



SL127T WH

# DuPont™ Tychem® 4000

DuPont™ Tychem® 4000 Hooded Coverall. Offers rugged, durable protection against a wide range of chemicals. White coverall features a standard fit hood, elastic wrists and ankles, a storm flap with adhesive closure, taped seams, and a pin lock slider zipper pull. Suitable for a variety of applications, including hazardous remediation, nuclear environments, waste management, and chemical handling.

Name	Description
Full Part Number	SL127TWHxx0006yy (xx=size;yy=option code)
Fabric/Materials	TYCHEM® 4000
Design	Coverall w/ Hood, Elastic Wrists and Ankles
Seam	Taped
Color	White
Quantity/Box	6 per case
Sizes	MD, LG, XL, 2X, 3X, 4X, 5X, 6X, 7X
Option Codes	00

## FEATURES & PRODUCT DETAILS

DuPont™ Tychem® 4000 delivers effective protection against a range of chemical environments. Tychem® 4000 utilizes a chemical barrier film laminated to a Tyvek® substrate to provide a rugged and durable fabric that resists abrasion. Tychem® 4000 fabric provides at least 30 minutes of protection against >124 chemical challenges. Typical applications: chemical mixing, hazardous remediation, emergency medical response, paint spraying, and nuclear environments.

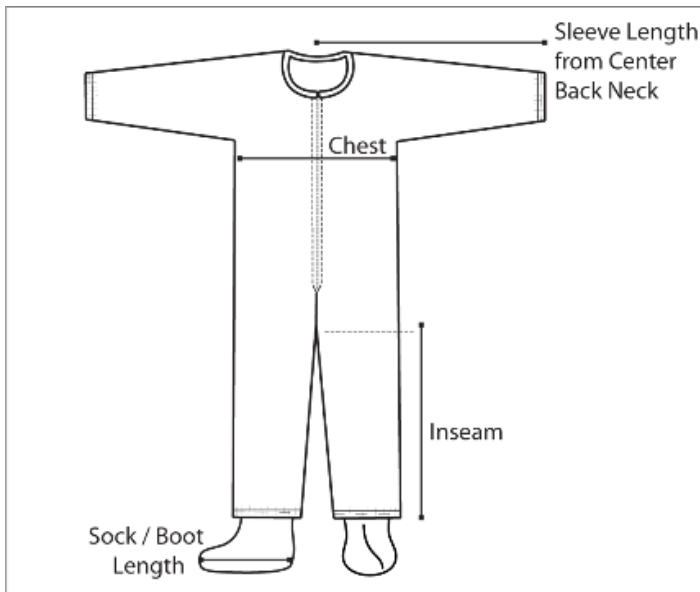
- Pin locking slider locks in place when the pins on the puller are pushed into the zipper elements
- Taped seams provide strong chemical resistance against heavy liquid splashes. A sewn seam is covered with a strip of compatible chemical-resistant material through heat sealing.
- Attached hood with elastic around face opening.
- Storm flap covers zipper which can be sealed by the wearer with adhesive strip to prevent intrusion at zipper
- Elastic opening for tighter fit at wrist
- Elastic opening for tighter fit at ankle
- Manufactured under specifications that do not contain natural rubber latex
- 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	SL127TWHxx000600

## SPECIFICATIONS

- The garment shall be constructed of DuPont™ Tychem® 4000 -- a DuPont™ Tyvek® protective fabric laminated with a chemical resistant Dow Saranex™ 23-P film.
- The garment shall be white in color.
- The garment shall be a hooded coverall design.
- The garment shall have taped seams.
- The tape used to cover the seams shall be a film composite with equal to or greater chemical resistance than the base fabric.
- The garment shall have a standard hood with elastic around the face.
- The garment shall have a front zipper closure.
- The zipper shall be covered with a storm flap with adhesive closure.
- The garment shall have elastic wrists.
- The garment shall have elastic ankles.



