

# DuPont™ Tyvek®

## The best balance of protection, durability and comfort

With Tyvek®, you don't have to compromise. That's because Tyvek® delivers the best balance of protection, durability and comfort. Made using a proprietary manufacturing process, Tyvek® features an inherent barrier. So, unlike other protective apparel fabrics, which have either a film or coating that can be easily scratched or worn away, Tyvek® provides barrier through the entire fabric. As a result, your protection is not compromised unless the fabric has been completely torn—which isn't easy to do because of the strength and durability of Tyvek®. Make sure you're getting Tyvek®. Ask for it by name.

### Barrier Protection You Can Trust, Durability That Isn't Easily Compromised

- Tyvek® is the industry standard for dry particulate barriers. Microscopic particles as small as 0.5 microns can't pass through Tyvek®—even after it's been abraded.
- Tyvek® is an inherent barrier—not easily scratched or worn away.

### Comfort You'd Never Expect

Standing still, your body radiates heat and moisture vapor. So, it's no surprise that working in protective apparel that can't breathe escalates the problem dramatically and can affect productivity. It's called heat stress. And, it can seriously compromise your safety, especially in hazardous environments.

- Tyvek® lets air and moisture vapor pass through.
- Tyvek® is anti-static treated.
- Tyvek® breathes. Breathability is a key factor in reducing heat stress.
- Tyvek® is six times more breathable than microporous film garment materials.
- Tyvek® SoftWear™ is even more comfortable and four times as breathable as traditional Tyvek®.
- Tyvek® SoftWear™ has a dramatically softer feel.

### Proven Performance and Quality

At DuPont Personal Protection, our goal is to combine scientific innovation with material, garment and manufacturing knowledge to create protective apparel that helps the people who wear PPE perform at their best. Both DuPont manufacturing facilities are certified to ISO 9001:1994.

### Garment Styles To Meet Your Needs

- Tyvek® is available in a wide variety of garment styles, such as coveralls, labcoats, smocks and aprons.
- Tyvek® SoftWear™ is available in four coverall styles.

### Wide Range of Applications

- General Maintenance Operations
- Construction & Agricultural
- Lead & Asbestos Abatement
- Environmental Clean-up
- Modesty Garments (Hospitals & Police)
- Environments where cross contamination is an issue
- Spray Painting
- Food Processing
- Mold Remediation
- Abrasive Blasting
- Forensics



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# Tyvek® and Tyvek® SoftWear™

## Physical Properties

PROPERTY	UNITS	TYVEK®	TYVEK® SOFTWEAR™
Basis Weight	oz/yd <sup>2</sup>	1.2	1.2
Thickness	mils	5.4	6.0
Tongue Tear, MD	lbf	2.2	2.2
Tongue Tear, CD	lbf	2.3	2.2
Strip Tensile, MD	lbf	7.9	7.9
Strip Tensile, CD	lbf	8.7	8.1
Mullen Burst	psi	50	55
Porosity	l/m <sup>2</sup> /min/mm H <sub>2</sub> O	3.0	18.6
Static-Log R	log ohms	<9.8	<9.8
Flammability	16 CFR 1610	Class 1	Class 1

### INDEX OF CODES:

< = less than

These results are measured using the latest ASTM test methods. Results will vary due to the changes in test methods. A true test of performance is in use.

This information is based upon technical data that DuPont believes to be reliable. It is subject to revision as additional knowledge and experience are gained. DuPont makes no guarantee of results and assumes no obligation or liability in connection with this information.

It is the user's responsibility to determine the level of toxicity and the proper personal protective equipment needed. The information set forth herein reflects laboratory performance of fabrics, not complete garments, under controlled conditions. It is intended for information use by persons having technical skill for evaluation under their specific end-use conditions, at their own discretion and risk.

Anyone intending to use this information should first verify that the garment selected is suitable for the intended use. In many cases, seams and closures have shorter breakthrough times and higher permeation rates than the fabric. Please contact the garment manufacturer for specific data. If fabric becomes torn, abraded or punctured, end user should discontinue use of garment to avoid potential exposure to chemical. SINCE CONDITIONS OF USE ARE OUTSIDE OUR CONTROL, WE MAKE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE AND ASSUME NO LIABILITY WHATSOEVER IN CONNECTION WITH ANY USE OF THIS INFORMATION.

This information is not intended as a license to operate under or a recommendation to infringe any patent or technical information of DuPont or others covering any material or its use.

### WARNINGS:

- 1) Tyvek® is not flame-resistant and should not be used around heat, flame, sparks or in potentially flammable or explosive environments.
- 2) Garments made of Tyvek® should have slip-resistant or antislip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.

### For more information:

Visit our website at:

[www.PersonalProtection.DuPont.com](http://www.PersonalProtection.DuPont.com)

### DuPont Personal Protection

**Fax-On-Demand Service at 1-800-558-9329**

DuPont manufactures a complete line of garments for personal protection.

For more information, call **1-800-931-3456**

# DuPont Personal Protection

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1. **How should Tyvek® garments be disposed of? May the garments be incinerated?**  
The recommended method of disposal is burial in a landfill in accordance with applicable local, state, national, EC and/or federal regulations. If a suit is known to be contaminated additional requirements may apply. Discarded suits should be mutilated to avoid re-use by unauthorized individuals.  
  
