4H Chemical Protection Guide

February 2001

Chemical Testing as per
Fixperm X10, ASTM F739 and EN 374.
Detection limit: 1 µg/cm²/min.

CE Type Approval (Cat. 3)
as per EN 374 and EN 420 was performed by notified body FORCE Dantest (0200).
The approval is based on chemicals marked with CE 0200 in this guide.

Protection Index as per EN 374

Breakthrough time	
>10 minutes	Class 1
>30 minutes	Class 2
>60 minutes	Class 3
>120 minutes	Class 4
>240 minutes	Class 5
>480 minutes	Class 6

NT means Not Tested at this temperature

* means new chemical or new test result

means known or suspected carcinogen

Please observe **Instructions for Use** on the last page of this guide

Chemical Names (and Synonyms)	CAS Reg. nr.	21°C (70°F) Break-through time minutes	21°C (70°F) Protection Index as per EN 374	35°C (95°F) Break-through time minutes
Acetaldehyde	75-07-0	>240	5	NT
Acetic Acid 100%	64-19-7	>480	6	53
Acetic Anhydride (Acetyl Oxide)	108-24-7	>480	6	>240
Acetone	67-64-1	>480	6	>240
Acetone/Water 20:80	67-64-1	>240	5	>240
Acetonitrile (Methyl Cyanide)	75-05-8	>480	6	>240
Acetophenone (1-Phenylethanone)	98-86-2	>480	6	>240
Acrolein (Acrylaldehyde orn 2-Propenal)	107-02-8	>480	6	>240
Acrylic Acid (2-Propenoic Acid)	79-10-7	>240	5	210
Acrylonitrile (Propenenitrile or VCN)	107-13-1	>480	6	>240
Allylamine (2-Propen-1-Amine)	107-11-9	15	1	NT
Allyl Chloride (Chlor-propylene)	107-05-1	>240	5	>240
Ammonia Water 2N	7664-41-7	110	3	40
Ammonia Water 25%	7664-41-7	>240	5	30
Ammonium Fluoride 34%	12125-01-8	>240	5	>240
Ammonium Hydroxide, 29,1 w/w% in Water *	1336-21-6	>240	5	>240
Aniline	62-53-3	>480	6	>240
Benzaldehyde	100-52-7	>480	6	>240
Benzene (Bensol)	71-43-2	>480	6	>240

Chemical Names (and Synonyms)	CAS Reg. nr.	21°C (70°F)		35°C (95°F)
		Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
3,3', 4,4' Benzophenone Tetracarboxylic Dianhydride (BDTA)	2421-28-5	>240	5	NT
Benzyl Alcohol (Benzene Methanol)	100-51-6	>480	6	NT
Benzyl Chloride (Chloromethyl Benzene)	100-44-7	>480	6	>240
Benzyl Cyanide	140-29-4	>240	5	>240
n-Benzyl Dimethylamine	103-83-3	>240	5	NT
Bromoacetonitrile *	590-17-0	>240	5	>240
1-Bromoethylethyl Carbonate	89766-09-6	>240	5	>240
n-Butanol (n-Butyl Alcohol or 1-Butanol)	71-36-3	>480	6	>240
sec-Butanol (sec-Butyl Alcohol or 2-Butanol)	78-92-2	>480	6	>240
tert-Butanol (tert-Butyl Alcohol)	75-65-0	>480	6	>240
n-Butyl Acetate (Butyl Acetic Acid)	123-86-4	>480	6	>240
Butyl Acrylate (Butyl-2-Propenoate)	141-32-2	>480	6	>240
Butyl Glycol (2-Butoxyethanol)	111-76-2	>240	5	>240
tert-Butyl Hydroperoxide (*tert*-Butyl Methyl Ether)	75-91-2	>240	5	NT
n-Butyraldehyde (*n*-Butyl Aldehyde)	123-72-8	>480	6	>240
Carbon Disulphide (Carbon Bisulphide)	75-15-0	>480	6	>240
Carbon Tetrachloride (Tetrachloromethane)	56-23-5	>480	6	>240
Chlorine	7782-50-5	>240	5	NT
Chloroacetone (Chloro-2-Propanone)	78-95-5	>240	5	>240
2-Chloroethanol (Ethylene Chlorohydrin)	107-07-3	>240	5	>240
Chloroform (Trichloromethane)	67-66-3	>480	6	>240
3-Chloropropene	107-05-1	>240	5	NT
Chromic Acid 50%	1333-82-0	>240	5	>240
Creosote	8001-58-9	>240	5	>240
Cyclohexane	110-82-7	>480	6	>240
Cyclohexanol	108-93-0	>480	6	>240
Cyclohexanone	108-94-1	>480	6	>240
Cyclopentanone	120-92-3	>240	5	>240
Cypermethrin (Cymbush®)	52315-07-8	>240	5	NT
Diacetone Alcohol (4-Hydroxy-4-Methyl-2-Pentanone)	123-42-2	>240	5	>240
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	>480	6	NT
Dibutyl Ether	142-96-1	>480	6	NT
Di-*n*-butyl Phthalate (DBP or *n*-Butyl Phthalate)	84-74-2	>240	5	>240
1,3-Dichloro-2-Butene	926-57-8	>240	5	NT
1,2-Dichlorobenzene (*o*-Dichlorobenzene)	95-50-1	>240	5	>240
1,2-Dichloroethane (Ethylene Dichloride)	107-06-2	>240	5	>240
1,1-Dichloroethylene (Vinylidene Chloride) *	75-35-4	>480	6	>480
Diethylacetamide (N,N-Diethylacetamide)	685-91-6	>480	6	>240
Diethylamine	109-89-	60	3	6
Diethylenetriamine (N,N,-Diethylethanolamine)	111-40-0	>240	5	NT
Diethyl Ether (Ethyl Ether)	60-29-7	>480	6	>240
N,N Diethylnitrosoamin (N-Nitrosodiethylamine)	55-18-5	>240	5	NT
Diethylphthalate (Phthalic Acid Diethylester)	84-66-2	>240	5	NT
Diisobutyl Ketone (2,6-Dimethyl-4-Heptanone)	108-83-8	>240	5	>240
N,N Dimethyl Cyclohexylamine	98-94-2	>480	6	NT
Dimethyl Mercury *	593-74-8	60	3	NT

