



Influenza A (H1N1) Virus

FREQUENTLY ASKED QUESTIONS

1. Do garments made from DuPont™ Tyvek® and DuPont™ Tychem® protect you from getting the influenza A (H1N1) virus?

By themselves, Tyvek® and Tychem® garments will not protect the wearer from the H1N1 virus. The lead federal and United Nations health agencies have issued recommendations for workers involved in veterinary surveillance, disinfection of buildings and equipment, laboratory handling of H1N1 virus specimens, and for caregivers and people in healthcare facilities. In certain circumstances, Tyvek® and Tychem® garments meet these recommendations for disposable apparel. There are some situations where Tyvek® and Tychem® garments would not be appropriate. Please refer to your local health department or other recognized health agency for further guidance.

2. Why are people wearing DuPont™ Tyvek® and DuPont™ Tychem® protective garments and footwear in areas with the H1N1 virus?

Protective clothing that is discarded after use can help reduce the opportunity for contamination of skin and clothing and helps reduce the migration of the infectious materials to non-contaminated areas.

3. What is currently being recommended to protect against the H1N1 virus and who is leading this effort?

Lead federal and United Nations agencies providing recommendations for the H1N1 virus response include WHO (<http://www.who.org>), CDC (<http://www.cdc.gov>), OSHA (<http://www.osha.gov>) OIE (<http://www.oie.int>) and FAO (<http://www.fao.gov>).

4. Do Tyvek® and Tychem® fabrics protect from viruses?

Tyvek® protective garment materials have resisted viral penetration from a synthetic body fluid at 2 kPa (0.3 psi). Seams, closures and garment design are also important in the barrier performance of the Tyvek® garment. Taped seams provide more barrier than sewn or bound seams. The barrier of a zipper closure can be improved with an over-flap. Similar testing of Tychem® fabrics shows that they are impervious to liquid-borne viral penetration at 13.4 kPa.

5. What testing has DuPont done regarding the ability of DuPont™ Tyvek® and DuPont™ Tychem® fabrics to protect against flu virus?

We are not aware of any protective clothing material that has been tested with flu virus, including Tyvek® or Tychem® materials. We have tested Tyvek® and Tychem® protective garment materials for resistance to viral penetration from virus-laden synthetic body fluids and against particles.

6. Do you plan to test DuPont™ Tyvek® and DuPont™ Tychem® garments and fabric against flu virus?

We will follow the lead of federal and United Nations organizations, such as CDC and WHO, in determining the priorities in testing the characteristics of H1N1 virus. If the CDC and WHO ask for our help in testing Tyvek® and Tychem® materials, we will provide technical assistance to the best of our capabilities.

7. When is DuPont™ Tyvek® not appropriate?

When exposure to moderate-to-large volumes of body fluids, liquefied excrement, pooled body fluids or disinfectant solutions is expected, taped-seam protective garments made of DuPont™ Tychem® fabrics, which are liquid impervious materials, should be considered or procedures should be used to reduce the risk of liquid contact. We are not aware of any protective clothing material that has been tested with the flu virus, including Tyvek® or Tychem® material. Tychem® garments are not appropriate for all situations. The overall liquid barrier performance of a Tychem® garment also depends on the design of the garment, the seam construction and closures.

8. How can someone find out if their protective garment meets guidelines?

Not all protective clothing is adequate to prevent the spread of the H1N1 virus. Each situation should be assessed by a person trained in the selection and use of protective clothing and equipment. Confirm the suitability of their garments for your particular intended use with the garment manufacturer, such as DuPont Personal Protection. Do not select a garment based solely on its color. Make sure the garment contains the right materials for your intended use.

9. What type of PPE should I wear if I am caring for a family member with H1N1 virus as a patient in my home?

The CDC provides guidance documents for home care of potential or confirmed H1N1 patients on their website at <http://www.pandemicflu.gov>.

10. Are there enough DuPont™ Tyvek® and DuPont™ Tychem® garments available to meet world demand? What is DuPont doing to make more garments available quickly?

DuPont is monitoring the supply situation and adjusting inventories to meet expected demand.

11. What is DuPont doing to help with this health crisis?

DuPont is working to meet global demand for products, working to understand the appropriate use of our products and preparing information to help users make informed decisions about what protection is appropriate to their needs, in conjunction with the guidance provided by lead federal and United Nations agencies.

12. What causes flu?

Flu can be caused by several types of influenza virus, each with unique symptoms, species impact and severity. The current outbreak is associated with the H1N1 serotype of Type A influenza virus. For more information on the H1N1 virus, consult the CDC (www.cdc.gov) and WHO (www.who.org) websites.

13. To be used for protection against the H1N1 virus, must the garment material pass ASTM F 1671?

No, according to 19 CFR 1910.1030, the OSHA Bloodborne Pathogens Regulation, the material is considered adequate if it prevents contamination of the skin and the garment worn underneath under conditions of normal wear and use. In some cases, a material that passes ASTM F 1671 may not provide adequate protection against viral challenges. When evaluating garments for protection against any chemical or biological hazard, you should evaluate the garment design and seam construction, as well as the fabric.

14. How do we know that DuPont™ Tyvek® garments will protect from flu virus?

Not all protective clothing is adequate to prevent the spread of flu. Each situation should be assessed by a person trained in the selection and use of protective clothing and equipment. Confirm the suitability of their garments for your particular intended use with the garment manufacturer. Do not select a garment based solely on its color. Make sure the garment contains the right materials for your intended use.

