TF169T GY

DuPont™ Tychem® 6000

DuPont™ Tychem® 6000 Coverall. Respirator Fit Hood. Elastic Wrists. Attached Socks. Double Storm Flap. Taped Seams. Semi-auto locking slider zipper pull. Gray.

Name	Description
Full Part Number	TF169TGYxx0006yy (xx=size;yy=option code)
Fabric/Materials	TYCHEM® 6000
Design	Coverall w/ Resp. Fit Hood, Elastic Wrists, Att. Socks
Seam	Taped
Color	Gray
Quantity/Box	6 per case
Sizes	SM, MD, LG, XL, 2X, 3X, 4X, 5X
Option Codes	00,TV

FEATURES & PRODUCT DETAILS

Tychem® 6000 garments are made of a proprietary barrier film laminated to a Tyvek® substrate. The fabric provides at least 30 minutes of protection against over 180 challenge chemicals including chemical warfare agents and toxic industrial chemicals. Tychem® 6000 garments are strong, durable and lightweight, and they are available in both high-visibility orange and low-visibility gray fabrics, making them a preferred choice for law enforcement, emergency medical services (EMS) technicians and military personnel.

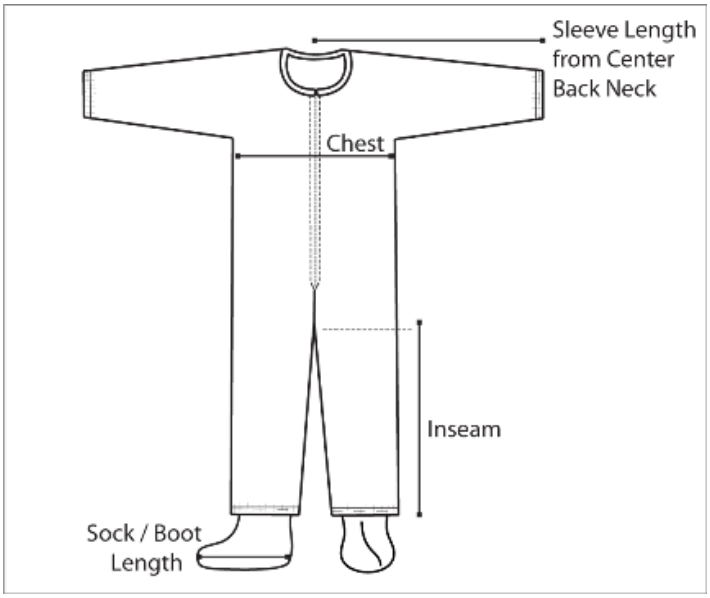
- Zipper features a semi-automatic locking slider allowing the puller to stay down and in a locked position
- Taped seams provide strong chemical resistance against heavy liquid splashes. A sewn seam is covered with a strip of compatible chemical-resistant material through heat sealing.
- Three-piece hood design with longer zipper that extends to chin for complete coverage of neck area and good fit around a respirator
- 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
- Integrated socks composed of garment material
- 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	SM,MD,LG,XL,2X,3X,4X,5X	TF169TGYxx000600
TV	Trade Agreement Act compliant	SM,MD,LG,XL,2X,3X,4X,5X	TF169TGYxx0006TV

SPECIFICATIONS

- The garment shall be constructed of DuPont™ Tychem® 6000 -- a patented fabric made with a multi-layer composite barrier film laminated to a DuPont™ Tyvek® protective fabric.
- The garment shall be gray 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 respirator fit 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 attached socks.
- The garment shall have soles made of garment material.



FINISHED DIMENSIONS

Size	Sleeve Length	Chest Width	Inseam	Fits Chest	Fits Height	Boot Length
SM	33 3/4	22	27 1/2	30 3/4 - 34 1/4	5'0" - 5'7"	16 1/2
MD	34 1/2	24	28 1/2	34 3/4 - 38 1/4	5'3" - 5'7"	16 1/2
LG	36 1/2	26	29	38 3/4 - 42 1/4	5'5" - 5'9"	16 1/2
XL	37 1/2	28	29 1/2	42 3/4 - 46 1/4	5'8" - 6'2"	16 1/2
2X	38 1/4	30	29 3/4	46 3/4 - 50 1/4	6'0" - 6'4"	16 1/2
3X	38 3/4	32	30	50 3/4 - 54 1/4	6'2" - 6'4"	16 1/2
4X	39 1/2	34	30 1/2	54 3/4 - 58 1/4	6'4" - 6'7"	16 1/2
5X	40 1/4	36	30 3/4	58 3/4 - 62 1/4	6'7" - 6'10"	16 1/2

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.
- Wear separate appropriate outer footwear over the garment sock. This garment has attached socks made of garment material. These socks are not suitable to used as outer footwear. They do not have adequate durability or slip resistance to be worn as the outer foot covering. (15)