## FINISHED DIMENSIONS

Size	Sleeve Length	Chest Width	Inseam	Fits Chest	Fits Height
MD	33 3/4	24 1/4	28	35 1/4 - 38 3/4	5'3" - 5'7"
LG	35	25 3/4	29	38 1/4 - 41 3/4	5'5" - 5'9"
XL	36 1/2	27 1/4	29 1/2	41 1/4 - 44 3/4	5'8" - 6'2"
2X	38 1/4	28 3/4	30 1/2	44 1/4 - 47 3/4	6'0" - 6'4"
3X	38 1/2	30 1/4	31 1/2	47 1/4 - 50 3/4	6'2" - 6'4"
4X	39 1/2	32	32 1/2	50 3/4 - 54 1/4	6'4" - 6'7"
5X	40 1/2	33 1/2	33 1/2	53 3/4 - 57 1/4	6'7" - 6'10"
6X	41 1/2	35 1/2	34 1/2	57 3/4 - 61 1/4	6'9" - 7'1"
7X	42 1/2	37	35 1/2	60 3/4 - 64 1/4	7'0" - 7'4"

## **ADDITIONAL EQUIPMENT NEEDED**

- Please read, understand and follow the Tychem® User Manual.
- 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	12 mils
Basis Weight	ASTM D3776	3.6 oz/yd <sup>2</sup>
Burst Strength - Mullen	ASTM D3786	71 psi
Breaking Strength - Grab (MD)	ASTM D5034	44 lb <sub>f</sub>
Breaking Strength - Grab (CD)	ASTM D5034	48 lb <sub>f</sub>
Wearing Apparel Flammability	16 CFR 1610	Class 1

