

# Tychem® TK

## Our highest level of protection.

Tychem® TK is the newest line of DuPont protective fabric. Specifically developed for protection against toxic, corrosive gases, liquids and solid chemicals, this high-performance chemical barrier fabric is perfectly suited for industrial, HazMat, and domestic preparedness applications. Tychem® TK offers dependable protection with proven performance over a wide range of chemicals.

### Wide-Ranging Protection

Tychem® TK exhibits outstanding chemical barrier properties. An extremely durable fabric that's puncture- and tear-resistant, its barrier has been tested against 260 challenge chemicals with no observed breakthrough after exposures of up to 8 hours. Excellent permeation data from stringent ASTM testing substantiates the uncompromised protection available with Tychem® TK.

### High Visibility

The lime-yellow color of Tychem® TK is highly visible in both bright and dim light, offering greater safety in emergency situations. Easily seen in smoky or hazy environments, Tychem® TK is ideal for hazardous material handling, domestic preparedness, emergency response and transportation emergency teams.

### Physical Properties of Tychem® TK

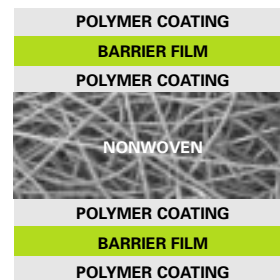
Basis Weight ASTM D3776	10.6 oz/yd <sup>2</sup>
Thickness ASTM D1777	26 mils
Ball Burst ASTM D3787	187 lbf
Grab Tensile (md/cd) ASTM D5034	188/180 lbf
Trap Tear (md/cd) ASTM D5733	53/52 lbf

These results are measured by using the latest ASTM test methods. Results will vary due to the changes in test methods. A true test of performance is in use.

### Material Composition

Tychem® TK chemical barrier fabric is unique, consisting of a high strength, highly tear-resistant, 100% nonwoven fabric sandwiched between proprietary non-halogenated films.

(Fabric cross-section of Tychem® TK illustrated)



# Tychem® TK

CHEMICAL PROTECTIVE CLOTHING



# Tychem® TK

Permeation Data for ASTM Recommended List of Chemicals for  
Evaluating Protective Clothing Materials (ASTM F1001)

CHEMICAL NAME	PHYSICAL PHASE	AVERAGE NORMALIZED BREAKTHROUGH TIME (minutes)	AVERAGE PERMEATION RATE ( $\mu\text{g}/\text{cm}^2/\text{minute}$ )
Acetone	L	>480	<0.01
Acetonitrile	L	>480	<0.1
Ammonia	G	>480	<0.1
1,3-Butadiene	G	>480	<0.07
Carbon disulfide	L	>480	<0.02
Chlorine	G	>480	<0.02
Dichloromethane	L	>480	<0.03
Diethylamine	L	>480	<0.1
N,N-Dimethylformamide	L	>480	<0.01
Ethyl acetate	L	>480	<0.06
Ethylene oxide	G	>480	<0.1
n-Hexane	L	>480	<0.01
Hydrogen chloride	G	>480	<0.1
Methanol	L	>480	<0.1
Methyl chloride	G	>480	<0.02
Nitrobenzene	L	>480	<0.1
Sodium hydroxide, 50%	L	>480	<0.1
Sulfuric acid, 98%	L	>480	<0.1
1,1,2,2-Tetrachloroethylene	L	>480	<0.01
Tetrahydrofuran	L	>480	<0.04
Toluene	L	>480	<0.02

#### INDEX OF CODES:

> = greater than, < = less than,  
L = liquid, G = gas,  
Immed. = immediate (<10 minutes)

Numbers reported are averages of samples tested by the ASTM F739 test method. Sample results do vary and therefore averages for these results are reported.

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 information 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 the garment manufacturer for specific data. If fabric becomes torn, abraded or punctured, 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, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE AND ASSUME NO LIABILITY WHATSOEVER 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.