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
Basis Weight	ASTM D3776	3.5 oz/yd^2
Burst Strength - Ball	ASTM D3787	55 lb_f
Tear Resistance - Trap Tear (MD)	ASTM D5733	8 lb_f
Tear Resistance - Trap Tear (CD)	ASTM D5733	7 lb_f
Breaking Strength - Grab (MD).	ASTM D751	63 lb_f
Breaking Strength - Grab (CD)	ASTM D751	69 lb_f
Puncture, Propagation, Tear Resistance (MD)	ASTM D2582	9 lb_f
Puncture, Propagation, Tear Resistance (CD)	ASTM D2582	7 lb_f
Wearing Apparel Flammability	16 CFR 1610	Class 1

CHEMICAL RESISTANCE

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
2-(2-Butoxyethoxy) ethanol	112-34-5	Liquid	>480
2-Methyl-2-Butanol	75-85-4	Liquid	>480
2-Methyl-4-isothiazolin-3-one (20%)	2682-20-4	Liquid	>480
Acetaldehyde	75-07-0	Liquid	imm
Acetic acid (>95%)	64-19-7	Liquid	>480
Acetic acid 2 ethoxy ethyl ester	111-15-9	Liquid	>480
Acetic acid 2 methoxy ethyl ester	110-49-6	Liquid	>480
Acetic acid ethenyl ester	108-05-4	Liquid	>480
Acetic acid ethyl ester	141-78-6	Liquid	>480
Acetic acid pentyl ester	628-63-7	Liquid	>480
Acetic anhydride	108-24-7	Liquid	>480
Acetic chloride	75-36-5	Liquid	>480
Acetone	67-64-1	Liquid	>480
Acetone cyanohydrin	75-86-5	Liquid	>480
Acetonitrile	75-05-8	Liquid	131
Acetyl chloride	75-36-5	Liquid	>480
Acroleic acid	79-10-7	Liquid	>480
Acrolein	107-02-8	Liquid	75*/101
Acrolein (10 g/m^2)	107-02-8	Liquid	>480
Acrylamide (50%)	79-06-1	Liquid	>480
Acrylic acid	79-10-7	Liquid	>480
Acrylic acid ethyl ester	140-88-5	Liquid	imm*/162
Acrylic acid n-butyl ester	141-32-2	Liquid	>480
Acrylicamide (50%)	79-06-1	Liquid	>480
Acrylonitrile	107-13-1	Liquid	73*/92
Acryloyl Chloride	814-68-6	Liquid	334
Adipic acid dinitrile	111-69-3	Liquid	>480
Adipic acid nitrile	111-69-3	Liquid	>480
Adiponitrile	111-69-3	Liquid	>480
Allyl alcohol	107-18-6	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Allyl chloride	107-05-1	Liquid	381*/447
Amido sulfonic acid (15%)	5329-14-6	Liquid	>480
Amino benzene	62-53-3	Liquid	>480
Amino diphenyl, 4- (1 mg/ml in Methanol)	92-67-1	Liquid	>480
Amino ethanol, 2-	141-43-5	Liquid	>480
Amino ethylethanolamine	111-41-1	Liquid	>480
Amino ethylethanolamine (60%)	111-41-1	Liquid	>480
Amino ethylpiperazine	140-31-8	Liquid	>480
Amino propane, 2-	75-31-0	Liquid	>480
Ammonia (-33 °C, liquid)	7664-41-7	Liquid	20
Ammonia (gaseous)	7664-41-7	Vapor	20
Ammonium bifluoride (sat)	1341-49-7	Liquid	>480
Ammonium fluoride (40%)	12125-01-8	Liquid	>480
Ammonium hydrogendifluoride (sat)	1341-49-7	Liquid	>480
Ammonium hydroxide (32%)	1336-21-6	Liquid	>480
Amyl acetate, n-	628-63-7	Liquid	>480
Amyl alcohol	71-41-0	Liquid	>480
Amyl alcohol, tert-	75-85-4	Liquid	>480
Amyl ester acetic acid	628-63-7	Liquid	>480
Anilin, 4-Trifluoromethoxy-	461-82-5	Liquid	>480
Aniline	62-53-3	Liquid	>480
Anthracene (sat in Toluene)	120-12-7	Liquid	>480
Anthracin (sat in Toluene)	120-12-7	Liquid	>480
Antimony pentachloride	7647-18-9	Liquid	<15
Arsenic (III) chloride	7784-34-1	Liquid	32*/38
Arsenic trichloride	7784-34-1	Liquid	32*/38
Azolidine	123-75-1	Liquid	45*/100
Benzaldehyde	100-52-7	Liquid	>480
Benzenamine	62-53-3	Liquid	>480
Benzene	71-43-2	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Benzene carbonyl chloride	98-88-4	Liquid	>480
Benzene sulfone chloride	98-09-9	Liquid	>480
Benzene sulfonyl chloride	98-09-9	Liquid	>480
Benzisothiazol 1,2- (20%)	2634-33-5	Liquid	>480
Benzo nitrile	100-47-0	Liquid	>480
Benzoyl chloride	98-88-4	Liquid	>480
Benzyl alcohol	100-51-6	Liquid	>480
Benzyl chloride	100-44-7	Liquid	>480
Benzyl cyanide	140-29-4	Liquid	>390
Benzyl methylamine, N-	103-67-3	Liquid	>480
Bis (4-(2,3-epoxypropoxy)phenyl)propane	1675-54-3	Liquid	>480
Bis phenol A diglycidyl ether	1675-54-3	Liquid	>480
Black Liquor (mix)	mix	Liquid	>480
Boron fluoride ethyl ether	109-63-7	Liquid	>480
Boron trifluoride diethyl etherate	109-63-7	Liquid	>480
Boron trifluoride dimethyl etherate	353-42-4	Liquid	>480
Boron trifluoride etherate	109-63-7	Liquid	>480
Brom thiophene, 2-	1003-09-4	Liquid	>480
Bromine	7726-95-6	Liquid	imm
Bromo 4-fluorobenzene, 1-	460-00-4	Liquid	>480
Bromo fluorobenzene, 4-	460-00-4	Liquid	>480
But-3-en-2-one	78-94-4	Liquid	>480
Butadiene, 1,3- (gaseous)	106-99-0	Vapor	>480
Butanal, n-	123-72-8	Liquid	>480
Butanol, 1-	71-36-3	Liquid	>480
Butanol, n-	71-36-3	Liquid	>480
Butanol, tert-	75-65-0	Liquid	37*/205
Butanone	78-93-3	Liquid	40*/64
Butanone oxime, 2-	96-29-7	Liquid	>480
Butenal, 2-	123-73-9	Liquid	147