## CHEMICAL RESISTANCE

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
2-(2-Ethoxyethoxy) ethanol	111-90-0	Liquid	>480
2-Methyl-4-isothiazolin-3-one (20%)	2682-20-4	Liquid	>480
Acetic acid (>95%)	64-19-7	Liquid	>480
Acetic acid 2 ethoxy ethyl ester	111-15-9	Liquid	116*/238
Acetic acid 2 methoxy ethyl ester	110-49-6	Liquid	>480
Acetic acid ethenyl ester	108-05-4	Liquid	24
Acetic acid ethyl ester	141-78-6	Liquid	imm
Acetic anhydride	108-24-7	Liquid	12*/48
Acetic chloride	75-36-5	Liquid	39*/63
Acetone	67-64-1	Liquid	13
Acetonitrile	75-05-8	Liquid	60
Acetyl chloride	75-36-5	Liquid	39*/63
Acroleic acid	79-10-7	Liquid	>480
Acrolein (90%)	107-02-8	Liquid	24
Acrylamide (50%)	79-06-1	Liquid	>480
Acrylic acid	79-10-7	Liquid	>480
Acrylic acid n-butyl ester	141-32-2	Liquid	>480
Acrylicamide (50%)	79-06-1	Liquid	>480
Acrylonitrile	107-13-1	Liquid	36*/48
Acryloyl Chloride	814-68-6	Liquid	imm
Allyl alcohol	107-18-6	Liquid	>480
Amino 3,4-dichlorobenzene, 1- (70 °C, molten)	95-76-1	Liquid	imm
Amino benzene	62-53-3	Liquid	>480
Amino diphenyl, 4- (1 mg/ml in Methanol)	92-67-1	Liquid	>480
Amino ethylethanolamine	111-41-1	Liquid	imm
Amino ethylethanolamine (60%)	111-41-1	Liquid	>480
Amino ethylpiperazine	140-31-8	Liquid	>480
Amino pyridine, 2- (sat)	504-29-0	Liquid	>480
Ammonia (gaseous)	7664-41-7	Vapor	26
Ammonium hydroxide (2-3% in Householdcleaner)	1336-21-6	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Ammonium hydroxide (32%)	1336-21-6	Liquid	55
Aniline	62-53-3	Liquid	>480
Antimony pentachloride	7647-18-9	Liquid	>480
Benzenamine	62-53-3	Liquid	>480
Benzene	71-43-2	Liquid	imm
Benzisothiazol 1,2- (20%)	2634-33-5	Liquid	>480
Benzyl alcohol	100-51-6	Liquid	>480
Bis (4-(2,3-epoxypropoxy)phenyl)propane (80%)	1675-54-3	Liquid	>480
Bis phenol A diglycidyl ether (80%)	1675-54-3	Liquid	>480
Black Liquor (mix)	mix	Liquid	>480
Bromo methane	74-83-9	Vapor	>480
Butadiene, 1,3- (gaseous)	106-99-0	Vapor	>480
Butanal, n-	123-72-8	Liquid	41
Butanol, 1-	71-36-3	Liquid	>480
Butanol, n-	71-36-3	Liquid	>480
Butanone	78-93-3	Liquid	18
Butanone oxime, 2-	96-29-7	Liquid	>480
Butenal, 2-	123-73-9	Liquid	34
Butoxy ethanol, 2-	111-76-2	Liquid	>480
Butyl acrylate, n-	141-32-2	Liquid	>480
Butyl alcohol, n-	71-36-3	Liquid	>480
Butyraldehyde, n-	123-72-8	Liquid	41
Carbon disulfide	75-15-0	Liquid	imm
Carburant n° 2	68476-30-2	Liquid	>480
Caustic ammonia (2-3% in Householdcleaner)	1336-21-6	Liquid	>480
Caustic ammonia (32%)	1336-21-6	Liquid	55
Caustic soda (50%)	1310-73-2	Liquid	>480
Cellosolve acetate	110-80-5	Liquid	>480
Chemguard S-764P14A	mix	Liquid	>480
Chemidize 727 ND (mix)	mix	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Chlorine (gaseous)	7782-50-5	Vapor	>480
Chloro 1-methylbenzene, 2-	95-49-8	Liquid	13
Chloro 2,3-epoxy propane, 1-	106-89-8	Liquid	15
Chloro acetic acid (80%)	79-11-8	Liquid	>480
Chloro acetone (95%)	78-95-5	Liquid	258
Chloro acetyl chloride	79-04-9	Liquid	120
Chloro aniline, p- (70 °C, molten)	106-47-8	Liquid	imm
Chloro benzenamine, 4- (70 °C, molten)	106-47-8	Liquid	imm
Chloro ethene	75-01-4	Vapor	>480
Chloro propan-2-one, 1- (95%)	78-95-5	Liquid	258
Chloro toluene, o-	95-49-8	Liquid	13
Chloroform	67-66-3	Liquid	imm
Chlorsulfonic acid	7790-94-5	Liquid	>480
Chromic acid (CrO3) (44.9%)	1333-82-0	Liquid	>480
Cresol o-	95-48-7	Liquid	>480
Cresols, mixed isomers	1319-77-3	Liquid	100
Cresylic acid	1319-77-3	Liquid	100
Croton aldehyde	123-73-9	Liquid	34
Crude oil	8002-05-9	Liquid	>480
Crude oil, California	8002-05-9	Liquid	>480
Cyanoethylene	107-13-1	Liquid	36*/48
Cyanomethane	75-05-8	Liquid	60
Cyclo hexanone	108-94-1	Liquid	136
Cyclo hexyl isocyanate	3173-53-3	Liquid	36*/54
Diaminoethane, 1,2-	107-15-3	Liquid	>480
Dichlorbenzen, 1,2-	95-50-1	Liquid	76
Dichlorbenzen, 1,3-	541-73-1	Liquid	45
Dichlorbenzen, 1,4- (50% in Ethanol)	106-46-7	Liquid	>480
Dichlorethane, 1.2.-	107-06-2	Liquid	imm
Dichloro -4,4'-methylenedianiline, 2,2'- (sat in Methanol)	101-14-4	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Dichloro aniline, 3,4- (70 °C, molten)	95-76-1	Liquid	imm
Dichloro methane	75-09-2	Liquid	imm
Diesel Fuel Grade D-2	mix	Liquid	>480
Diethyl amine	109-89-7	Liquid	15
Diethyl aniline crude	91-66-7	Liquid	>480
Diethyl benzene (95%)	25340-17-4	Liquid	31
Diethyl ethanamine, N,N-	121-44-8	Liquid	12*/22
Diethyl ether	60-29-7	Liquid	imm
Diethyl m-toluidine, N,N-	91-67-8	Liquid	>480
Diethylene imide oxide	110-91-8	Liquid	158
Diethylene triamine	111-40-0	Liquid	imm*/321
Dimethyl Carbonate (DMC)	616-38-6	Liquid	35
Dimethyl acetamide, N,N-	127-19-5	Liquid	96
Dimethyl dichlorosilane	75-78-5	Liquid	46
Dimethyl formamide, N,N-	68-12-2	Liquid	90
Dimethyl hydrazine, N,N-	57-14-7	Liquid	13
Dimethyl ketal	67-64-1	Liquid	13
Dimethyl ketone	67-64-1	Liquid	13
Dimethyl maleate	624-48-6	Liquid	>480
Dimethyl sulfate	77-78-1	Liquid	>480
Diphenyl methane diisocyanate, 4,4'- (50 °C, molten)	101-68-8	Liquid	>480
Disodium sulfide (60% (slurry))	1313-82-2	Liquid	>480
Epichlorohydrin	106-89-8	Liquid	15
Epoxy ethane (gaseous)	75-21-8	Vapor	imm
Ethane 1,2-diol	107-21-1	Liquid	>480
Ethane diol dipropanoate, 1,2-	123-73-9	Liquid	34
Ethane nitrile	75-05-8	Liquid	60
Ethane thiol	75-08-1	Liquid	imm
Ethanol	64-17-5	Liquid	>480
Ethanoyl chloride	75-36-5	Liquid	39*/63

