



QS127T GR

# DuPont™ Tychem® 2000 SFR

DuPont™ Tychem® 2000 SFR Coverall. Attached Hood (Respirator Fit). Front Zipper Closure. Chin Flap. Storm Flap. Elastic Ankles. Elastic Waist. Elastic Wrists. Taped Seams. Green.

Name	Description
Full Part Number	QS127TGRxx0004yy (xx=size;yy=option code)
Fabric/Materials	Tychem® 2000 SFR
Design	Hooded Coverall
Seam	Taped
Color	Green
Quantity/Box	4 per case
Sizes	MD, LG, XL, 2X, 3X, 4X, 5X, 6X, 7X
Option Codes	00

## FEATURES & PRODUCT DETAILS

Tychem® 2000 SFR provides chemical and secondary flame protection in a lightweight garment. Tychem® 2000 SFR garments are intended to be worn over primary flame resistant garments. In the event that a flash fire occurs, they won't ignite and won't contribute to additional burn injury if appropriate flame-resistant personal protective equipment, such as DuPont™ Nomex®, is worn beneath.

Tychem® 2000 SFR represents a new generation of secondary flame-resistant chemical garment technology. Unlike traditional secondary flame resistant chemical garments that have been available for years, new Tychem® 2000 SFR garments were specially designed to meet dual hazard needs of a protective chemical suit with secondary flame resistance. This unique combination of performance permits Tychem® 2000 SFR garments to be worn over primary flame resistant (FR) garments like Nomex® when chemical splash and flash fire hazards exist. The fabric used in Tychem® 2000 SFR garments is a unique technology. It doesn't char like traditional secondary flame resistant technologies. Instead, it was designed to *shrink away* from flame - without burning.

We engineered Tychem® 2000 SFR garments to perform well in flame engulfment scenarios. Extensive ASTM F1930 (instrumented thermal manikin) testing was conducted during the development of Tychem® 2000 SFR garments to aid in garment design and component selection. The final Tychem® 2000 SFR garment continues to demonstrate excellent performance when exposed to a fire engulfment. In fact, when tested side-by-side, Tychem® 2000 SFR garments yield a much lower predicted body burn level and much less afterflame than competing garments, including Lakeland Pyrolon® CRFR. The performance of the actual garment when exposed to a fire engulfment should be the key deciding point for selection of a secondary FR garment. Using ASTM F1930 testing for 4 seconds of flame exposure, when worn over Nomex® IIIA coverall 6oz/yd<sup>2</sup>, Tychem® 2000 SFR shows 9.3% body burn, versus Lakeland Pyrolon® which shows 28.1% body burn.



Tychem® 2000 SFR garments also provide an effective barrier against a range of inorganic acids and bases as well as industrial cleaning chemicals and particles. They're an ideal option for keeping workers safe from chemicals, while not compromising the flame protection of fire-resistance clothing worn beneath them. Applications include: refineries, petrochemical plants, laboratories, hazardous maintenance operations.

- Respirator-fit hood lined with ProShield® 6 SFR fabric.
- Covered, braided elastic at hood.
- Nylon zipper with large metal pull.
- Chin flap with double-sided adhesive tape.
- Storm flap covers zipper which can be sealed by the wearer with double-sided adhesive strip to prevent intrusion at zipper.
- Covered, braided elastic openings at wrist and ankle for tighter fit.
- Taped seams.
- Meets the U.S. industry requirements for blood (ASTM F1670) and viral penetration (ASTM F1671) protecting against several bloodborne pathogen exposure risks.