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Butoxy ethanol, 2-	111-76-2	Liquid	>480
Butyl acetate, n-	123-86-4	Liquid	>480
Butyl acrylate, n-	141-32-2	Liquid	>480
Butyl alcohol, n-	71-36-3	Liquid	>480
Butyl amine	109-73-9	Liquid	200
Butyl ether, n-	142-96-1	Liquid	223*/285
Butyl stannium trichloride	1118-46-3	Liquid	>480
Butylchloroformate	592-34-7	Liquid	>480
Butyraldehyde, n-	123-72-8	Liquid	>480
Butyric Acid	107-92-6	Liquid	>480
Calomel (sat)	10112-91-1	Liquid	>480
Carbon disulfide	75-15-0	Liquid	>480
Carbon tetrachloride	56-23-5	Liquid	imm*/11
Carbon tetrachloride (1000 ppm)	56-23-5	Vapor	>480
Caustic ammonia (32%)	1336-21-6	Liquid	>480
Caustic soda (50% at 50 °C)	1310-73-2	Liquid	>480
Caustic soda (50%)	1310-73-2	Liquid	>480
Cellosolve acetate	110-80-5	Liquid	>480
Chemguard S-764P14A	mix	Liquid	>480
Chlor allylene	107-05-1	Liquid	381*/447
Chlor trinitromethan	76-06-2	Liquid	>480
Chlorine (gaseous)	7782-50-5	Vapor	>480
Chloro 1,3-butadiene, 2- (50% in Butanol)	126-99-8	Liquid	>480
Chloro 1-methylbenzene, 2-	95-49-8	Liquid	>480
Chloro 2,3-epoxy propane, 1-	106-89-8	Liquid	395
Chloro 2-nitrobenzene, 1- (35-40 °C, molten)	88-73-3	Liquid	>480
Chloro acetic acid (80%)	79-11-8	Liquid	>480
Chloro acetone (95%)	78-95-5	Liquid	>480
Chloro acrylonitrile, 2-	920-37-6	Liquid	>480
Chloro aniline, p- (70 °C, molten)	106-47-8	Liquid	imm

