# DuPont Personal Protection



#### This information packet may not be removed except by the end user K-17399 Rev 3/08

# Technical Data Package

DuPont<sup>™</sup> Tychem<sup>®</sup> BR & Tychem<sup>®</sup> LV

BR611T & LV611T

## Compliant with Class 2 of NFPA 1994, 2007 Edition

Consult the DuPont™ Tychem® User Manual for Instructions on Use

**Revised March 2008** 



The miracles of science™

## **Technical Data Package**

## DuPont<sup>™</sup> Tychem<sup>®</sup> BR611T & LV611T Ensembles Compliant with Class 2 of NFPA 1994, 2007 Edition

### Consult the Tychem® User Manual for Instructions on Use

NOTE: Tychem<sup>®</sup> BR611T and Tychem<sup>®</sup> LV611T garments are not a replacement for Level A garments. They do not provide the same high level of liquid-splash and chemical-vapor protection obtained with Level A garments.

## Donning and Doffing the BR611T and LV611T Ensembles

Have a second person assist you in donning (putting on) or doffing (taking off) the BR611T or LV611T ensembles. You and your assistant must read, understand and follow these instructions.

Before you attempt to use this garment you must be familiar with the operation of this ensemble. Read and understand the following:

- these Donning and Doffing Instructions
- this Technical Data Package
- the DuPont<sup>™</sup> Tychem<sup>®</sup> User Manual which accompanies this garment
- the garment label
- the documentation that accompanies your respirator

Be familiar with the operation and use of:

• your respirator

- the flexible respirator seal on this garment
- the gloves
- the boots
- the garment label

If you are donning this garment outdoors, use a ground cloth to avoid damaging your garment. Use a stable chair, bench or stool which is free of sharp edges.

#### Donning

1. Remove all jewelry and personal items (pens, key rings, badges, pagers, radios, knife cases, etc.) that might damage the garment.

2. Check function of your respirator and place it within reach.

4. Conduct a visual inspection of the

3. Visually check size and condition of outer boots and place them nearby.



- garment must be free of discoloration or physical damage
- garment must not smell.

- Do not use a garment that has been damaged, altered or contaminated.
- inner gloves must be fully inserted into outer gloves
- flexible facepiece seal must be free of distortion or physical damage

5. Remove your shoes. The garment has socks. These socks are worn inside additional outer chemical boots. These socks do not have adequate durability or slip resistance to be worn as the outer footwear covering.

6, Open garment closure completely. Pull the hook-and-loop tape apart, unzip zipper.



7. Sit in a chair and with the aid of your assistant place your feet into the suit and down into socks. Stretch out your legs to maximum extension while pulling garment up around hips.



8. Pull your boot flaps up on each leg.



9. Put your outer boots on each foot and pull boot flaps down over outer boots



10. Don your respirator facepiece according to the respirator manufacture's instructions



11. Stand and place arms into sleeves making sure fingers fit into gloves.



12. Pull upper portion of coverall over head.



13. Tilt your head up to assist in proper placement of outer and inner facepiece seals. Have your assistant position the flexible face seal around the respirator facepiece, starting with the chin,



- Continue placing the seal around the face moving towards forehead. Make sure the edge of outer flexible facepiece seal is flush with the facepiece, makes a continuous seal around the facepiece and is as close to the lens frame as possible.



14. Once outer facepiece seal is in place have your assistant go behind you and reach through the opening of the suit to make sure that the inner elastic opening is placed on the facepiece surround.



15. Pull zipper from bottom to top to close. Hold zipper together to zip close.



16. Place inner flap over zipper.

17. Have your assistant complete the fastening of storm flaps while you bend

forward at the waist with back and arms hanging downward.



18. Squat down and cross arms to remove excess air from the suit.



19. Don your SCBA harness per manufacturing's instructions.



20. Have your assistant recheck the flexible facepiece seal.



#### DOFFING

Have a second person assist you in doffing (taking off) the BR611T or LV611T ensembles. You and your assistant must read, understand and follow these instructions.

If your garment has been contaminated or is suspected of being contaminated, then

- you must first undergo field decontamination.
- continue to use your respirator until the garment has been doffed and removed.
- your assistant must wear protective clothing and respiratory equipment.

1. Have your assistant help you remove the SCBA backpack without disconnecting the regulator from the facepiece. The tank must be held by wearer or placed in a dry, secure position. Wearer must always hold facepiece in place during doffing.