#### WARNINGS:

- 1) Tychem® TK is not flame-resistant and should not be used around heat, flame, sparks, or in potentially flammable or explosive environments.
- 2) Garments made of Tychem® TK should have slip-resistant or antislip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.

#### For more information:

Visit our website at:

[www.DuPontProtectiveApprl.com](http://www.DuPontProtectiveApprl.com)

For specific permeation data and breakthrough times for other chemicals:

**DuPont Protective Apparel Fax-On-Demand Service**  
**1-800-558-9329**

To place an order please call our customer service center:

phone: **1-800-845-6962** fax: **1-843-335-8599**

To find a distributor in your area, please call:

**1-888-577-6960**



**Tychem®**  
CHEMICAL PROTECTIVE CLOTHING

# DuPont Tychem® Protective Apparel

A wide variety of dependable protection from encapsulated suits to coveralls.



## COMMANDER® SERIES

### ALL TYCHEM® TK COMMANDER® FULLY ENCAPSULATED LEVEL A SUITS FEATURE:

- 3 layer faceshield (PVC 40 mil / Teflon® 5 mil / PVC 20 mil)
- attached internal Barrier® gloves (with attached outer butyl or Viton® gloves)
- gas tight zipper closure
- double storm flap over zipper
- Thermo Bond Max seams
- attached boots\*
- outer boot flaps
- knee wear pads
- 2 exhaust valves
- internal adjustable belt

## COMMANDER® TYCHEM® TK FULLY ENCAPSULATED LEVEL A SUITS

LEVEL A SUITS	EX (extra wide) faceshield or standard faceshield	expanded back (accommodates SCBA) or flat back (airline access)	butyl gloves or Viton® gloves	front entry or rear entry
ITEM #				
Commander® EX				
TKXFB	EX (extra wide)	expanded back	butyl	front
TKXRB	EX (extra wide)	expanded back	butyl	rear
TKXFV	EX (extra wide)	expanded back	Viton®	front
TKXRV	EX (extra wide)	expanded back	Viton®	rear
TKXFAB	EX (extra wide)	flat back	butyl	front
TKXRAB	EX (extra wide)	flat back	butyl	rear
TKXFAV	EX (extra wide)	flat back	Viton®	front
TKXRAV	EX (extra wide)	flat back	Viton®	rear
Commander®				
TKFB	standard	expanded back	butyl	front
TKRB	standard	expanded back	butyl	rear
TKFV	standard	expanded back	Viton®	front
TKRV	standard	expanded back	Viton®	rear
TKFAB	standard	flat back	butyl	front
TKRAB	standard	flat back	butyl	rear
TKFAV	standard	flat back	Viton®	front
TKRAV	standard	flat back	Viton®	rear

Certified compliant to ASTM F1052.

All level A suits come with a free carry bag.

## NFPA 1991 (2000 edition) compliant



TKXFAB  
EX (extra wide)  
Faceshield

### Tychem® TK test results

### NFPA 1991 (2000 edition) test data

per ASTM F1001 Test Battery on Tychem® TK Level A Suits

CHEMICAL NAMES	PERMEATION				PENETRATION ZIPPER CLOSURE
	VISOR	VISOR SEAMS	SUIT SEAMS	GLOVES	
Acetone	>180	>180	>480	>180	Pass
Acetonitrile	>180	>180	>480	>180	Pass
Anyhydrous Ammonia (gas)	>180	>180	>480	>180	NA
1, 3-Butadiene (gas)	>180	>180	>480	>180	NA
Carbon disulfide	>180	>180	>480	>180	Pass
Chlorine (gas)	>180	>180	>480	>180	NA
Dichloromethane	>180	>180	>480	>180	Pass
Diethylamine	>180	>180	>480	>180	Pass
N, N-Dimethylformamide	>180	>180	>480	>180	Pass
Ethyl acetate	>180	>180	>480	>180	Pass
Ethylene oxide (gas)	>180	>180	>180	>180	NA
n-Hexane	>180	>180	>480	>180	Pass
Hydrogen chloride (gas)	>180	>180	>180	>180	NA
Methanol	>180	>180	>480	>180	Pass
Methyl chloride	>180	>180	>480	>180	NA
Nitrobenzene	>180	>180	>480	>180	Pass
Sodium hydroxide, 50%	>180	>180	>480	>180	Pass
Sulfuric acid (conc.)	>180	>180	>480	>180	Pass
Tetrachloroethylene	>180	>180	>480	>180	Pass
Tetrahydrofuran	>180	>180	>480	>180	Pass
Toluene	>180	>180	>480	>180	Pass