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Ethoxy ethanol, 2-	110-80-5	Liquid	>480
Ethoxy ethylacetat	111-15-9	Liquid	116*/238
Ethyl Cellosolve®	110-80-5	Liquid	>480
Ethyl acetate	141-78-6	Liquid	imm
Ethyl alcohol	64-17-5	Liquid	>480
Ethyl benzene	100-41-4	Liquid	imm
Ethyl ethanamine, N-	109-89-7	Liquid	15
Ethyl ether	60-29-7	Liquid	imm
Ethyl glycol acetate	111-15-9	Liquid	116*/238
Ethyl mercaptan	75-08-1	Liquid	imm
Ethyl methyl carbonate (EMC)	623-53-0	Liquid	25
Ethyl nitrile	75-05-8	Liquid	60
Ethylene Carbonate solution (60%)	96-49-1	Liquid	>480
Ethylene carboxylic acid	79-10-7	Liquid	>480
Ethylene diamine	107-15-3	Liquid	>480
Ethylene dichloride	107-06-2	Liquid	imm
Ethylene glycol	107-21-1	Liquid	>480
Ethylene glycol mono ethyl ether acetate	111-15-9	Liquid	116*/238
Ethylene glycol monobutyl ether	111-76-2	Liquid	>480
Ethylene glycol monoethyl ether	110-80-5	Liquid	>480
Ethylene glycol monomethyl ether	109-86-4	Liquid	>480
Ethylene glycol monomethyl ether acetate	110-49-6	Liquid	>480
Ethylene oxide (gaseous)	75-21-8	Vapor	imm
Ethylene tetrachloride	127-18-4	Liquid	imm
Ethylene trichloride	79-01-6	Liquid	imm
Ferric (III) chloride (50%)	7705-08-0	Liquid	>480
Fluorobenzene	462-06-6	Liquid	imm
Fluoroboric acid (48-50%)	16872-11-0	Liquid	>480
Fluorosilicic acid (33-35%)	16961-83-4	Liquid	>480
Formaldehyde (37%)	50-00-0	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Formalin (37% (10-15% Methanol))	50-00-0	Liquid	>480
Formalin (37%)	50-00-0	Liquid	>480
Formic acid (88%)	64-18-6	Liquid	>480
Fuel-oil no 2	68476-30-2	Liquid	>480
Furaldehyde, 2-	98-01-1	Liquid	198*/227
Furfural	98-01-1	Liquid	198*/227
Gasoline, unleaded	86290-81-5	Liquid	imm
Gasoline, unleaded E10 (87 Octane)	308066-70-8	Liquid	imm
Glutaral (50%)	111-30-8	Liquid	>480
Glutaraldehyde (50%)	111-30-8	Liquid	>480
Glycol alcohol	107-21-1	Liquid	>480
Green Liquor (mix)	mix	Liquid	>480
Hexamethyl disilazane	999-97-3	Liquid	>480
Hexamethyl disilazane, 1,1,1,3,3,3-	999-97-3	Liquid	>480
Hexamethylene diamine (50 °C, molten)	124-09-4	Liquid	80
Hexamethylene diisocyanate	822-06-0	Liquid	>480
Hexane, n-	110-54-3	Liquid	imm
Hexanone	108-94-1	Liquid	136
Hydrazine	302-01-2	Liquid	>480
Hydriodic acid (47%)	10034-85-2	Liquid	>480
Hydrochloric acid (37%)	7647-01-0	Liquid	>480
Hydrofluoric acid (48-51%)	7664-39-3	Liquid	>480
Hydrofluoric acid (70%)	7664-39-3	Liquid	143
Hydrogen chloride (gaseous)	7647-01-0	Vapor	>480
Hydrogen fluoride (20-27 °C, gaseous)	7664-39-3	Vapor	93*/134
Hydrogen peroxide (30%)	7722-84-1	Liquid	>480
Hydroxy 2-nitrobenzene, 1- (70 °C, molten)	88-75-5	Liquid	imm
Hydroxy toluene	100-51-6	Liquid	>480
Hydroxy toluene, o-	95-48-7	Liquid	>480
Iodine	7553-56-2	Solid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Iodomethane	74-88-4	Liquid	imm
Isoamyl alcohol	123-51-3	Liquid	>480
Isopropanol	67-63-0	Liquid	>480
Isopropanol (70%)	67-63-0	Liquid	>480
Isopropyl alcohol	67-63-0	Liquid	>480
Isopropyl alcohol (70%)	67-63-0	Liquid	>480
Isopropylidenediphenol diglycidyl ether, 4,4'- (80%)	1675-54-3	Liquid	>480
JP-4 Jet Fuel	50815-00-4	Liquid	imm
JP-8 Jet Fuel	94114-58-6	Liquid	39*/67
Kerosene	8008-20-6	Liquid	69
Ketone propane	67-64-1	Liquid	13
Lewisite (L), MIL-STD-282 (10 g/m <sup>2</sup> )	541-25-3	Liquid	>360 <sup>8</sup>
Lithium Hexafluorophosphate (sat.)	21324-40-3	Liquid	>480
MEK	78-93-3	Liquid	18
