Protective Clothing for Avian Flu

DUPONT Tyvek | Tychem

What is Avian Flu?

Avian Influenza (AI) or the bird flu is a virus that infects wild birds (such as ducks, gulls, and shorebirds) and domestic poultry (such as chickens, turkeys, ducks, and geese). Influenza A viruses are subdivided into subtypes. These subtypes are differentiated by variations in two viral surface proteins, hemagglutinin (H) and neuraminidase (N). There are 16 different H proteins and 9 N proteins that have been identified. There are a total of 144 different subtypes that can be designated by numbering particular combinations of these proteins (such as H5N1, H7N9, etc.).

In addition to subtypes, these avian flu strains can be divided into two groups based on the ability of the virus to produce disease in poultry. These groups are known as low-pathogenicity avian influenza (LPAI) and high-pathogenicity avian influenza (HPAI). LPAI occurs naturally in wild birds and can spread to domestic birds. In most cases, it causes no signs of infection or minor symptoms in birds. HPAI spreads more rapidly than LPAI and has a higher death rate in birds. HPAI is often fatal in chickens and turkeys.

How is Avian Influenza spread?

Avian influenza in humans is rare. The most common route of infection is via direct or indirect contact with nasal, oral or fecal secretions from infected poultry. LPAI or "low-pathogenicity" avian influenza poses little threat to human health. HPAI or "high pathogenicity" avian influenza can spread from birds to humans as a result of extensive direct contact with infected birds. HPAI causes the most public health concerns due to the potential for the HPAI virus to mutate into a form that could spread from human-to-human.

Who needs to be protected?

Authorities provide guidance on protection of individuals engaging in activities involving high contact with poultry or wild birds that have been confirmed or highly suspected of being infected with avian flu. (Avian influenza (bird flu) - GOV.UK - About Avian Influenza (AI) - europa.eu)

These high contact activities include:

- Handling birds
- Collecting birds
- Transporting birds
- Culling and Disposal of birds
- Cleaning and Disinfection of contaminated areas

All individuals involved with these activities should:

1. Be registered with the animal health authority (or by the public health authority in collaboration with the animal health authority).
2. Wear appropriate personal protective equipment (PPE) including protective clothing, heavy gloves and boots, goggles, and masks, and receive adequate training on putting on, taking off, and hygienic disposal/disinfection of PPE.
3. Maintain diligence in personal hygiene, including frequent hand washing.
4. Receive adequate instruction on disinfection/disposal of potentially contaminated personal clothing and other personal articles.
5. Be monitored twice daily for fever (>38 °C) and influenzalike illness (ILI)[1] for 7 days after the last day of contact with poultry/contaminated environments. Any person experiencing fever or ILI should immediately report to health authorities for diagnostic testing and appropriate treatment[2].

In case of a breach of PPE or in situations where full and appropriate personal protection was impossible, individuals might consider:

6. Commencing a course of prophylactic oseltamivir (75 mg once per day) on the date of first exposure, to be terminated 10 days after the last exposure. In this case, ongoing monitoring should include monitoring for adverse effects of chemoprophylaxis.

When possible, vaccination with seasonal influenza vaccine should be considered.

NOTE: such vaccination is not intended to protect against infection with avian H5 virus, but only to minimize other ILIs in exposed persons and facilitate identification of possible H5 infections.

Personal protective equipment (PPE) for controlling animal diseases

Suitable personal protective equipment (PPE) is accordingly required for the above activities in order to

- prevent the disease from spreading into previously uninfected areas and
- protect the personnel carrying out cleaning and disinfection from contact with the chemicals used for this purpose.

Such PPE includes chemical protective garments which must provide a barrier to infective agents and to chemical splashes under pressure.

DuPont Personal Protection can supply different models from the three product families, Tychem® 2000 C, Tychem® 6000 F, Tyvek® 600 Plus and Tyvek® 800 J, which are particularly suitable for such applications. They meet the requirements for the norm EN 14126 (Protective clothing. Performance requirements and test methods for protective clothing against infective agents). They also provide protection against chemicals which are frequently used for disinfection.

1 Abrupt onset of fever and upper respiratory symptoms such as sore throat, cough, sneezing, and/or nasal discharge. 2 WHO Clinical management of human infection with avian influenza A (H5N1) virus

Tychem® 2000 C

Tychem® 2000 C coveralls consist of a laminate made from tried and trusted DuPont™ Tyvek® protective material and a polymer coating.

- Very high barrier to infective agents according to EN 14126
- Certified as type 3-B, 4-B, 5-B and 6-B chemical protective clothing
- High barrier to numerous inorganic chemicals (even under pressure)
- Protection against disinfectants

Three-part hood

Wrist closures with elastic

Elastics at ankle closures

Also available with socks

Category III

TYPE 6-B

TYPE 3-B

EN 1149-5

TYPE 4-B

EN 1073-2

TYPE 5-B

EN 14126

Tychem® 6000 F

Tychem® 6000 F coveralls consist of a robust Tyvek® substrate, onto which a proprietary barrier film is laminated.