2. Have your assistant wipe any excess liquid from the surface of your garment before opening the suit.

3. While you stand, have your assistant open the hook-and-loop closure of your garment and pull third storm flap away from zipper. Wipe away liquid from the flaps as they are opened.

4. Once all the flaps are opened and excess liquid removed, then unzip the zipper from top to bottom.



5. Have your assistant pull the unzipped opening around wearers shoulder toward wearer's sides.

6. Tilt your head down and place at least one hand in the center of your facepiece to hold it in place while removing the hood of the garment. Have your assistant stand in front of you in order to peel the hood over your head from back to front, turning it partially inside out.



7. Have your assistant use one hand to help you retain the seal of your respirator to your face while pulling the hood of the garment away from your facepiece.



8. Have your assistant continue to peel the garment away from your shoulders and torso by turning the garment partially inside out.

9. Have your assistant hold the wrists of you garments while you remove your hands from the gloves.



10. After your assistant has lowered the garment below your waist sit down.



11. Have your assistant remove the outer boots. If these boots are contaminated, they move them a safe distance away from you.



12. Have the assistant pull the suit off of your legs.

13. Have your assistant move the suit and SCBA harness to a safe distance away from you immediately after you disconnect your regulator from your facepiece,

14. Finally, remove your respirator facepiece.

#### Accessories

Accessories and pass through options are listed in an attached document, " $DuPont^{TM}$  *Tychem*<sup>®</sup> Accessories List".

#### <u>Sizes</u>

These NFPA 1994, Class 2 compliant DuPont<sup>™</sup> Tychem<sup>®</sup> BR611T & Tychem<sup>®</sup> LV611T Ensembles are available in the following sizes: S, M, L, XL, 2XL and 3XL. The non-encapsulating garment sizing chart found in the Tychem<sup>®</sup> User Manual applies to these garments.

#### **Components**

The chemical barrier garment element of the NFPA 1994, Class 2 compliant Tychem<sup>®</sup> BR611T & Tychem<sup>®</sup> LV611T ensembles are made from a proprietary multi-layer chemical barrier fabric. The chemical garment seams are sewn with a serge stitch with cotton/polyester thread and sealed with hotair welded chemical barrier tape outside.

There is no visor. The diaphragm around the facepiece opening consists of butyl rubber attached to a CPE gasket which in turn, is sealed to the hood of the garment.

The glove configuration consists of:

- Inner Glove: Ansell Barrier® Style 2-1

- Outer Glove: Guardian #IN 35 Neoprene

These gloves are unlined and have no surface treatments. Gloves are available in five size combinations to fit hands from less than 9 inches to 11 inches in circumference. The gloves are sewn together at the gauntlet. A flexible cone is placed inside the inner glove at the wrist and jam fit into a cone sewn at the end of the garment sleeve.

Chemical barrier socks and boot top covers are attached to the garment. The attached socks and boot top cover are made from suit material. The socks provide the footwear barrier protection. The ensembles are certified with Onguard HazMax<sup>®</sup> 87012 boots that are worn over the socks and under the boot top covers. These boots have steel toes and ladder shanks and provide physical protection. There are no surface treatments applied to the boots. These boots are available in sizes 6 to 15. The boots are not physically attached to the garment. The boots are not provided with the ensemble and must be purchased separately

The zipper is 38" inches long for garments size SM to 2X and 42" long for sizes 2XL and 3XL. The zipper is vertically mounted and liquid-resistance. The slider components are nylon. The closure is mounted on a polyester tape that is sewn to the chemical barrier garment. The closures are covered by three flaps made of primary garment material. The flaps are fastened with opposing hook-and-loop tapes.

There are no exhaust valves or external fittings provided with this garment. The garments were certified with a constructiontype hardhat with front brim.

