

DuPont Personal Protection



Technical Data Package

DuPont™ Tychem®
CPF3 Coveralls

C3198T & C3199T

Compliant with

NFPA 1992, 2012 Edition

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

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This information packet may not be removed
except by the end user
K27464 (12/13)



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Technical Data Package

DuPont™ Tychem® C3198T and C3199T Garments Compliant with NFPA 1992, 2012 Edition

Consult the Tychem® User Manual for Instructions on Use

Configurations

This Technical Data Packages covers the following configurations:

OPTION CODES	Attached Socks	Attached Gloves
C3198T		
00	No	No
WG	No	Yes
C3199T		
00	Yes	No
WG	Yes	Yes

Sizes

These NFPA 1992 compliant DuPont™ Tychem® C3198T and C3199T garments are available in the following sizes: S, M, L, XL, 2X, 3X, 4X and 5X. The non-encapsulating garment sizing chart found in the Tychem® User Manual applies to these garments.

Components

The chemical barrier garment element of the NFPA 1992 compliant Tychem® C3198T and C3199T garments 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 hot-air welded chemical barrier tape outside.

There is no visor. The interface between the respirator face piece and the hood are not evaluated in this certification and are not liquid tight.

The C3198T and C3199T garments with Option Code 00 do not have attached gloves. The wearer must obtain glove separately. The performance of the gloves and the glove to sleeve interface are not evaluated in garments with Option Code 00.

The C3198T and C3199T garments with Option Code WG have attached gloves. That optional glove configuration consists of:

- Inner Glove: : North SSG – Silver Shield®/4H®
- Outer Glove: Guardian CP14 Butyl

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.

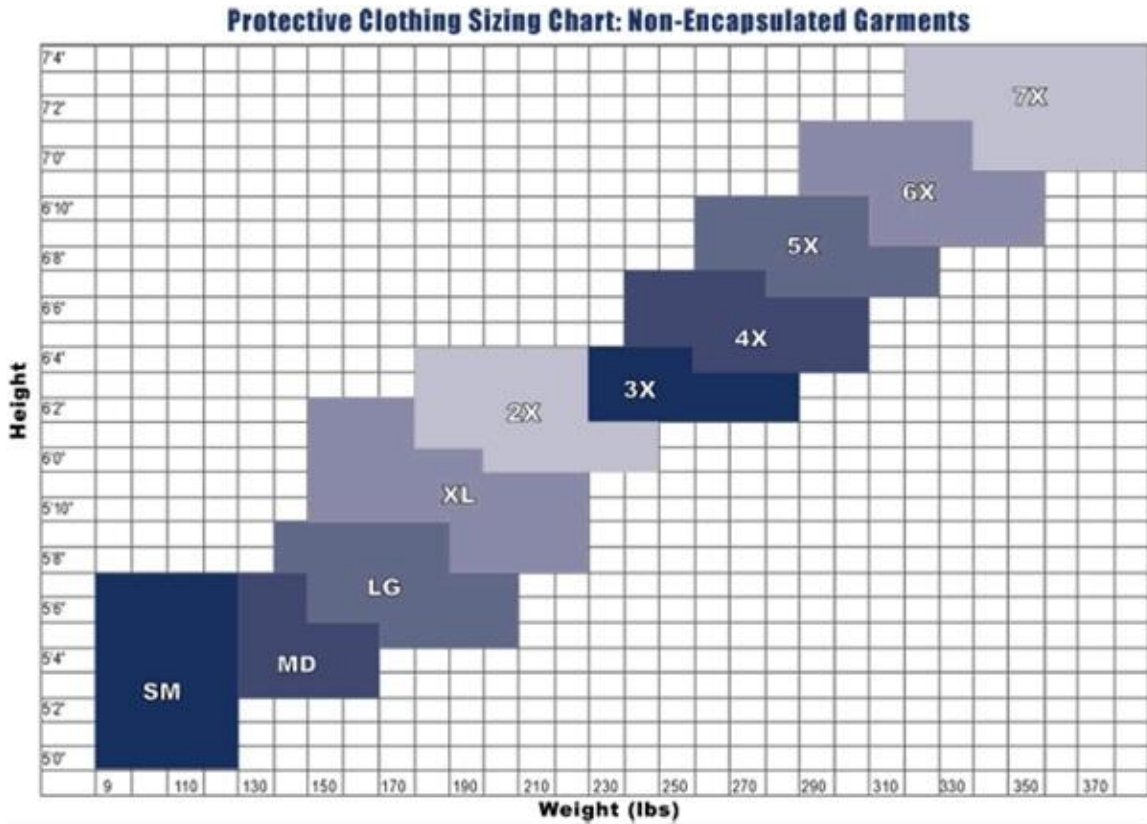
These garments must be worn with separate, user-supplied boots. Model C3199T has chemically resistant socks attached to the garment, but these socks do not provide physical protection to the foot. Model C3198T does not provide chemical barrier or physical footwear protection.

The zipper is 32” inches long for garments sizes SM to 5X. The zipper is vertically mounted. The metal zipper components are zinc and mounted in a polyester tape. The closure is mounted on a polyester tape that is sewn to the chemical barrier garment. The closures are covered by two flaps made of primary garment material. The flaps are fastened with opposing hook-and-loop tapes.

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There are no exhaust valves or external fittings provided with this garment. The

garments were certified with a construction-type hardhat with front brim.