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Chloro benzenamine, 4- (70 °C, molten)	106-47-8	Liquid	imm
Chloro benzene	108-90-7	Liquid	>480
Chloro ethanol, 2-	107-07-3	Liquid	>480
Chloro ethene	75-01-4	Vapor	>480
Chloro form	67-66-3	Liquid	imm
Chloro form (1000 ppm)	67-66-3	Vapor	>480
Chloro methyl methyl ether	107-30-2	Liquid	imm*/37
Chloro picrin	76-06-2	Liquid	>480
Chloro prene, 3-	107-05-1	Liquid	381*/447
Chloro propan-2-one, 1- (95%)	78-95-5	Liquid	>480
Chloro toluene, alpha-	100-44-7	Liquid	>480
Chloro toluene, o-	95-49-8	Liquid	>480
Chloroacetic ethylester	105-39-5	Liquid	>480
Chloroacetic ethylester (75% in Ethanol)	105-39-5	Liquid	
Chlorsulfonic acid	7790-94-5	Liquid	>480
Chromic acid (CrO3) (44.9%)	1333-82-0	Liquid	>480
Citric acid (sat)	77-92-9	Liquid	>480
Creosote	8001-58-9	Liquid	>480
Cresol o-	95-48-7	Liquid	179
Cresols, mixed isomers	1319-77-3	Liquid	>480
Cresylic acid	1319-77-3	Liquid	>480
Croton aldehyde	123-73-9	Liquid	147
Cumene	98-82-8	Liquid	>480
Cyanamide (50%)	420-04-2	Liquid	nm
Cyanobenzene	100-47-0	Liquid	>480
Cyanoethylene	107-13-1	Liquid	73*/92
Cyanomethane	75-05-8	Liquid	131
Cyanopropan-2-ol, 2-	75-86-5	Liquid	>480
Cyclo hexane	110-82-7	Liquid	>480
Cyclo hexanone	108-94-1	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Dahlgren Decon solution	mix	Liquid	>480
Diamino sulfo chloride	13360-57-1	Liquid	>480
Diaminoethane, 1,2-	107-15-3	Liquid	>480
Dibromoethane, 1,2-	106-93-4	Liquid	144*/288
Dibutyl 1,2-benzenedicarboxylate	84-74-2	Liquid	nm
Dibutyl phthalate	84-74-2	Liquid	nm
Dibutyl sebacate	109-43-3	Liquid	nm
Dichlorbenzen, 1,2-	95-50-1	Liquid	>480
Dichlorbenzen, 1,3-	541-73-1	Liquid	>480
Dichlorbenzen, 1,4- (50% in Ethanol)	106-46-7	Liquid	>480
Dichlorethane, 1.2.-	107-06-2	Liquid	93
Dichloro -2-propanone, 1,3- (45 °C, molten)	534-07-6	Liquid	>480
Dichloro acetone, 1,3- (45 °C, molten)	534-07-6	Liquid	>480
Dichloro acetyl chloride	79-36-7	Liquid	160
Dichloro ethyl ether	111-44-4	Liquid	>480
Dichloro ethylene, 1,1-	75-35-4	Liquid	>480
Dichloro methane	75-09-2	Liquid	imm
Dichloro methane (10.000 ppm)	75-09-2	Vapor	52
Dichloro methane (1000 ppm)	75-09-2	Vapor	>480
Dichloro propene, 2,3-	78-88-6	Liquid	imm*/25
Dicyanobutane, 1,4-	111-69-3	Liquid	>480
Diesel Fuel Grade D-2	mix	Liquid	>480
Diesel fuel	68334-30-5	Liquid	>480
Diethyl amine	109-89-7	Liquid	>480
Diethyl benzene (95%)	25340-17-4	Liquid	>480
Diethyl ethanamine, N,N-	121-44-8	Liquid	>480
Diethyl ether	60-29-7	Liquid	>480
Diethyl sulfate	64-67-5	Liquid	>480
Diethylene glycol monobutyl ether	112-34-5	Liquid	>480
Diethylene triamine	111-40-0	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Diketene Acetone (95%)	5394-63-8	Liquid	>480
Dimethyl acetamide, N,N-	127-19-5	Liquid	>480
Dimethyl amine	124-40-3	Vapor	>480
Dimethyl aniline, N,N-	121-69-7	Liquid	>480
Dimethyl dichlorosilane	75-78-5	Liquid	>480
Dimethyl formamide, N,N-	68-12-2	Liquid	>480
Dimethyl fumarate (27 °C, solid)	624-49-7	Solid	nm
Dimethyl fumarate (37 °C, solid)	624-49-7	Solid	nm
Dimethyl ketal	67-64-1	Liquid	>480
Dimethyl ketone	67-64-1	Liquid	>480
Dimethyl nitrosamine	62-75-9	Liquid	>480
Dimethyl phenylamine, N,N-	121-69-7	Liquid	>480
Dimethyl propandioate	108-59-8	Liquid	>480
Dimethyl sulfate	77-78-1	Liquid	>480
Dimethyl sulfide	75-18-3	Liquid	271
Dimethyl sulfoxide	67-68-5	Liquid	>480
Dimethylmalonate	108-59-8	Vapor	>480
Dioxane, 1,4-	123-91-1	Liquid	>480
Diphenyl methane diisocyanate, 4,4'- (50 °C, molten)	101-68-8	Liquid	>480
Diphosgene	503-38-8	Liquid	>480
Dowtherm Heat Transfer Fluid	mix	Liquid	>480
Dytek® A	15520-10-2	Liquid	>480
Epichlorohydrin	106-89-8	Liquid	395
Epoxy ethane (gaseous)	75-21-8	Vapor	126
Epoxy propane, 1,2-	75-56-9	Liquid	43
Ethane 1,2-diol	107-21-1	Liquid	>480
Ethane dioic acid (sat)	144-62-7	Liquid	>480
Ethane diol dipropanoate, 1,2-	123-73-9	Liquid	147
Ethane nitrile	75-05-8	Liquid	131
Ethane thiol	75-08-1	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Ethane trichloride	79-00-5	Liquid	164*/232
Ethanol	64-17-5	Liquid	>480
Ethanol amine	141-43-5	Liquid	>480
Ethanoyl chloride	75-36-5	Liquid	>480
Ethansulphonic acid (70%)	594-45-6	Liquid	>480
Ethoxy ethanol, 2-	110-80-5	Liquid	>480
Ethoxy ethylacetat	111-15-9	Liquid	>480
Ethyl Cellosolve®	110-80-5	Liquid	>480
Ethyl acetate	141-78-6	Liquid	>480
Ethyl acrylate	140-88-5	Liquid	imm*/162
Ethyl alcohol	64-17-5	Liquid	>480
Ethyl benzene	100-41-4	Liquid	>480
Ethyl ethanamine, N-	109-89-7	Liquid	>480
Ethyl ether	60-29-7	Liquid	>480
Ethyl glycol acetate	111-15-9	Liquid	>480
Ethyl hexanoic acid	149-57-5	Liquid	>480
Ethyl mercaptan	75-08-1	Liquid	>480
Ethyl nitrile	75-05-8	Liquid	131
Ethylchloroformate	541-41-3	Liquid	>480
Ethylene carboxylic acid	79-10-7	Liquid	>480
Ethylene chlorohydrin	107-07-3	Liquid	>480
Ethylene diamine	107-15-3	Liquid	>480
Ethylene dibromide	106-93-4	Liquid	144*/288
Ethylene dichloride	107-06-2	Liquid	93
Ethylene glycol	107-21-1	Liquid	>480
Ethylene glycol mono ethyl ether acetate	111-15-9	Liquid	>480
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

