DuPont™ Animal Health Solutions
DuPont Personal Protection

Avian Influenza Biosecurity Personal Protective Equipment

The use of Personal Protective Equipment has three objectives:

- **to prevent the spread of the disease into non-contaminated areas**
- **to avoid contamination and infection of workers or visitors in infected areas**
- **to address health & safety issues in the application of cleaning and disinfectant chemicals.**

The choice of clothing will be dependent upon the type of work.

Tyvek® Classic Plus
model CHA5

Routine inspection of poultry

During routine inspection of poultry it is important to protect workers and visitors from dust – as this may be carrying virus particles. Many overalls may allow dust to enter, particularly through the seams which are clearly inappropriate. Particle-tight garments, including particle-tight seams and closures, are recommended.
Tyvek® Classic Plus fabric has a tightness level for particles down to 1 µm diameter. In combination with sealed seams and the option to seal the zipper area – Tyvek® Classic Plus garments with taped seams represent an optimised solution for such cases, if no wet decontamination is required. Tyvek® Classic Plus fabric has also shown an adequate barrier against infected particles according to ISO/DIS 22612.

Tychem® C
model CHA5

Tychem® C
model CHA6
(model with socks)

Virkon® S
disinfectant

Contact with faecal material

Should there be a risk of faecal contact, or other potentially contaminated liquid under low pressure, then an impermeable apron, for example made from Tychem® C, should be worn over a Tyvek® Classic Plus suit to provide additional protection.

If there is a risk of contact with potentially infected faeces or body fluids at high pressure then liquid impervious garments are recommended. These suits should also be worn when applying cleaning and disinfecting chemicals. These garments should have liquid tight seams and closures which are liquid tight during the entire working time. Tychem® C garments represent an excellent solution since they have passed a 2-bar-liquid pressure test being tight for the fabric, seams and closures.

Tychem® C fabric passed all relevant bio-barrier tests, according to standard EN 14126, at the highest performance levels. This includes the barrier against viruses according to ISO/DIS 16604.

Tychem® F
model CHA5

Tychem® F
model CHA6
(model with socks)

Disinfection of Contaminated Garments

It is good biosecurity practice to disinfect garments after use – and indeed many countries have set special regulations following garment use. These include the wet-decontamination of a whole suit to reduce the spread of avian influenza viruses and to protect the wearer of garments against any type of cross-contamination. Virkon® S is an ideal disinfectant for decontamination.

For wet decontamination the combination of Tychem® C suits with Virkon® S provides an excellent solution. To protect the user, the Tychem® C suit has impervious fabrics, seams and closures to the applied disinfectant as well as a chemical barrier. Virkon® S is highly effective against the Avian Influenza virus, yet has an excellent safety profile.

Other disinfectants which may have a high toxic potential may pass through garment fabrics on a molecular level (permeation). In such cases the garment fabric barrier requires also a barrier against these disinfectants. For such cases, Tychem® F is recommended as an optimal solution. Tychem® C and Tychem® F have both passed the relevant bio-barrier tests according to EN 14126 at the highest performance levels. Depending on the required chemical barrier, both garments may be used to protect wearers in an efficient manner.

Summary

Task	Recommended personal protection
Routine inspection of poultry.	Tyvek® Classic Plus garment with taped seams.
Routine inspection of poultry with risk of contact with faecal matter, or other infected material, at low pressure.	Tyvek® Classic Plus garment with taped seams plus Tychem® C apron.
Potential for high pressure contact with faeces, or other infected material, including application of cleaning and disinfectant chemicals.	Tychem® C – if Virkon® S used. Tychem® F – if more toxic disinfectants used.

Complete biosecurity solutions

DuPont™ Animal Health Solutions (DAHS) provides a comprehensive range of customised biosecurity processes and products to deliver a total preventative hygiene approach, with the aim of reducing or eliminating environmental disease challenges at source.

DAHS' complete offering includes microbial mapping, a process employed to identify and show the impact of microbial ecology in a particular environment. Also available are customised biosecurity prevention and decontamination programmes applicable to emergency disease control and farm to fork livestock production. DAHS offers a broad range of specialized cleaning and disinfection products including chlorine dioxide technology, for water sanitization and DuPont™ Tyvek® personal protective equipment for use in product application and farm decontamination situations. Visit the DAHS website www.ahs.dupont.com for further information on specific products and services.

Disclaimer
This information is based upon technical data that DuPont believes to be reliable. It is subject to revision as additional knowledge and experience becomes available. DuPont does not guarantee 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. This information is intended for use by per-sons having the technical expertise to undertake evaluation under their own specific end-use conditions, at their own discretion and risk. Anyone intending to use this information should first check that the garment selected is suitable for the intended use.
The end-user should discontinue use of garment if fabric becomes torn, worn or punctured, to avoid potential chemical exposure. Since conditions of use are beyond our control, we make no warranties, expressed or implied, including but not limited to warranties of merchantability or fitness for a particular purpose and assume no liability in connection with any use of this information. This information is not intended as a licence to operate under or a recommendation to infringe any patent or technical information of DuPont or other persons covering any material or its use.

For further information on Virkon®, please contact:
DuPont Animal Health Solutions
Windham Road, Chilton Industrial Estate,
SUDBURY, Suffolk, CO10 2XD

Tel: +44 (0) 1787 377305
Fax: +44 (0) 1787 310846

E-mail: biosecurity@gbr.dupont.com
www.ahs.dupont.com

For further information on Tyvek® and Tychem® please contact:
DuPont Personal Protection
Tel: 00800 3666 6666 (toll free number)
E-mail: personal.protection@lux.dupont.com

www.dpp-europe.com

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