## **Compliance with Design Requirements**

Section	Chapter 6 - Design Requirement		
6.1	Protective Ensemble Requirements.		
6.1.1	Ensembles shall have at least the applicable design requirements specified in section 6.1) of this standard when inspected by the certification organization.	Compliant	
6.1.2	Ensembles shall be designed to protect the wearer's upper and lower torso, head, hands, and feet.	Compliant	
6.1.3	Ensembles elements shall include protective garments, protective gloves, and protective footwear.	Compliant	
6.1.4	Ensembles shall be designed to be worn for a single exposure at incidents involving CBRN terrorism agents	Compliant	
6.1.5	Ensembles shall be permitted to be designed as either encapsulating or non-encapsulating, and shall be so designated on the product label.	Non-encapsulating	
6.1.6	Any ensemble certified as Class 2, Class 3, or Class 4 shall be permitted to also be certified to any other or both other class ensembles covered in NFPA 1994.	Not Applicable	
6.1.7	Ensembles shall accommodate the respirators specified by the manufacturer for the specific ensemble.	Compliant	
6.1.8	All respirators specified by the ensemble manufacturer for inclusion in Class 2, Class 3, or Class 4 ensembles shall be certified by the National Institute for Occupational Safety and Health (NIOSH) as compliant with the <i>Statement of Standard for NIOSH CBRN SCBA</i> <i>Testing</i> , or with the <i>Statement of Standard for NIOSH CBRN APR</i> <i>Testing</i> , or with the <i>Statement of Standard for NIOSH CBRN PAPR</i> <i>Testing</i> . All respirators shall cover the eyes, nose, and mouth at a minimum.	Compliant	
6.1.8.1	All respirators specified in 6.1.8 for inclusion in Class 2 ensembles shall be CBRN self-contained breathing apparatus. (SCBA)	Compliant	
6.1.8.2	Where the respirator specified in 6.1.8 is an open circuit SCBA, the SCBA shall also be certified as compliant with NFPA 1981, <i>Standard on Open-Circuit Self-Contained Breathing</i> Apparatus for Fire and Emergency Services.	Compliant	
6.2	Garment Element Requirements.		
6.2.1	Garments shall have at least the applicable design requirements specified in this section when inspected by the certification organization.	Compliant	
6.2.2	Garments shall be designed and configured to protect at least the wearer's upper and lower torso, arms, and legs and the head with the respirator.	Compliant	
6.2.3	Garments shall be designed for a single exposure wearing at incidents involving CBRN terrorism agents.	Compliant	
6.2.4	Where garments incorporate booties, the booties shall be designed as an extension of the garment leg and shall cover the entire foot and ankle.	Compliant	
6.2.5	Garments shall be offered in at least four unique and different sizes.	Compliant	
6.2.6	All garment hardware and external fittings shall be free of rough spots, burrs, or sharp edges that could abrade or tear primary materials.	Compliant	
6.3	Glove Element Requirements.		
6.3.1	Gloves shall have at least the applicable design requirements specified in this section where inspected by the certification organization.	Compliant	
6.3.2	Gloves shall provide protection from the fingertips to at least 25 mm (1 in.) beyond the wrist crease.	Compliant	
6.3.3	Gloves shall be designed to be worn for a single exposure at incidents involving CBRN terrorism agents.	Compliant	

6.3.4	In order to label or otherwise represent a glove that meets the requirements of this standard, the manufacturer shall provide gloves in not less than five separate and distinct sizes.	Compliant
6.3.5	All hardware and external fittings shall be free of rough spots, burrs, or sharp edges that could abrade or tear primary materials.	
6.4	Footwear Element Requirements.	
6.4.1	Footwear shall have at least the applicable design requirements specified in this section where inspected by the certification organization.	Compliant
6.4.2	Footwear shall provide protection of not less than 200 mm (8 in.) in height when measured from the plane of the sole bottom.	Compliant
6.4.3	Footwear shall be designed for a single exposure wearing at incidents involving CBRN terrorism agents.	Compliant
6.4.4	Protective footwear shall be offered in at least six unique and different sizes.	Compliant
6.4.5	Any metal parts of footwear shall not penetrate from the outside into the lining or insole at any point.	Compliant
6.4.6	No metal parts of footwear, including but not limited to nails or screws, shall be present or utilized in the construction or attachment of the sole with heel to the puncture-resistant device, insole, or upper.	Compliant
6.4.7	All hardware and external fittings shall be free of rough spots, burrs, or sharp edges that could tear primary materials.	Compliant