Tyvek® garments are certified incinerable by GTS Duratek. Tyvek® garments may be incinerated if not contaminated with chemicals, which would prevent incineration. Given the proper combustion conditions, incineration of Tyvek® will generate water vapor, carbon dioxide and a small amount of mineral ash residue. A mixture of smoke and fumes are emitted when burned. It is recommended that positive pressure, self-contained breathing apparatus be worn; extinguish with dry chemical, foam or carbon dioxide. [Go to top](#)
2. **Are Tyvek® garments anti-static or static dissipative?**  
Tyvek® garments are anti-static treated. [Go to top](#)
3. **Is it possible to wash Tyvek® garments?**  
Tyvek® garments are inexpensive and designed to be disposed of, thus DuPont does not recommend washing. [Go to top](#)
4. **Are Tyvek® garments flame resistant or flame retardant?**  
No, Tyvek® garments are not flame resistant or flame retardant and should not be used around heat, flame, sparks or potentially flammable environments. [Go to top](#)
5. **Can Tyvek® garments be used for welding applications?**  
No, Tyvek® garments should not be used for welding applications. Tyvek® garments are not flame resistant or flame retardant and should not be used around heat, flame, sparks or potentially flammable environments. [Go to top](#)
6. **How much chemical protection will Tyvek® garments provide?**  
Tyvek® garments are acceptable for situations involving dry hazardous particles and aerosols. [Go to top](#)
7. **Can Tyvek® garments be used in cleanrooms? If yes, how clean is it, and what class cleanrooms should it be used in?**  
Specially manufactured, processed and packaged IsoClean® and ProClean® garments made of DuPont Tyvek® and Pro/Shield® 2 are suitable for use in cleanrooms class 100 to class 100,000. [Go to top](#)
8. **May Tyvek® garments be gamma sterilized?**  
Yes, gamma sterilization is the preferred method of sterilizing garments made of Tyvek®. [Go to top](#)
9. **Will Tyvek® garments discolor in storage or before use?**  
Tyvek® garments may turn yellow after long-term exposure to oxidizing gases, such as nitrous oxide and exhaust from internal combustion engines. [Go to top](#)
10. **What is the shelf life of Tyvek® garments?**  
Tyvek® garments have a shelf life of at least 5 years based on hyperbaric oxidative degradation studies. High temperature, oxidizing gases, wet, cold, ultraviolet and ionizing radiation will significantly impact the long-term life of garments made of Tyvek®. [Go to top](#)
11. **How fluid repellent are Tyvek® garments?**  
Tyvek® garment material will resist water penetration up to 1.5 psi, and liquid penetration by blood at a similar level. Low surface tension liquids will penetrate at lower pressures. In light liquid splash and residual contact situations, consider NexGen® or Pro/Shield® 2 garments. These garments are made from a breathable, microporous film that is penetration resistant to many liquids, except at lower surface tensions. Chemical splash protection may require bound or taped seam garments made from non-porous chemical fabrics such as Tychem® or System CPF®. [Go to top](#)
12. **Are Tyvek® garments available in other colors?**

Tyvek® garments are available only in white. [Go to top](#)

13. **Have Tyvek® fabrics been tested for cytotoxicity (toxic effects on human cells)?**  
Tyvek® garment fabrics exhibit no cytotoxicity. [Go to top](#)
  
14. **How long may Tyvek® garments be used before discarding?**  
All Tyvek® garments are designed for limited-use; the actual use time will vary depending on work conditions and hazards present. [Go to top](#)
  
15. **Is an MSDS available for Tyvek® garments?**  
No. Tyvek® garments are considered to be "articles" and are therefore exempt from MSDS reporting requirements. DuPont does provide an MSDS for the Tyvek® material for information purposes. [Go to top](#)
  
16. **May Tyvek® garments be recycled?**  
Yes, non-contaminated garments used in cleanroom operations can be recycled for non-hazardous applications. Contact DuPont Protective Apparel Customer Service for additional information. [Go to top](#)
  
17. **Are Tyvek® boot covers skid-resistant?**  
Shoe and boot covers made of Tyvek® FC have a good coefficient of friction (COF) and are skid resistant. [Go to top](#)
  
18. **What is the particle holdout of Tyvek®?**  
Tyvek® garment materials demonstrates barrier against a wide range of particle challenges and sizes. Contact DuPont for specific documentation. [Go to top](#)
  
19. **Can Tyvek® garments be used for paint spraying applications?**  
Yes, testing on isocyanate spray paint systems show that Tyvek® can be used with isocyanate-based paints, under proper conditions. Garments made of Tyvek® are not appropriate in spray applications if they become soaked with overspray and back splatter. The well-designed spray booth should not result in excessive over-spray and back-splatter. Some two-part, isocyanate-based, spray paints contain hexamethylene diisocyanate (HMDI) and aliphatic isocyanate oligomers. In many isocyanate paint formations, there is less than 0.1% free HMDI present in the hardener component of the paint formulation which quickly reacts upon mixing with the other component. The aliphatic isocyanate oligomers have low vapor pressure and are present as an aerosol during spraying. Particle barrier testing demonstrates the barrier of Tyvek® to micron sized aerosols. If conditions during the spray operations do result in excessive wetting of the garment, then breathable film products, such as NexGen® or monolithic film products such Tychem® QC or CPF® 1 should be considered. [Go to top](#)