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NFPA 1992 (2012 Edition) – Chapter 7 – Performance Requirements			
(Data reported in this table taken from the test reports during initial certification to this edition of the standard.)			
7.1 Protective Garment Elements and Items			
7.1.1	Garments shall be tested for liquid tight integrity and shall allow no liquid penetration. <u>Note:</u> The interface between the hood and respirator are not evaluated in this garment. For Option 00 (not attached gloves), the liquid tight integrity of the gloves and the glove to sleeve interface is not evaluated.		No liquid penetration observed
7.1.2	Garments shall be tested for overall function and integrity and:		
		Shall allow the test subject to complete all tasks within 15 minutes,	All tasks completed
		Shall allow no liquid penetration in subsequent liquid tight integrity testing	No liquid penetration observed
		Garment closure shall remain engaged during the entire garment function testing.	Closure remained engaged during entire period
7.1.2.1	Where hoods are provided, garments shall accommodate head protection devices meeting the dimensional requirements for Type I, Class G helmets of ANSI Z89.1, <i>Standard for Industrial Head Protection</i> .		Hardhat Accommodated
7.1.2.2	Where hoods with visors are provided, garments shall permit the test subject to see with a visual acuity of 20/35 or better through the combination of both the hood visor and the respirator face piece lens.		No visor
7.1.2.3	Where a protective flap is used over the closure system, it shall remain closed for the duration of the overall garment function test.		Protective flap remained closed
7.1.3	Garment material shall resist penetration by acetone, acetonitrile, ethyl acetate, hexane, 50% sodium hydroxide, 93.1% sulfuric acid, tetrahydrofuran after flex and abrasion and have no observed penetration after 1 hour per ASTM F 903, Method Procedure C		
	Acetone	>60 minutes	Ethyl Acetate
	50% Sodium Hydroxide	>60 minutes	93.1% Sulfuric Acid
	Tetrahydrofuran	>60 minutes	Dimethylformamide
	Nitrobenzene	>60 minutes	
7.1.4	Garment materials shall be tested for bursting strength and shall have a bursting strength of not less than 135 N (30 lbf).		62.7 lbf
7.1.5	Garment materials shall be tested for puncture propagation tear resistance and shall have a puncture propagation tear resistance of not less than 25 N (5.6 lbf).		39.0 N MD 55.4 N CD
7.1.6	Garment materials shall be tested for cold weather performance and shall have a bending moment of not greater than 0.68 N ×m (0.50 lb ×in.) at an angular deflection of 60 degrees and –25°C (–13°F).		0.0014 N/m MD 0.0039 N/m CD
7.1.7 Garment Visor Requirements			No Visor
7.1.8 Garment Seam Requirements			
7.1.8.1	Garment seams, and visor seams where visors are provided, shall be tested for penetration resistance and shall exhibit no penetration for at least 1 hour for 100 percent isopropanol and 93.1 percent w/w sulfuric acid.		
	100% isopropanol	> 60 minutes	93.1% Sulfuric Acid
7.1.8.2	Garment seams, and visor seams where visors are provided, shall be tested for seam strength and shall have a breaking strength of not less than 67 N/50 mm (15 lbf/2 in.).		39.4 lbf/2 in.
7.1.9 Garment Closure Assembly Requirements			
7.1.9.1	Where garment closures are not fully covered by a protective flap that is constructed of the same material as the garment, garment closure assemblies shall be tested for penetration resistance and shall exhibit no penetration for at least 1 hour for 100 percent isopropanol and 93.1% w/w sulfuric acid.		Closure covered by flap

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7.1.9.2	Garment closure assemblies shall be tested for closure strength and shall have a breaking strength of not less than 67 N/50 mm (15 lbf/2 in.).	19.5 lbf/2 in		
7.2 C3198T and C3199T Garment with optional attached gloves				
7.2.1	Gloves shall be tested for liquid tight integrity and shall show no leakage.	No leakage		
7.2.2	Glove materials shall be tested for penetration resistance after flexing and abrading and shall exhibit no penetration for at least 1 hour for the following list of chemicals, and shall exhibit no penetration for at least 1 hour for each additional chemical or specific chemical mixture for which the manufacturer is certifying the glove:			
	Acetone	>60 minutes	Ethyl Acetate	>60 minutes
	50% Sodium Hydroxide	>60 minutes	93.1% Sulfuric Acid	>60 minutes
	Toluene	>60 minutes	Dimethylformamide	>60 minutes
	Nitrobenzene	>60 minutes		
7.2.3	Glove materials shall be tested for cut resistance and shall have a blade travel distance of not less than 25 mm (1 in.).	> 52.5 mm		
7.2.4	Glove materials shall be tested for puncture resistance and shall have a puncture resistance of not less than 11 N (2.5 lbf).	15.1 N		
7.2.5	Glove materials shall be tested for cold weather performance and shall have a bending moment of 0.68 N ×m (0.50 lb ×in.) at an angular deflection of 60 degrees and -25°C (-13°F).	0.0008 N/m		
7.2.6	Glove specimens shall be tested for hand function and shall have an average percent increase over barehanded control less than 200 percent.	124% Size Sm 138% Size Lg		
7.2.7	Glove seams shall be tested for penetration resistance and shall exhibit no penetration for at least 1 hour for 100 percent isopropanol and 93.1 percent w/w acid.			
	100% isopropanol	>60 minutes	93.15 Sulfuric Acid	>60 minutes
7.3 Protective Footwear Element Performance Requirements		Not Applicable		
7.4 Non-encapsulating Protective Ensemble Performance Requirements		Not Applicable		
7.5 Encapsulating Protective Ensemble Performance Requirements		Not Applicable		
7.6 Optional Chemical Flash Fire Escape Protective Performance Requirements		Not Applicable		

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