## **Compliance with Performance Requirements**

Section	Chapter 7 - Performance Requirement			Compl	iance
7.1	Class 2 Ensembles.				
7.1.1	Class 2 Ensemble Gene	eral Requi	ements.		
7.1.1.1	MIST Performance Data with MSA Ultra <sup>®</sup> Elite Respirator Facepiece and Firehawk <sup>®</sup> SCBA Harness, Regulator and Tank.		Compliant		
	Class 2 ensembles shall be tested for overall inward leakage using the Man-In-Simulant Test (MIST), and shall have an average local physiological protective dosage factor (PPDFi) value at each PAD location for the four ensembles tested of no less than 360.0 and a systemic physiological protective dosage factor (PPDFsys) value for each tested ensemble of no less than 361.0.		Systemic (ave. 53	: PPDF <sub>i</sub> of 4) 6	
Locals PPDF <sub>i</sub> Values (average of 4 d				ations)	
	Scalp	1175	Chest		26715
	Forehead	1540	Right buttock		28910
	Behind Left Ear Upper	25510	Lower back		26347
	Behind Left Ear	1216	Groin		29918
	Neck Right	1069	Crotch (left0		13808
	Neck Left	25182	Crotch (right)		13694
Results	Nape	1086	Left inner thigh		58250
Results	Left Armpit	4765	Right inner thigh		67671
	Left inner upper arm	11793	Left inner shin		73493
	Left outer upper arm	9757	Right inner shin		47544
	Left forearm	26022	Right cheek		44972
	Right forearm	23340	Left cheek		47202
	Middle back	28395	Left hand		44417
	Middle back duplicate	28771	Right hand		263966
	Abdomen	27127	Foot		63302

7.1.1.1	MIST Performance Data with Dräger Panorama Nova Respirator Facepiece and AirBoss™ SCBA Harness, Regulator and Tank.			Compliant	
	Class 2 ensembles shall be tested for overall inward leakage using the Man-In-Simulant Test (MIST), and shall have an average local physiological protective dosage factor (PPDFi) value at each PAD location for the four ensembles tested of no less than 360.0 and a systemic physiological protective dosage factor (PPDFsys) value for each tested ensemble of no less than 361.0.			Systemic PPDF <sub>i</sub> (ave. of 4) 2410	
	Locals Pl	PDF <sub>i</sub> Values	(average of 4 determina	itions)	
	Scalp	42843	Chest		42375
	Forehead	38457	Right buttock		53339
	Behind Left Ear Upper	41853	Lower back		38531
	Benind Left Ear	38339	Groin Crotob (loff)		45781
	Neck Left	38/60	Crotch (right)		100/6
Local PPDF <sub>i</sub>	Nane	38163	Left inner thigh		44745
Results	Left Armnit	27291	Right inner thigh		64478
	Left inner upper arm	21819	Left inner shin		57727
	Left outer upper arm	21582	Right inner shin		48454
	Left forearm	21130	Right cheek		64478
	Right forearm	26751	Left cheek		50507
	Middle back	44455	Left hand		25808
	Middle back duplicate	41601	Right hand		26223
	Abdomen	55089	Foot		42871
7.1.1.1	MIST Performance Data with Scott AV-3000 Respirator Facepiece and Corresponding Air-Pak <sup>®</sup> Compliant Harness, Regulator and Tank.			bliant	
	the Man-In-Simulant Test (MIS)	(), and shall h	ave an average local	Systemi	
	physiological protective dosage factor (PPDFi) value at each PAD			(ave of 4)	
	location for the four ensembles	tested of no le	ess than 360.0 and a	(ave. 01 4)	
	systemic physiological protective dosage factor (PPDFsys) value for 1505 each tested ensemble of no less than 361.0.			5	
	Locals PPDF <sub>i</sub> Values (average of 4 determinations)				
	Scalp	4631	Chest	· · ·	7388
	Forehead	9937	Right buttock		15839
	Behind Left Ear Upper	10759	Lower back		14967
	Behind Left Ear	13972	Groin		20790
	Neck Right	7994	Crotch (left0		5142
	Neck Left	13664	Crotch (right)		8972
Results	Nape	9378	Left inner thigh		36274
rtoodito	Left Armpit	20757	Right inner thigh		16733
	Left inner upper arm	9434	Left inner shin		25137
	Left outer upper arm	15593	Right inner shin		24946
	Left forearm	20744	Right cheek		28508
	Right forearm	11677	Left cheek		28376
	Middle back duplicate	23090	Left nand		0209
	Abdomen	52238	52250Right hand		25383
	Class 2 ensembles shall be test	ed for overall	function and		20000
	shall allow the test subject to co	molete all tas	ks within 20		
7.1.1.2	minutes, and shall allow no liquid penetration in subsequent			Complia	nt
	liquid-tight integrity testing and the garment closure shall				
	remain engaged during the entire garment function testing.				
	Where hoods are provided, gar	ment shall ac	commodate		
71121	head protection devices meeting the dimensional			Compliant	
1.1.1.4.1	requirements of Type I, Class G helmets of ANSI Z89.1,				
	Standard on Industrial Head Pro	otection.	ante chellinen 11		
7.1.1.2.2	the test subject to see with a vis	ovided, garme	ents snall permit 20/35 or better	Complia	nt