## AVAILABLE OPTIONS

Option Code	Description	Sizes	Part Number
00	Standard	MD,LG,XL,2X,3X,4X,5X,6X,7X	QS127TGRxx000400

## FINISHED DIMENSIONS

Size	Sleeve Length	Chest Width	Inseam	Fits Chest	Fits Height
MD	34 5/8	24	31 7/8	36 - 39	5'6" - 5'9"
LG	35 7/8	26	32 1/4	39 - 43	5'8" - 6'0"
XL	37	28	33	43 - 46	5'11" - 6'2"
2X	38 1/4	30	33 1/2	46 - 49	6'1" - 6'4"
3X	39 3/8	32	34 1/4	49 - 52	6'3" - 6'7"
4X	40 5/8	34 1/2	34 1/4	52 - 55	6'7" - 6'10"
5X	41 7/8	36 1/2	34 1/4	55 - 58	6'10" - 7'1"
6X	43	38 1/2	35	58 - 61	6'10" - 7'1"
7X	44 1/8	40 1/2	35 3/4	61 - 64	6'10" - 7'1"

## **ADDITIONAL EQUIPMENT NEEDED**

- Please read, understand and follow the Tychem® User Manual.
- Tychem® 2000 SFR coveralls provide only secondary flame-resistant protection. They must always be worn over an appropriate primary flame-resistant garment in an environment that needs flame protection, along with other personal protective equipment that protects your face, hands, and feet.
- Wear other appropriate PPE such as, but not limited to, respiratory, eye, head, hand, and foot protection based on the hazard assessment.

## Physical Properties



Data relating to mechanical performance of the fabrics used in DuPont chemical protective clothing, listed for the selected garment according to the test methods and relevant European standard, if applicable. Such properties, including abrasion and flex-cracking resistance, tensile strength and puncture resistance can help in the assessment of protective performance.

Property	Test Method	Typical Result
Thickness	ASTM D1777	7.5 mils
Basis Weight	ASTM D3776	3.2 oz/yd <sup>2</sup>
Tear Resistance - Trap Tear (MD)	ASTM D1117	10 lbf
Tear Resistance - Trap Tear (CD)	ASTM D1117	8 lbf
Breaking Strength - Grab (MD)	ASTM D5034	39 lbf
Breaking Strength - Grab (CD)	ASTM D5034	41 lbf
Wearing Apparel Flammability	16 CFR 1610	Class 1

## CHEMICAL RESISTANCE

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Black Liquor (mix)	mix	Liquid	>480
Caustic soda (50%)	1310-73-2	Liquid	>480
Chlorsulfonic acid	7790-94-5	Liquid	41
Chromic acid (CrO3) (44.9%)	1333-82-0	Liquid	>480
Dimethyl acetamide, N,N-	127-19-5	Liquid	18
Dimethyl acetamide, N,N- (8%)	127-19-5	Liquid	>480
Green Liquor (mix)	mix	Liquid	>480
Hydrochloric acid (37%)	7647-01-0	Liquid	54
Hydrofluoric acid (48-51%)	7664-39-3	Liquid	400
Hydrogen peroxide (70%)	7722-84-1	Liquid	>480
Lithium hydroxide (14.9%)	1310-65-2	Liquid	>480
Nitric acid (70%)	7697-37-2	Liquid	203
Potassium hydroxide (45%)	1310-58-3	Liquid	>480
Sodium hydroxide (50%)	1310-73-2	Liquid	>480
Sodium hypochlorite (15%)	7681-52-9	Liquid	>480
Sulfuric acid (>95%)	7664-93-9	Liquid	>480
White Liquor	mix	Liquid	>480

BT0.1 Normalized breakthrough time at 0.1 µg/cm<sup>2</sup>/min [mins] CAS Chemical abstracts service registry number min Minute > Larger than < Smaller than imm Immediate (< 10 min) nm Not tested sat Saturated solution N/A Not Applicable na Not attained GPR grade General purpose reagent grade \* Based on lowest single value 8 Actual



breakthrough time; normalized breakthrough time is not available DOT5 Degradation after 5 min DOT30 Degradation after 30 min DOT60 Degradation after 60 min DOT240 Degradation after 240 min BT1383 Normalized breakthrough time at 0.1  $\mu\text{g}/\text{cm}^2/\text{min}$  [mins] acc. ASTM F1383

**SPECIAL WARNINGS**

- **CAUTION:** 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 informational 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 DuPont for specific data. If fabric becomes torn, abraded or punctured, or if seams or closures fail, or if attached gloves, visors, etc. are damaged, 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, express or implied, including, without limitation, no warranties of merchantability or fitness for a particular use and assume no liability 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 or technical information of DuPont or others covering any material or its use.

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