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Ethylene oxide (gaseous)	75-21-8	Vapor	126
Ethylene tetrachloride	127-18-4	Liquid	>480
Ethylene trichloride	79-01-6	Liquid	>480
Ferric (II) chloride (sat)	7758-94-3	Liquid	>480
Ferric (III) chloride (40%)	7705-08-0	Liquid	>480
Fluorobenzene	462-06-6	Liquid	>480
Fluorosilicic acid (33-35%)	16961-83-4	Liquid	>480
Fluorosulfonic acid	7789-21-1	Liquid	194
Formaldehyde (37%)	50-00-0	Liquid	>480
Formalin (37% (10-15% Methanol))	50-00-0	Liquid	>480
Formalin (37%)	50-00-0	Liquid	>480
Formic acid (50%)	64-18-6	Liquid	>480
Formic acid (>95%)	64-18-6	Liquid	260
Furaldehyde, 2-	98-01-1	Liquid	>480
Furan	110-00-9	Liquid	97
Furfural	98-01-1	Liquid	>480
Gasoline, leaded	mix	Liquid	imm*/21
Gasoline, unleaded	86290-81-5	Liquid	>480
Glutaral (50%)	111-30-8	Liquid	170
Glutaraldehyde (50%)	111-30-8	Liquid	170
Glycol alcohol	107-21-1	Liquid	>480
Glycol chlorohydrin	107-07-3	Liquid	>480
Green Liquor (mix)	mix	Liquid	>480
Heptane	142-82-5	Liquid	>480
Hexamethylene diamine (45 °C, molten)	124-09-4	Liquid	>480
Hexamethylene diisocyanate	822-06-0	Liquid	>480
Hexane, n-	110-54-3	Liquid	>480
Hexanone	108-94-1	Liquid	>480
Hexone	108-10-1	Liquid	>480
Hexyl chloro formate, 2-	6092-54-2	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Hydrazine	302-01-2	Liquid	283
Hydriodic acid (55-57%)	10034-85-2	Liquid	>480
Hydrobromic acid (48%)	10035-10-6	Liquid	>480
Hydrochloric acid (37%)	7647-01-0	Liquid	>480
Hydrofluoric acid (48-51%)	7664-39-3	Liquid	>480
Hydrofluoric acid (60%)	7664-39-3	Liquid	52
Hydrofluoric acid (70%)	7664-39-3	Liquid	35
Hydrogen bromide (gaseous)	10035-10-6	Vapor	>480
Hydrogen chloride (gaseous)	7647-01-0	Vapor	>480
Hydrogen fluoride (20-27 °C, gaseous)	7664-39-3	Vapor	imm
Hydrogen peroxide (50%)	7722-84-1	Liquid	>480
Hydrogen peroxide (70%)	7722-84-1	Liquid	>480
Hydroxy 1,2,3-propanetricarboxylic acid, 2- (sat)	77-92-9	Liquid	>480
Hydroxy 1-ethanethiol, 2-	60-24-2	Liquid	>480
Hydroxy 2-methylpropionitrile, 2-	75-86-5	Liquid	>480
Hydroxy isobutyronitrile	75-86-5	Liquid	>480
Hydroxy toluene	100-51-6	Liquid	>480
Hydroxy toluene, o-	95-48-7	Liquid	179
Hypophosphorus acid (50%)	6303-21-5	Liquid	>480
Iodomethane	74-88-4	Liquid	296
Isobutyl methyl ketone	108-10-1	Liquid	>480
Isophthaloyldichloride (45 °C, molten)	99-63-8	Liquid	>480
Isopropanol	67-63-0	Liquid	>480
Isopropyl alcohol	67-63-0	Liquid	>480
Isopropyl amine	75-31-0	Liquid	>480
Isopropyl benzene	98-82-8	Liquid	>480
Isopropyl bromoacetate (>95%)	29921-57-1	Liquid	>480
Isopropylidenediphenol diglycidyl ether, 4,4'-	1675-54-3	Liquid	>480
Kerosene	8008-20-6	Liquid	>480
Ketone propane	67-64-1	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Lewisite (L), FINABEL 0.7.C	541-25-3	Liquid	>155[8]
Lewisite (L), MIL-STD-282 (100 g/m^2)	541-25-3	Liquid	360[8]
Limonene d-	5989-27-5	Liquid	>480
MEK	78-93-3	Liquid	40*/64
Maleic anhydride (66 °C, molten)	108-31-6	Liquid	22
Mercapto acetic acid	68-11-1	Liquid	>480
Mercapto ethanol	60-24-2	Liquid	>480
Mercuric I chloride (sat)	10112-91-1	Liquid	>480
Mercury	7439-97-6	Liquid	>480
Methacrylic acid	79-41-4	Liquid	>480
Methanesulfonyl chloride	124-63-0	Liquid	>480
Methanesulphonic acid	75-75-2	Liquid	>480
Methanethiol	74-93-1	Vapor	>480
Methanol	67-56-1	Liquid	117
Methoxy 2-methylpropane, 2-	1634-04-4	Liquid	>480
Methoxy chloromethane	107-30-2	Liquid	imm*/37
Methoxy ethanol, 2	109-86-4	Liquid	>480
Methoxy ethylacetate, 2-	110-49-6	Liquid	>480
Methyl -2-pyridyl acetate	1658-42-0	Liquid	>480
