large carriers can accommodate 2.5L (84.5oz.) or 4L (135oz.) bottles.

Size	Diameter	Color	Cat. No.	Each
Small	11.4 cm (4½")	Red	56608-972	52.29
Small	11.4 cm (4½")	Black	56608-982	52.29
Large	19.1 cm (7½")	Red	56608-970	78.89
Large	19.1 cm (7½")	Black	56608-980	78.89
Large	19.1 cm (7½")	White	56608-975	78.89



VWR® Sterile 70% Isopropanol

- Contains 70% USP-grade Isopropanol
- Ready to use with a 3-year shelf life
- Evaporates and leaves extremely low residues
- Gamma-irradiated to a sterility assurance level (SAL) of 10⁻⁶ and 0.2µm filtered; meets the requirements for USP 797
- Select spray or jet option for a variety of applications

Each leak-proof bottle is induction sealed, capped, and shipped with an uninstalled trigger sprayer to eliminate the occurrence of leakage. Instructions for sterile installation of the trigger sprayer are available.



Description	Size	Cat. No.	Price
Trigger Spray Bottle	473 mL (16 oz.)	89108-160	Cs. 12/ 131.88
Bottle	3.8 L (1 gal.)	89108-162	Cs. 4/ 175.51

Shop vwr.com for more information.



SWABS FOR CRITICAL CLEANING



Lab-Tips®

Tip	Length, mm	Cat. No.	Pack of	Case of
Knitted 100% Polyester Swabs				
FLEX	70	89137-162*	100/ 11.48	2000/ 229.62
FLEX	162	89137-172*	100/ 26.19	1000/ 251.79
RIGID	70	89137-164	100/ 12.06	2000/ 231.51
RIGID	125	89137-176*	100/ 36.59	500/ 175.87
Open Cell Foam Swabs				
FLEX	70	89137-156*	100/ 10.97	2000/ 210.80
FLEX	162	89137-168*	100/ 16.31	1000/ 163.07
POINT	70	89137-160*	100/ 14.47	2000/ 278.37
RIGID	70	89137-158	100/ 10.67	2000/ 205.17
Closed Cell Foam Swabs				
RIGID	125	89137-174	100/ 25.03	500/ 120.35
Nonwoven 100% Polyester Swabs				
FLEX	70	89137-166	100/ 11.66	2000/ 224.17
FLEX	162	89137-170*	100/ 21.43	1000/ 206.05

*Multiple tip and handle length configurations available



Lab-Tips® Swabs are exceptionally pure for precision cleaning, surface sampling, and validation procedures.

Is Your Cleanroom Wiper A Hand Me Down?



Buy Vertex® Sterile Wipers.

Manufactured HandsFree™ for the lowest possible risk.

Cleanroom wipers look white but are they really clean?

Cleanroom wipers are made by hand, but people are the greatest source of contamination. A standard wiper adds great risk through introduction of dirt, particles and other unwanted intruders into your cleanroom.

Sterile Vertex, The Ultra-Clean Wiper.

Texwipe developed a patent-pending, fully-automated system to wash, cut and pack wipers without human hands. The robotic technology guides each wiper through its production and ensures consistency from wiper to wiper, bag to bag and lot to lot.

TWTX3042	Sterile Vertex High Sorption Dry Wiper 12" x 12" (30 cm x 30 cm)	511.94/ Cs 114.21/ Pk.
TWTX3049	Sterile Vertex High Sorption Dry Wiper 9" x 9" (23 cm x 23 cm)	321.31/ Cs. 71.68/ Pk.
TWTX3042P	Sterile Vertex High Sorption Prewet Wiper 12" x 12" (30 cm x 30 cm)	195.88/ Cs. 43.70/ Pk.

TWTX3049P	Sterile Vertex High Sorption Prewet Wiper 9" x 9" (23 cm x 23 cm)	144.59/ Cs. 32.26/ Pk.
TWTX3052	Sterile Vertex Microdenier Wiper 12" x 12" (30 cm x 30 cm)	1048.63/ Cs. 233.94/ Pk.
TWTX3059	Sterile Vertex Microdenier Wiper 9" x 9" (23 cm x 23 cm)	892.01/ Cs. 199.01/ Pk.