Maleic anhydride (66 °C, molten)	108-31-6	Liquid	13
Mercuric II chloride (sat)	7487-94-7	Liquid	>480
Mercury	7439-97-6	Liquid	>480
Methanesulphonic acid (70%)	75-75-2	Liquid	>480
Methanol	67-56-1	Liquid	>480
Methoxy 2-methylpropane, 2-	1634-04-4	Liquid	>480
Methoxy ethanol, 2	109-86-4	Liquid	>480
Methoxy ethylacetate, 2-	110-49-6	Liquid	>480
Methyl 2-methyl-2-propenoate	80-62-6	Liquid	23
Methyl 2-pyrrolidone, N-	872-50-4	Liquid	101
Methyl Ethyl Ketone Peroxide (35%)	1338-23-4	Liquid	>480
Methyl acetyl	67-64-1	Liquid	13
Methyl acrolein	123-73-9	Liquid	34
Methyl aniline, o-	95-53-4	Liquid	>480
Methyl benzol	108-88-3	Liquid	imm
Methyl bromide	74-83-9	Vapor	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Methyl butan-1-ol, 3-	123-51-3	Liquid	>480
Methyl chloride (-70 °C, liquid)	74-83-9	Vapor	>480
Methyl chloride (gaseous)	74-87-3	Vapor	>480
Methyl cyanide	75-05-8	Liquid	60
Methyl ethyl ketone	78-93-3	Liquid	18
Methyl ethyl ketoxime	96-29-7	Liquid	>480
Methyl iodide	74-88-4	Liquid	imm
Methyl isocyanate	624-83-9	Liquid	imm
Methyl ketone	67-64-1	Liquid	13
Methyl methacrylate	80-62-6	Liquid	23
Methyl phenols	1319-77-3	Liquid	100
Methyl salicylate	119-36-8	Liquid	>480
Methyl tert-butyl ether	1634-04-4	Liquid	>480
Methylen Isocyclohexylamine, 4,4- (50 °C, molten)	1761-71-3	Liquid	>480
Methylene bis(2-Chloroaniline), 4,4- (sat in Methanol)	101-14-4	Liquid	>480
Methylene chloride	75-09-2	Liquid	imm
Methylene diphenyl diisocyanate, 4,4'- (50 °C, molten)	101-68-8	Liquid	>480
Mineral oil	8012-95-1	Liquid	>480
Mineral spirit	64475-85-0	Liquid	190
Morpholine	110-91-8	Liquid	158
Naphthalene (25% in Diethylene glycol dimethylether)	91-20-3	Liquid	79
Nitric acid (70%)	7697-37-2	Liquid	>480
Nitro benzene	98-95-3	Liquid	59
Nitro phenol, o- (70 °C, molten)	88-75-5	Liquid	imm
Nitro toluene, 2-	88-72-2	Liquid	95
Nitrogen Dioxide (liquid)	10102-44-0	Liquid	>480
Norflurane	811-97-2	Vapor	>480
Oleum (20% free SO3)	8014-95-7	Liquid	>480
Oleum (30% free SO3)	8014-95-7	Liquid	>480
PCB 1254 (50% in Mineral Oil)	11097-69-1	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
PCB 1254 (90%)	11097-69-1	Liquid	>480
Pentachloroantimony	7647-18-9	Liquid	>480
Pentanedial, 1,5- (50%)	111-30-8	Liquid	>480
Peracetic Acid (32%)	79-21-0	Liquid	272
Phenethylene	100-42-5	Liquid	16
Phenol (45 °C, molten)	108-95-2	Liquid	44
Phenol (60 °C, molten)	108-95-2	Liquid	imm
Phenol (85%)	108-95-2	Liquid	>480
Phenyl amine	62-53-3	Liquid	>480
Phenyl ethane	100-41-4	Liquid	imm
Phenyl ethanol, 1-	98-85-1	Liquid	>480
Phenyl glycidyl ether	122-60-1	Liquid	>480
Phenyl trichlorosilane	98-13-5	Liquid	>480
Phosphoric acid (85%)	7664-38-2	Liquid	>480
Phosphorus trichloride	7719-12-2	Liquid	imm
Pimelic ketone	108-94-1	Liquid	136
Polymethylene polyphenyle isocyanate (p-MDI)	9016-87-9	Liquid	>480
Potassium acetate (sat)	127-08-2	Liquid	>480
Potassium chromate (sat)	7789-00-6	Liquid	>480
Potassium hydroxide (45%)	1310-58-3	Liquid	>480
Prop-2-en-1-al (90%)	107-02-8	Liquid	24
Propan -2-ol	67-63-0	Liquid	>480
Propan -2-ol (70%)	67-63-0	Liquid	>480
Propan -2-one	67-64-1	Liquid	13
Propen 1-ol, 2-	107-18-6	Liquid	>480
Propenamide (50%)	79-06-1	Liquid	>480
Propene acid	79-10-7	Liquid	>480
Propenenitrile, 2-	107-13-1	Liquid	36*/48
Propenoic acid butyl ester, 2-	141-32-2	Liquid	>480
Propenoic acid nitrile	107-13-1	Liquid	36*/48