Methyl 1,5-pentantedinitrile, 2-	4553-62-2	Liquid	>480
Methyl 2-methyl-2-propenoate	80-62-6	Liquid	imm*/53
Methyl 2-pyrrolidon, N-	872-50-4	Liquid	>480
Methyl 4-isopropenyl-1-cyclohexene, 1-	5989-27-5	Liquid	>480
Methyl Ethyl Ketone Peroxide (35%)	1338-23-4	Liquid	>480
Methyl N-nitrosomethanamine, N-	62-75-9	Liquid	>480
Methyl acetyl	67-64-1	Liquid	>480
Methyl acrolein	123-73-9	Liquid	147
Methyl acrylate	96-33-3	Liquid	>480
Methyl amine (gaseous)	74-89-5	Vapor	>480
Methyl aniline, o-	95-53-4	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Methyl benzol	108-88-3	Liquid	>480
Methyl benzylamine, N-	103-67-3	Liquid	>480
Methyl chloride (gaseous)	74-87-3	Vapor	>480
Methyl chloro formate	79-22-1	Liquid	204*/308
Methyl cyanide	75-05-8	Liquid	131
Methyl ethyl ketone	78-93-3	Liquid	40*/64
Methyl ethyl ketoxime	96-29-7	Liquid	>480
Methyl formamide, N-	123-39-7	Liquid	>480
Methyl hydrazine	60-34-4	Liquid	183*/283
Methyl imidazole, 1-	616-47-7	Liquid	>480
Methyl iodide	74-88-4	Liquid	296
Methyl isocyanate	624-83-9	Liquid	imm
Methyl ketone	67-64-1	Liquid	>480
Methyl mercaptan	74-93-1	Vapor	>480
Methyl methacrylate	80-62-6	Liquid	imm*/53
Methyl pentan-2-one, 4-	108-10-1	Liquid	>480
Methyl phenols	1319-77-3	Liquid	>480
Methyl propan-2-ol, 2-	75-65-0	Liquid	37*/205
Methyl propenoic acid, 2-	79-41-4	Liquid	>480
Methyl pyridine, 2-	109-06-8	Liquid	>480
Methyl pyridine, 3-	108-99-6	Liquid	>480
Methyl tert-butyl ether	1634-04-4	Liquid	>480
Methyl trichlorosilane	75-79-6	Liquid	>480
Methyl vinyl ketone	78-94-4	Liquid	>480
Methylen Isocyclohexylamine, 4,4- (40 °C)	1761-71-3	Liquid	>480
Methylene bromide	74-95-3	Liquid	imm
Methylene chloride	75-09-2	Liquid	imm
Methylene chloride (10.000 ppm)	75-09-2	Vapor	52
Methylene chloride (1000 ppm)	75-09-2	Vapor	>480
Methylene diphenyl diisocyanate, 4,4'- (50 °C, molten)	101-68-8	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Naphthalene	91-20-3	Solid	>480
Naphthalene (25% in Diethylene glycol dimethylether)	91-20-3	Liquid	>480
Neoprene (50% in Butanol)	126-99-8	Liquid	>480
Nicotine	54-11-5	Liquid	>480
Nitric acid (70%)	7697-37-2	Liquid	>480
Nitric acid (>95%)	7697-37-2	Liquid	46
Nitric acid, red fuming (90%)	52583-42-3	Liquid	imm*/10
Nitro benzene	98-95-3	Liquid	>480
Nitro chlormethan	76-06-2	Liquid	>480
Nitro methane	75-52-5	Liquid	233
Nitro propane, 2-	79-46-9	Liquid	>480
Nitro toluene, 2-	88-72-2	Liquid	>480
Nitrogen dioxide	10102-44-0	Vapor	<15
Norflurane	811-97-2	Vapor	>480
Octyl chlor formiate	7452-59-7	Liquid	>480
Oleum (20% free SO3)	8014-95-7	Liquid	>480
Oleum (40% free SO3)	8014-95-7	Liquid	455*/468
Oleum (65% free SO3)	8014-95-7	Liquid	248
Oxalic acid (sat)	144-62-7	Liquid	>480
PCB in transformer oil (mix)	mix	Liquid	>480
Pentachloroantimony	7647-18-9	Liquid	<15
Pentanedial, 1,5- (50%)	111-30-8	Liquid	170
Pentanoic acid	109-52-4	Liquid	>480
Pentanol, 1-	71-41-0	Liquid	>480
Pentanol, tert-	75-85-4	Liquid	>480
Pentene nitrile, 2-	13284-42-9	Liquid	>480
Pentyl acetate	628-63-7	Liquid	>480
Peracetic Acid (32%)	79-21-0	Liquid	>480
Perchloric acid (70%)	7601-90-3	Liquid	>480
Phenethylene	100-42-5	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Phenol (45 °C, molten)	108-95-2	Liquid	25
Phenol (60 °C, molten)	108-95-2	Liquid	imm
Phenol (85%)	108-95-2	Liquid	>480
Phenyl acetonitrile	140-29-4	Liquid	>390
Phenyl amine	62-53-3	Liquid	>480
Phenyl chlor formiate	1885-14-9	Liquid	>480
Phenyl chloride	108-90-7	Liquid	>480
Phenyl cyanide	100-47-0	Liquid	>480