VWR® Glove Liners



- Ergonomically designed liners provide protection and comfort when used with latex, nitrile, and PVC gloves
- Made from 15 denier, low-ling nylon knit fabric
- Fully launderable for reusability and economy
- Color-coded cuffs indicate size
- Ambidextrous
- Packed in clean polyethylene bags that are free of silicone, dioctyl phthalate, and amides

Size	Cat. No.	Pack of 20	Case of 300
Full Finger Liners			
Small	94000-608	28.74	304.00
Medium	94000-610	28.74	304.00
Large	94000-612	28.74	304.00
X-Large	94000-614	28.74	304.00
Half Finger Liners			
Small	94000-616	30.31	320.63
Medium	94000-618	30.31	320.63
Large	94000-620	30.31	320.63
X-Large	94000-622	30.31	320.63



VWR® CHANGE NOTICE VERIFICATION SERVICE PROGRAM

Ask your local VWR Sales Representative how you can enroll in the program.

VWR® Critical Step® Multi-Layer Floor Mats

Adhesive-coated contamination control mats capture particulates from foot traffic and equipment wheels, preventing debris from hitchhiking into the cleanroom or controlled environment. Adhesive is non-transferable and contains a non-leeching, nontoxic antimicrobial agent that provides long-lasting protection against growth of mold, mildew, fungi, and algae. Numbered corner tabs ensure one-at-a-time sheet removal. Suitable for use in nuclear, pharmaceutical, food processing, hospital, electronics, agriculture, laser/optics, biotechnology, medical device, semiconductor, and defense applications. 30-layer mats are blue; 60-layer mats are white.

W x L, cm (in.)	Cat. No.	Case of
30-Layer Mats		
61 x 91.4 (24 x 36)	21924-856	8/ 262.84
63.5 x 114.3 (25 x 45)	18888-214	8/ 286.64
45.7 x 91.4 (18 x 36)	21924-110	8/ 203.89
45.7 x 116.8 (18 x 46)	21924-122	8/ 249.58
91.4 x 116.8 (36 x 46)	21924-210	8/ 408.34
60-Layer Mats		
61 x 91.4 (24 x 36)	21992-042	4/ 223.46
63.5 x 114.3 (25 x 45)	18888-200	4/ 246.84
45.7 x 91.4 (18 x 36)	21924-100	4/ 184.82
45.7 x 116.8 (18 x 46)	21924-112	4/ 226.38
91.4 x 116.8 (36 x 46)	21924-048	4/ 375.35

Shop vwr.com for additional sizes.



Innovative cleaning solutions for **EVERY** market

Description	Cat. No.	Each	Case of
Telescopic Handle with Color Coding	89066-060	34.83	10/ 266.12
UltraSpeed MicroPlus Microfiber Mop Pad	89134-274	17.46	25/ 434.34
UltraSpeed Frame	89132-758	94.82	10/ 759.92
UltraSpeed Double Bucket System with Chasis/Dolly and PushBar	89132-754	—	1/ 320.11
14" Aluminum Extendable Straight Roll-O-Matic Mop with color coding	94001-380	180.81	—
VWR Collection Roll-O-Matic 14" Mop Refills			
Blue Universal	89032-176	—	12/ 164.96
Polyester Laminated	89032-182	—	12/ 256.54
Microfiber Laminated	89032-184	—	12/ 266.59



For more info on our production facility cleaning products please visit VWR.com and search Freudenberg



VWR® Layflat Poly Bags on Rolls

- Manufactured using 100% renewable energy generated from sources like wind and solar power
- Fully recyclable, completely non-toxic, and yields no pre-consumer waste
- Engineered to provide three times the impact and twice the tensile strength of traditional LDPE bags
- Formulated to provide better performance at lower gauges so you'll feel confident using lighter weight bags
- Outstanding vapor and moisture barrier
- Manufactured under rigorous ISO 9001:2008 production processes that guarantee performance control and uniformity
- Thickness: 4 mil



Dimensions, W x L, cm (in.)	Cat. No.	Roll of
40.6 x 50.8 (16 x 20)	89072-300	500/ 158.47
45.7 x 61 (18 x 24)	89072-302	250/ 91.97
50.8 x 76.2 (20 x 30)	89072-304	250/ 127.16
61 x 91.4 (24 x 36)	89072-306	250/ 183.73
76.2 x 106.7 (30 x 42)	89072-308	125/ 135.18
91.4 x 121.9 (36 x 48)	89072-310	125/ 185.45

Shop vwr.com for additional sizes.