Permeation testing results are shown in minutes. **No Breakthrough** was recorded for the duration of the test. Test methods: Permeation – ASTM F739, Penetration – ASTM F903. > = greater than, NA = Not Tested.



**TK133**

**FULLY ENCAPSULATED/LEVEL B**  
standard faceshield (40 mil PVC)  
flat back (airline fit)  
elastic wrists  
rear entry  
zipper/PVC zip lock closure  
double storm flap over closure  
Thermo Bond seams  
attached boots\*, outer boot flaps  
2 exhaust vents  
EXPERT



**TK135**

**FULLY ENCAPSULATED/LEVEL B**  
standard faceshield (40 mil PVC)  
expanded back (accommodates SCBA)  
elastic wrists  
front entry  
zipper/PVC zip lock closure  
double storm flap over closure  
Thermo Bond seams  
attached boots\*, outer boot flaps  
2 exhaust vents  
EXPERT



**TK635**

**FULLY ENCAPSULATED/LEVEL B**  
standard faceshield (40 mil PVC)  
expanded back (accommodates SCBA)  
elastic wrists  
rear entry  
zipper/PVC zip lock closure  
double storm flap over closure  
Thermo Bond seams  
attached boots\*, outer boot flaps  
2 exhaust vents  
EXPERT



**TK120**

**COVERALL**  
collar  
front zipper closure  
storm flap over zipper  
Thermo Bond seams



**TK125**

**COVERALL**  
collar  
elastic wrists, elastic ankles  
front zipper closure  
storm flap over zipper  
Thermo Bond seams



**TK122**

**COVERALL**  
attached hood  
(elastic face)  
elastic wrists  
front zipper closure  
storm flap over zipper  
attached boots\*  
Thermo Bond seams



**TK124**

**COVERALL**  
attached hood  
(elastic face—respirator fit)  
elastic wrists  
front zipper closure  
storm flap over zipper  
attached boots\*  
Thermo Bond seams



**TK127**

**COVERALL**  
attached hood  
(elastic face)  
elastic wrists, elastic ankles  
front zipper closure  
storm flap over zipper  
Thermo Bond seams



**TK256**

**COVERALL**  
elastic hood  
(elastic face—respirator fit)  
elastic wrist  
attached boots\*, outer boot flaps  
front zipper closure  
storm flap over zipper  
Thermo Bond seams



**TK472**

**APRON**  
attached sleeves  
elastic wrists  
bound neck & ties  
26" x 52"  
Thermo Bond seams



**TK389**

**HOOD / VEST**  
pullover  
PVC faceshield  
hook & loop waist belt  
Thermo Bond seams



**TK444**

**BOOT COVER\*\***  
elastic top  
17"  
Thermo Bond seams  
(intended to be worn  
over your own boots)

\*Attached boots should be worn inside own shoes or boots. Shown above for illustration purposes only.  
\*\*Garments made of Tyvek® or Tychem® fabrics should have slip-resistant or antislip materials on the outer surface of boots, shoe covers, or other garment surfaces in conditions where slipping could occur. Item is not skid resistant.  
NOTE: All Tychem® TK coveralls are available in sizes small to 4XL.