Phenyl ethane	100-41-4	Liquid	>480
Phenyl ethanol, 1-	98-85-1	Liquid	>480
Phenyl propane, 2-	98-82-8	Liquid	>480
Phenyl trichlorosilane	98-13-5	Liquid	>480
Phosgene	75-44-5	Vapor	>480
Phosphine	7803-51-2	Vapor	imm
Phosphinic acid (50%)	6303-21-5	Liquid	>480
Phosphoric acid (85%)	7664-38-2	Liquid	>480
Phosphorus oxychloride	10025-87-3	Liquid	>480
Phosphorus trichloride	7719-12-2	Liquid	>480
Picoline, 2-	109-06-8	Liquid	>480
Picoline, 3-	108-99-6	Liquid	>480
Pimelic ketone	108-94-1	Liquid	>480
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
Potassium hydroxide (50%)	1310-58-3	Liquid	>480
Prop-2-en-1-al	107-02-8	Liquid	75*/101
Prop-2-en-1-al (10 g/m^2)	107-02-8	Liquid	>480
Prop-2-yn-1-ol	107-19-7	Liquid	123
Propan -1-ol	71-23-8	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Propan -2-ol	67-63-0	Liquid	>480
Propan -2-one	67-64-1	Liquid	>480
Propanoic acid	79-09-4	Liquid	>480
Propanol, 1-	71-23-8	Liquid	>480
Propanol, n-	71-23-8	Liquid	>480
Propargyl alcohol	107-19-7	Liquid	123
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	73*/92
Propenoic acid butyl ester, 2-	141-32-2	Liquid	>480
Propenoic acid nitrile	107-13-1	Liquid	73*/92
Propychloroformate	109-61-5	Liquid	>480
Propyl alcohol	71-23-8	Liquid	>480
Propyl amine, n-	107-10-8	Liquid	16*/21
Propyl bromide, n-	106-94-5	Liquid	>480
Propylene aldehyde	123-73-9	Liquid	147
Propylene oxide, 1,2-	75-56-9	Liquid	43
Pyridene, 2-fluoro-6-(trifluoromethyl)	94239-04-0	Liquid	>480
Pyridine	110-86-1	Liquid	>480
Pyroacetic ether	67-64-1	Liquid	>480
Pyrrolidine	123-75-1	Liquid	45*/100
Sarin (GB), FINABEL 0.7.C	107-44-8	Liquid	>1400[8]
Sarin (GB), MIL-STD-282 (100 g/m^2)	107-44-8	Liquid	>480[8]
Silane	7803-62-5	Vapor	>480
Silicon tetrachloride	10026-04-7	Liquid	>480
Sodium bisulphite (38-40%)	7631-90-5	Liquid	>480
Sodium cyanide (45%)	143-33-9	Liquid	>480
Sodium cyanide (sat)	143-33-9	Liquid	>480
Sodium hydroxide (50% at 50 °C)	1310-73-2	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Sodium hydroxide (50%)	1310-73-2	Liquid	>480
Sodium hypochlorite (15%)	7681-52-9	Liquid	>480
Soman (GD), FINABEL 0.7.C	96-64-0	Liquid	>1400[8]
Soman (GD), MIL-STD-282 (100 g/m^2)	96-64-0	Liquid	>480[8]
Spiritus	64-17-5	Liquid	>480
Styrene	100-42-5	Liquid	>480
Sulfamic acid (15%)	5329-14-6	Liquid	>480
Sulfamidic acid (15%)	5329-14-6	Liquid	>480
Sulfur Mustard (HD), FINABEL 0.7.C	505-60-2	Liquid	>1400[8]
Sulfur Mustard (HD), MIL-STD-282 (100 g/m^2)	505-60-2	Liquid	>480[8]
Sulfur dioxide	7446-09-5	Vapor	28*/46
Sulfuric acid (98% at 50 °C)	7664-93-9	Liquid	>480
Sulfuric acid (>95%)	7664-93-9	Liquid	>480
Sulfuric acid diethyl ester	64-67-5	Liquid	>480
Sulfuric acid dimethyl ester	77-78-1	Liquid	>480
Sulfuric acid fuming (20% free SO3)	8014-95-7	Liquid	>480
Sulfuric acid fuming (40% free SO3)	8014-95-7	Liquid	455*/468
Sulfuric acid fuming (65% free SO3)	8014-95-7	Liquid	248
Sulfuryl chloride	7791-25-5	Liquid	>480
Tabun (GA), FINABEL 0.7.C	77-81-6	Liquid	>1400[8]
Tabun (GA), MIL-STD-282 (100 g/m^2)	77-81-6	Liquid	>480[8]
Tetrachloro bisphenol-A, 2,2',6,6'-	79-95-8	Solid	>480
Tetrachloro ethane, 1,1,2,2,-	79-34-5	Liquid	>480
Tetrachloro ethylene, 1,1,2,2-	127-18-4	Liquid	>480
Tetrachloro methane	56-23-5	Liquid	imm*/11
Tetrachloro methane (1000 ppm)	56-23-5	Vapor	>480
Tetraethylene pentamine	112-57-2	Liquid	>480
Tetrafluoroethane, 1,1,1,2-	811-97-2	Vapor	>480
Tetrahydrofuran	109-99-9	Liquid	>480
Tetramethyl ammonium hydroxide (25%)	75-59-2	Liquid	>480