Sporicidin® Disinfectant Solution

- Intermediate level disinfectant featuring a broadspectrum kill that cleans, disinfects, and deodorizes
- Offers continuous bacteriostatic residual activity for up to 6 months
- Alcohol-free, compatible with plastics, treated wood, glass, and metals
- Non-staining, non-abrasive, and non-corrosive
- Provides users with a product safely rated in the lowest EPA toxicity
- Offers users the most neutral pH of any phenolic-based disinfectant
- FDA registered, OSHA compliant



Size	Cat. No.	Each	Case of 4
3.8 L (1 gal.)	89176-480	47.05	143.60



Thermo Scientific Nalgene PET Square Media Bottles

Lightweight Nalgene® PET Square Media Bottles with closure are shatter-resistant and provide excellent gas barrier properties for storage and shipping of liquid media, buffers, and sera. They feature molded-in graduations and neck ring for use with tamper evident shrink sleeves.

- PET with natural HDPE closure
- Space saving square design
- Molded in graduations and neck ring for use with tamper evident shrink sleeves
- Sterile, non-pyrogenic, non-cytotoxic
- Leakproof
- Excellent gas barrier, with transparency and reduced permeability to CO₂ and O₂
- Bottle and closure material are ADCF (Animal Derived Component Free)

**light, efficient
and space saving**

Thermo Scientific Nalgene PET Square Media Bottles with HDPE Closures, in Shrink-Wrapped Trays, Sterile

Capacity	O.D.	Ht. w/out closure	Qty/ Pk.	Qty/ Cs.	Cat. No.	Case of
125mL	52mm Square	104mm	24	96	73520-442	96/ 135.77
250mL	59mm Square	140mm	30	60	73521-216	60/ 142.62
500mL exp.	76mm Square	173mm	24	48	16010-102	48/ 130.69
1000mL	92mm Square	213mm	12	24	16010-104	24/ 116.38

Closure Size: 38-430mm

Neck ID: 28mm

Thermo
S C I E N T I F I C



YOUR COMPLIANCE SOLUTIONS



56609-970

SAFETY STORAGE CABINETS



56618-604

POLY ACID & CORROSIVE CABINETS



56609-936

LAB CANS



56609-970

POLY WASTE CANS

56610-175



EAGLE MANUFACTURING COMPANY

vwr.com



VWR® Cleanroom Office Supplies

VWR® Cleanroom Spiral Notebooks

- Semi-transparent high-density polyethylene covers
- Low-particle, 22lb. cleanroom paper
- Available with latex or latex-free paper; college rule or grid
- 50 sheets



VWR® Sheet Protectors

- Non-particulating pouch protects documents from harsh environments
- Three-hole punched for easy insertion into binders



VWR® Critical Print™ Sticky Notes

- Manufactured with 30lb. low-particulating paper
- 100 sheets/pad



VWR® Cleanroom Binders

- Constructed of white dissipative 0.75 gauge HDPE
- Transparent pockets on front and spine allow pages to be inserted for identification
- Available with plastic or metal rings



VWR® Critical Print™ Cleanroom Chart Recorder Paper

- For use with charting, measurement, or production equipment in a cleanroom environment
- Polyethylene core
- Roll length: 19.8m (65')



VWR® Critical Print™ Pens and Markers

- Very low sodium inks prevent sodium contamination
- Barrel and cap are made with HDPE
- Available in black, red, blue, or felt-tip marker



Shop **vwr.com** for product information or call **800.932.5000**





**VWR
Protection
Apparel
Coveralls**

The VWR Collection

High Quality.
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Micronova's Gel **Stainless Steel Cleaner** uses advanced no-drip technology to eliminate streaks and drips when applied to stainless, metal and other hard surfaces. The 'spray' gel clings on contact and glides over most surfaces with minimum effort. When dealing with rust, oxidation and residue build up, the gel can be applied into seams and crevices to pre-treat before wiping, making the cleaning process more labor efficient. Unlike traditional liquid cleaners, the gel is not atomized into ambient air and so will not impact indoor air quality. The no-drip gel contains no phosphorus and has biodegradable surfactants.

- **No-Drip Gel Formula**
- **Phosphorus-Free**
- **Biodegradable**
- **No VOC's**
- **Non-atomized**

Description	Cat. No.	Case of
Stainless Steel Cleaner	89208-418	12/ 167.35

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