	through the combination of the hood visor and the respirator	
7.1.1.2.3	Where protective flaps cover the closure, the protective flaps shall remain closed for the duration of the overall garment function test.	Compliant
7.1.1.3	External fittings installed in Class 2 ensembles shall be tested for pull-out strength and shall not have a failure force of less than 1000 N (225 lbf).	Not Applicable
7.1.1.4	Exhaust valves installed in Class 2 ensembles shall be tested for mounting strength and shall have a failure force greater than 135 N (30 lbf).	Not Applicable
7.1.1.5	Exhaust valves installed in Class 2 ensembles shall be tested for inward leakage and shall not exhibit a leakage rate exceeding 30 ml/min (1.83 in. <sup>3</sup> /min).	Not Applicable
7.1.2	Class 2 Garment Element Requirements.	
7.1.2.1	Class 2 garment materials and seams shall be tested for permeation resistance and shall meet the following performance criteria:	Compliant
7.1.2.1(1)	The average cumulative permeation in 1 hour shall not exceed 4.0 ug/cm <sup>2</sup> for chemical warfare agents Distilled Mustard (HD)	Compliant
7.1.2.1(2)	The average cumulative permeation in 1 hour shall not exceed 1.25 ug/cm <sup>2</sup> for chemical warfare agent Soman (GD).	Compliant
7.1.2.1(3)	For permeation testing of liquid and gaseous industrial chemicals, the average normalized breakthrough time shall be greater than 60 minutes.	Compliant
7.1.2.2	Class 2 garment materials shall be tested for bursting strength and shall have a bursting strength of not less than 156 N (35 lbf).	Compliant
7.1.2.3	Class 2 garment materials shall be tested for puncture propagation tear resistance and shall have a puncture propagation tear resistance of not less than 31 N (7 lbf).	Compliant
7.1.2.4	Class 2 garment materials shall be tested for cold weather performance and shall have a bending moment of not greater than 0.057 N • m ( <sup>1</sup> / <sub>2</sub> inlbf) at an angular deflection of 60 degrees at -25°C (-13°F).	Compliant
7.1.2.5	Class 2 garment seams shall be tested for seam strength and shall have a breaking strength of not less than 1.31 kN/m (15 lbf/2 in.).	Compliant
7.1.2.6	Class 2 garment closure assemblies shall be tested for closure strength and shall have a breaking strength of not less than 1.31 kN/m (15 lbf/2 in.).	Compliant
7.1.2.7	Class 2 garment materials and seams shall be tested for resistance to liquid or bloodborne pathogens and shall allow no penetration of the Phi-X-174 bacteriophage for at least 1 hour.	Compliant
7.1.2.8	Class 2 Garment Visor Requirements.	
7.1.2.8.1	Class 2 garment visor materials and seams shall be tested for permeation resistance and shall meet the following performance criteria:	Not Applicable
7.1.2.8.1(1)	For permeation testing of chemical warfare agent Distilled Mustard (HD), the average cumulative permeation in 1 hour shall not exceed $4.0 \ \mu g/cm^2$ .	Not Applicable
7.1.2.8.1(2)	For permeation testing of chemical warfare agent Soman (GD), the average cumulative permeation in 1 hour shall not exceed $1.25 \ \mu g/cm^2$ .	Not Applicable
7.1.2.8.1(3)	For permeation testing of liquid and gaseous industrial chemicals, the average normalized breakthrough time shall be greater than 60 minutes.	Not Applicable
7.1.2.8.2	Class 2 garment visor materials shall be tested for bursting strength and shall have a bursting strength of not less than 156 N (35 lbf).	Not Applicable
7.1.2.8.3	Class 2 garment visor materials shall be tested for puncture propagation tear resistance and shall have a puncture propagation tear resistance of not less than 36 N (8 lbf).	Not Applicable