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Thiazol, 1,3-	288-47-1	Liquid	>480
Thioalkohol	75-08-1	Liquid	>480
Thioglycolic acid	68-11-1	Liquid	>480
Thionyl chloride	7719-09-7	Liquid	21
Thiophene	110-02-1	Liquid	>480
Tin chloride, mono-n-butyl	1118-46-3	Liquid	>480
Tin chloride, tri-n-butyl	1461-22-9	Liquid	nm
Titan(IV) chloride	7550-45-0	Liquid	>480
Titanium tetrachloride	7550-45-0	Liquid	>480
Toluene	108-88-3	Liquid	>480
Toluene diisocyanate, 2,4-	584-84-9	Liquid	>480
Toluene diisocyanate, 2,4- (80%)	584-84-9	Liquid	>480
Toluidine, o-	95-53-4	Liquid	>480
Tributyl amine (95%)	102-82-9	Liquid	>480
Trichloro acetic acid (sat)	76-03-9	Liquid	>480
Trichloro acetone, 1,1,3- (87.7%)	921-03-9	Liquid	467*/476
Trichloro benzene, 1,2,4-	120-82-1	Liquid	>480
Trichloro ethane, 1,1,2-	79-00-5	Liquid	164*/232
Trichloro ethanol, 2,2,2-	115-20-8	Liquid	>480
Trichloro ethylene	79-01-6	Liquid	>480
Trichloro methane	67-66-3	Liquid	imm
Trichloro methane (1000 ppm)	67-66-3	Vapor	>480
Trichloro phenylsilane	98-13-5	Liquid	>480
Triethyl amine	121-44-8	Liquid	>480
Triethylentetramine (60%)	112-24-3	Liquid	>480
Trifluoro acetic acid	76-05-1	Liquid	>480
Trifluoro methansulfonic acid	1493-13-6	Liquid	>480
Trimethyl chinon (30 °C, molten)	935-92-2	Liquid	nm
VX Nerve Agent, FINABEL 0.7.C	50782-69-9	Liquid	>1400[8]
VX Nerve Agent, MIL-STD-282 (100 g/m^2)	50782-69-9	Liquid	>480[8]

Hazard / Chemical Name	Cas Number	Phase	Normalized Break Through
Vinyl acetate	108-05-4	Liquid	>480
Vinyl benzol	100-42-5	Liquid	>480
Vinyl carbinol	107-18-6	Liquid	>480
Vinyl chloride	75-01-4	Vapor	>480
Vinyl cyanide	107-13-1	Liquid	73*/92
Vinyl ethylene (gaseous)	106-99-0	Vapor	>480
Vinylidene chloride	75-35-4	Liquid	>480
White Liquor	mix	Liquid	>480
White spirit	mix	Liquid	>480
Xylene, mixed isomers	1330-20-7	Liquid	>480
Xylidine, 2,4-	95-68-1	Liquid	>480

BT0.1 Normalized breakthrough time at 0.1 µg/cm²/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/cm²/min [mins] acc. ASTM F1383

SPECIAL WARNINGS

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Important Note.