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Propyl bromide, n-	106-94-5	Liquid	12
Propylene aldehyde	123-73-9	Liquid	34
Pyridine	110-86-1	Liquid	31
Pyroacetic ether	67-64-1	Liquid	13
Sarin (GB), MIL-STD-282 (10 g/m <sup>2</sup> )	107-44-8	Liquid	>480 <sup>b</sup>
Silicon tetrachloride	10026-04-7	Liquid	35
Skydrol 4D	mix	Liquid	>480
Skydrol 5	mix	Liquid	>480
Skydrol PE-5	mix	Liquid	>480
Sodium bisulphite (38-40%)	7631-90-5	Liquid	>480
Sodium cyanide (sat)	143-33-9	Liquid	>480
Sodium fluoride (sat)	7681-49-4	Liquid	>480
Sodium hydroxide (50%)	1310-73-2	Liquid	>480
Sodium hypochlorite (15%)	7681-52-9	Liquid	>480
Sodium metabisulphite (38%)	7681-57-4	Liquid	>480
Spectracide® (50% Malathion, 44% Aromatic Solvent)	mix	Liquid	>480
Spiritus	64-17-5	Liquid	>480
Styrene	100-42-5	Liquid	16
Sulfur Mustard (HD), MIL-STD-282 (10 g/m <sup>2</sup> )	505-60-2	Liquid	>480 <sup>b</sup>
Sulfur dioxide	7446-09-5	Vapor	>480
Sulfuric acid (>95%)	7664-93-9	Liquid	>480
Sulfuric acid dimethyl ester	77-78-1	Liquid	>480
Sulfuric acid fuming (20% free SO <sub>3</sub> )	8014-95-7	Liquid	>480
Sulfuric acid fuming (30% free SO <sub>3</sub> )	8014-95-7	Liquid	>480
Tetrachloro ethane, 1,1,2,2,-	79-34-5	Liquid	25
Tetrachloro ethylene, 1,1,2,2-	127-18-4	Liquid	imm
Tetraethyl ammonium hydroxide (35%)	77-98-5	Liquid	>480
Tetraethylene pentamine	112-57-2	Liquid	>480
Tetrafluoroethane, 1,1,1,2-	811-97-2	Vapor	>480
Tetrahydrofuran	109-99-9	Liquid	imm