We will continue to monitor the recommendations issued by the lead federal and United Nations agencies regarding infection control procedures and update our information accordingly. Protective garments can help prevent the contamination of workers' clothes and can help prevent the migration of the infectious materials to uncontaminated locations.

15. Are DuPont™ Tyvek® or DuPont™ Tychem® garments approved as medical devices in the U.S.?

No.

16. Has the CDC issued guidelines for protection from the H1N1 virus?

Yes, consult the CDC website at <http://www.CDC.gov>.

17. What are CDC, WHO, FAO, OIE, OSHA and USDA?

CDC is the Centers for Disease Control and Prevention, a part of the United States Department of Health and Human Services responsible for the understanding and control of public health issues in the United States. WHO is the World Health Organization, an agency of the United Nations responsible for world-wide public health understanding and control. FAO is the animal health arm of the United Nations. The OIE is the intergovernmental organization responsible for improving animal health worldwide. OSHA is the Occupational Safety and Health Administration within the U.S. Labor Department while USDA is the U.S. Department of Agriculture.

18. Why is this H1N1 virus outbreak so serious?

Health experts are concerned with this H1N1 virus outbreak because of 1) the difficulty in controlling the spread of this virus and, 2) the lack of acquired resistance to this virus. The longer the H1N1 virus circulates in the human and animal populations, the more likely it will mutate into a form that may be more deadly that will spread easily from human to human. Since humans have little immunity to this virus, person to person transmission could lead to a global influenza pandemic. No one can predict when a pandemic might occur. Experts from around the world are watching the H1N1 situation in North America very closely.

19. Why does DuPont base their recommendation on the guidelines issued by the WHO, CDC, FAO, OIE, OSHA and USDA?

These are credible bodies chartered by the federal and international governments that are assigned the responsibility for understanding major public health issues and recommending control measures.

20. Does DuPont have products for disinfection of farm equipment and buildings?

Consult the DuPont Animal Health Solutions website at <http://www.antecint.co.uk/go.htm> for information on products and procedures for the disinfection of farm equipment and buildings.

21. Does DuPont have products for hand hygiene?

For more information on DuPont™ RelyOn® disinfectant and antiseptic products, visit <http://www.relyon.dupont.com>.

22. What specific styles of DuPont™ Tyvek® and Tychem® garments are appropriate for response to the H1N1 virus?

If probability of abrasion exists, Tyvek® flashspun polyolefin is available. If risk of abrasion is minimal, ProShield® NexGen® and ProClean® are microporous film-based product offerings that are available as options. Tychem® fabrics are appropriate where a higher level of particle, liquid or aerosol barrier is required. When selecting protective apparel, you must consider the potential hazardous exposure associated with the work activity.

| Coveralls | | |
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| Fabric | Style | Description |
| Tyvek® | TY120S | Serged seam white Tyvek® coverall with a zipper front, open wrists and ankles |
| | TY125S | Serged seam white Tyvek® coverall with a zipper front, elastic wrists and ankles |
| | TY127S | Serged seam white Tyvek® coverall with a zipper front, elastic wrists and ankles and attached hood |
| Tyvek® IsoClean™ | IC180S | Serged seam white Tyvek® coverall with a zipper front, elastic wrists and ankles, attached hood |
| | IC181S | Serged seam white Tyvek® coverall with a zipper front, elastic wrists and ankles, bound neck and raglan sleeves |
| | IC258S | Serged seam white Tyvek® coverall with a zipper front, elastic wrists and ankles |
| ProShield® NexGen® | NG120S | Serged seam white coverall with a zipper front, open wrists and ankles |
| | NG125S | Serged seam white coverall with a zipper front, elastic wrists and ankles |
| | NG127S | Serged seam white coverall with a zipper front, elastic wrists and ankles and attached hood |
| ProClean® | PC143S | Serged seam white coverall, bound neck, front zipper closure, tunnelized elastic wrists, ankles and waist |
| Tychem® QC | QC120B | Bound seam yellow coverall with a zipper front, open wrists and ankles |
| | QC125T | Taped seam yellow coverall with a zipper front elastic wrists and ankles |
| | QC127T | Taped seam yellow coverall with a zipper front elastic wrists and ankles and attached hood |
| Aprons | | |
| Tychem® QC | QC273B | Bib apron with bound neck and ties, 36" long |
| | QC275B | Full coverage apron with attached elastic wrist sleeves, bound seams, bound neck snap, waist ties |
| Tychem® SL | SL274B | Bib apron with bound neck and ties, 36" long |
| | SL275B | Full coverage apron with attached elastic wrist sleeves, bound seams, bound neck snap, waist ties |
| Shoe and Boot Covers (with reinforced soles) | | |
| Tyvek® IsoClean™ | IC444S | Tyvek® boot cover, bound seams, PVC sole, tunnelized elastic tops, elastic ankles, 20" high |
| | IC446S | Tyvek® boot cover with Gripper™ sole, ties at ankle, 18" high |
| ProShield® NexGen® | NG444S 2V | Boot cover, bound seams, PVC sole, elastic tops, 17" high |
| | NG440S | Shoe cover, low top, bound seams, PVC sole, elastic tops, 6" high |
| ProClean® | PC444S | Boot cover with serged seams, PVC sole, tunnelized elastic tops, elastic ankles, 20" high |

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, trademark or technical information of DuPont or others covering any material or its use.

WARNINGS: 1) Tyvek® and Tychem® garments, except for Tychem® ThermoPro, are not flame-resistant and should not be used around heat, flame, sparks or in potentially flammable or explosive environments. 2) Footwear worn with garments made of Tyvek® or Tychem® fabrics should have slip-resistant or anti-slip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.



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