- Very high barrier to infective agents according to EN 14126
- Certified as type 3-B, 4-B, 5-B and 6-B chemical protective clothing
- Very high barrier to permeation by numerous organic and highly concentrated inorganic chemicals (even under pressure)
- Protection against highly toxic disinfectants

Self-adhesive chin and zipper flap

Thumb loops

Also available with socks

Category III

TYPE 6-B

TYPE 3-B

EN 1149-5

TYPE 4-B

EN 1073-2

TYPE 5-B

EN 14126

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For further assistance in garment selection, contact us.

Tyvek® 800 J

Breathable Type 3 garment for protection against water-based inorganic chemicals under pressure.

- An effective barrier against many low-concentration, water-based inorganic chemicals (even under pressure), small-sized hazardous particles as well as oil repellent.
- Bright, over-taped seams aid wearer identification.
- Soft and lightweight fabric that is permeable to both air and water vapour.
- Ergonomic fit consistent with the shape and movement of the user.

Self-adhesive chin flap

Elasticated waist

Thumb loops

Category III

TYPE 3-B

TYPE 4-B

TYPE 5-B

TYPE 6-B

EN 1149-5

EN 1073-2 Class 2

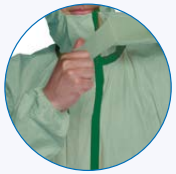
EN 14126

Tyvek® 600 Plus

For routine inspection of sheds and yards and for light cleaning work, DuPont can offer the Tyvek® 600 Plus type 4-B, 5-B and 6-B coverall.

- Protection against infective agents according to EN 14126
- Certified as type 4-B, 5-B and 6-B chemical protective clothing
- Protection against aqueous chemicals and spray mist
- Light-weight, permeable to air and to water vapour

Tychem® 2000 C and Tychem® 6000 F accessories are the ideal complement to enhance protection for parts of the body subject to particularly high levels of exposure. Gowns, aprons, sleeves and overboots are available.



Self-adhesive zipper and chin flap

Elasticated waist

Thumb loops

Category III

TYPE 4-B

TYPE 5-B

TYPE 6-B

EN 1149-5

EN 1073-2 Class 2

EN 14126

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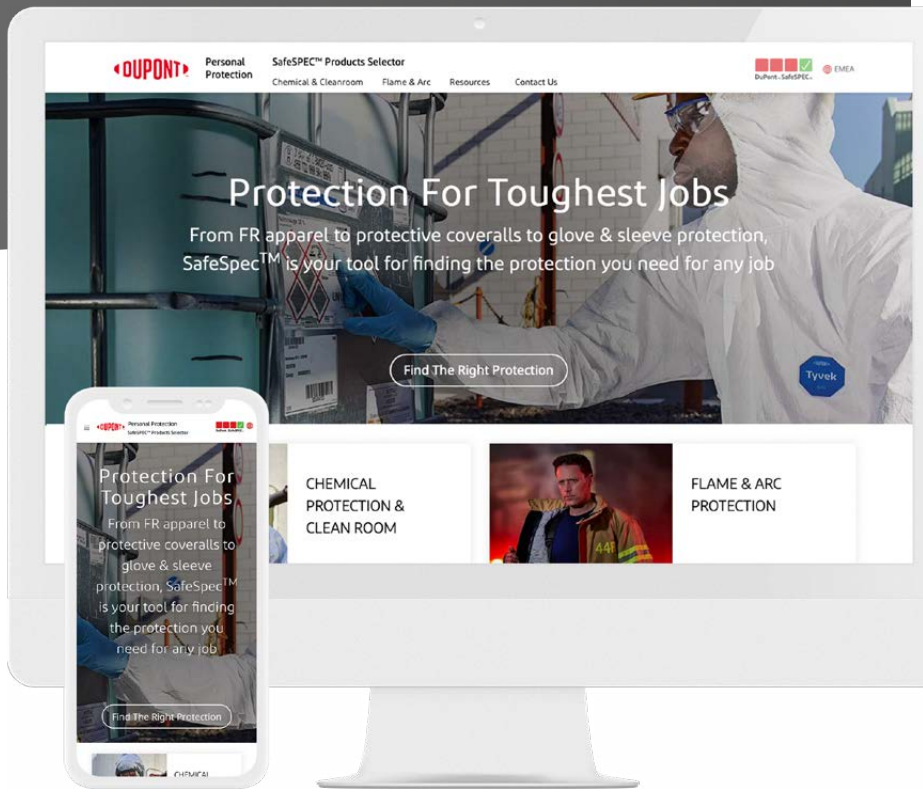

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