7.1.2.8.4	Class 2 garment visor materials shall be tested for cold temperature bending at -25°C (-13°F) and shall not crack or show evidence of visible damage.	Not Applicable
7.1.2.8.5	Class 2 garment visor material seams shall be tested for seam strength and shall have a breaking strength of not less than 1.31 kN/m (15 lbf/2 in.).	Not Applicable
7.1.2.8.6	Class 2 garment visor materials shall be tested for resistance to liquid or bloodborne pathogens and shall allow no penetration of the Phi-X-174 bacteriophage for at least 1 hour.	Not Applicable
7.1.3	Class 2 Glove Element Requirements.	
7.1.3.1	Class 2 gloves shall be tested for liquid-tight integrity and shall show no leakage.	Compliant
7.1.3.2	Class 2 glove materials and seams shall be tested for permeation resistance and shall meet the following performance criteria:	Compliant
7.1.3.2(1)	The average cumulative permeation in 1 hour shall not exceed 4.0 ug/cm <sup>2</sup> for chemical warfare agents Distilled Mustard (HD)	Compliant
7.1.3.2(2)	The average cumulative permeation in 1 hour shall not exceed 1.25 ug/cm <sup>2</sup> for chemical warfare agents Soman (GD).	Compliant
7.1.3.2(3)	For permeation testing of liquid and gaseous industrial chemicals, the average normalized breakthrough time shall be greater than 60 minutes.	Compliant
7.1.3.3	Class 2 glove materials shall be tested for cut resistance and shall have the distance of blade travel be not less than 25 mm (1 in.) at 200 g load.	Compliant
7.1.3.4	Class 2 glove materials shall be tested for puncture resistance and shall have a puncture resistance of not less than 15 N (3.8 lbf).	Compliant
7.1.3.5	Class 2 garment materials shall be tested for cold weather performance and shall have a bending moment of not greater than 0.057 N • m ( inlbf) at an angular deflection of 60 degrees at -25°C (-13°F).	Compliant
7.1.3.6	Class 2 gloves shall be tested for hand function and shall have an average percent increase over barehanded control less than 300 percent.	Compliant
71.3.7	Class 2 glove materials and seams shall be tested for resistance to liquid or bloodborne pathogens and shall allow no penetration of the Phi-X-174 bacteriophage for at least 1 hour.	Compliant
7.1.4	Class 2 Footwear Element Requirements.	
7.1.4.1	Class 2 footwear shall be tested for liquid-tight integrity and shall show no leakage.	Compliant
7.1.4.2	Class 2 footwear upper material and sole shall be tested for permeation resistance and shall meet the following performance criteria:	Compliant
7.1.4.2(1)	The average cumulative permeation in 1 hour shall not exceed 4.0 ug/cm <sup>2</sup> for chemical warfare agents Distilled Mustard (HD)	Compliant
7.1.4.1(2)	The average cumulative permeation in 1 hour shall not exceed 1.25 ug/cm <sup>2</sup> for chemical warfare agents Soman (GD),	Compliant
7.1.4.1(3)	For permeation testing of liquid and gaseous industrial chemicals, the average normalized breakthrough time shall be greater than 60 minutes.	Compliant
7.1.4.3	Class 2 footwear upper materials shall be tested for cut resistance and shall have the distance of blade travel not be less than 25 mm (1 in.) at a load of 600 g.	Compliant
7.1.4.4	Class 2 footwear upper materials shall be tested for puncture resistance and shall have a puncture resistance of not less than 36 N (8 lbf).	Compliant
7.1.4.5	Class 2 footwear soles and heels shall be tested for abrasion resistance and have an abrasion-resistance rating of not less than 65.	Compliant

7.1.4.6	Class 2 footwear soles shall be tested for slip resistance and shall have a static coefficient of 0.75 or greater.	Compliant
7.1.4.7	Class 2 footwear upper materials shall be tested for resistance to liquid or bloodborne pathogens and shall allow no penetration of the Phi-X-174 bacteriophage for at least 1 hour.	Compliant
7.1.4.8	Where the manufacturer specifies the use of a footwear cover to be worn over standard footwear, Class 2 footwear covers shall meet the requirements specified in 7.1.4.1, 7.1.4.2, 7.1.4.3, 7.1.4.4, 7.1.4.6, and 7.1.4.7, excluding 7.1.4.5.	Compliant
7.1.4.9	Where the manufacturer specifies the use of a footwear cover to be worn over standard footwear, Class 2 footwear covers shall be tested for abrasion resistance and shall show no wear through 3000 cycles.	Compliant

Product safety information available upon request. This information corresponds to our current knowledge on this subject. It is offered solely to provide possible suggestions for your determination. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. It is the user's responsibility to determine the level of risk and the proper protective equipment needed for the user's particular purpose. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, DUPONT MAKE NO WARRANTIES AND ASSUME NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any trademark or patent rights.

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Firehawk<sup>®</sup> is a registered trademark of Mine Safety Appliances, Inc (MSA)

Air-Pak<sup>®</sup> is a registered trademark of Scott Health and Safety, Inc.

AirBoss<sup>™</sup> is trademark of Dräger Safety Corporation (USA)