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Tetramethyl ammonium hydroxide (25%)	75-59-2	Liquid	>480
Thioalkohol	75-08-1	Liquid	imm
Titan(IV) chloride	7550-45-0	Liquid	imm
Titanium tetrachloride	7550-45-0	Liquid	imm
Toluene	108-88-3	Liquid	imm
Toluene diisocyanate, 2,4-	584-84-9	Liquid	>480
Toluene diisocyanate, 2,4- (80%)	584-84-9	Liquid	>480
Toluidine, m-	108-44-1	Liquid	>480
Toluidine, o-	95-53-4	Liquid	>480
Trichlor vinylsilane	75-94-5	Liquid	100
Trichloro benzene, 1,2,4-	120-82-1	Liquid	87
Trichloro ethanol, 2,2,2-	115-20-8	Liquid	>480
Trichloro ethylene	79-01-6	Liquid	imm
Trichloro methane	67-66-3	Liquid	imm
Trichloro phenylsilane	98-13-5	Liquid	>480
Trichloro silane	10025-78-2	Liquid	60
Triethyl amine	121-44-8	Liquid	12*/22
Triethylentetramine (60%)	112-24-3	Liquid	>480
Trifluoro acetic acid	76-05-1	Liquid	>480
Trifluoro methansulfonic acid	1493-13-6	Liquid	>480
Trimethyl phosphite	121-45-9	Liquid	210
VM & P Naphtha	8030-30-6	Liquid	imm
VX Nerve Agent, MIL-STD-282 (10 g/m <sup>2</sup> )	50782-69-9	Liquid	>480 <sup>8</sup>
Vinyl acetate	108-05-4	Liquid	24
Vinyl benzol	100-42-5	Liquid	16
Vinyl carbinol	107-18-6	Liquid	>480
Vinyl chloride	75-01-4	Vapor	>480
Vinyl cyanide	107-13-1	Liquid	36*/48
Vinyl ethylene (gaseous)	106-99-0	Vapor	>480
Vinyl magnesium chloride (15% in Tetrahydrofuran)	3536-96-7	Liquid	imm

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through .
Vinyl pyridine, 4-	100-43-6	Liquid	15
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 µg/cm<sup>2</sup>/min [mins] acc. ASTM F1383

**SPECIAL WARNINGS**

- \*Serged and bound seams are degraded by some hazardous liquid chemicals, such as strong acids, and should not be worn when these chemicals are present.

Important Note:

- \*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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