Chemical Names (and Synonyms)	CAS Reg. nr.	21°C (70°F)		35°C (95°F)
		Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
Dimethyl Sulphoxide	67-68-5	>480	6	194
N,N Dimethylacetamide (DMAC)	127-19-5	>240	5	>240
Dimethylamino-Ethanol (N,N-Dimethylethanolamine)	108-01-0	350	5	NT
N,N Dimethylaniline (DMA)	121-69-7	>240	5	>240
Dimethylethanolamine	108-01-0	>240	5	>240
Dimethylethylamine (N-Ethyldimethylamine)	598-56-1	9	-	2
Dimethylformamide (DMF)	68-12-2	>480	6	>240
Dimethyl Sulphate (Methyl Sulphate or DMS)	77-78-1	>240	5	>240
1,4-Dioxane (Diethylene Oxide)	123-91-1	>480	6	>240
Dipentene (d,l-limonene)	138-86-3	>480	6	36
Di-(2-Ethylhexyl) Phthalate	117-81-7	>240	5	>240
Diquat Dibromide (Reglone®)	85-00-7	>240	5	>240
Dodecane	112-40-3	>480	6	>240
Dynasylan BH-N	-	48-	6	NT
Epichlorohydrin (1,2-Epoxy-3-Chloropropane)	106-89-8	>240	5	>240
Ethanol 96% (Ethyl Alcohol)	64-17-5	>480	6	>240
Ethanolamine (1-Aminoethanol)	141-43-5	>480	6	>240
Ethidium Bromide, 1% solution *	-	>480	6	NT
2-(2-Amino) Ethoxy Ethanol	929-06-6	>240	5	>240
2-Ethoxy-1-Propanol	19089-45-5	>240	5	>240
Ethyl Acetate	141-78-6	480	6	>240
Ethyl Acrylate (Ethylpropenoate)	140-88-5	>240	5	>240
Ethyl Benzene	100-41-4	>480	6	>480
Ethyl Glycol (2-Ethoxyethanol)	110-80-5	>240	5	>240
Ethyl Glycol Acetate (2-Ethoxyethyl Acetate)	111-15-9	>240	5	>240
Ethylenediamine (1,2-Diaminoethane)	107-15-3	92	3	47
Ethylene Glycol (Ethanediol)	107-21-1	>240	5	>240
Ethylene Oxide (Orixane)	75-21-8	>240	5	NT
Extraction Petrol 80/110	-	>240	5	>240
Fluazifop-Butyl	69806-50-4	>480	6	>240
Formaldehyde	50-00-0	>240	5	>240
Formic Acid 98-100% (Methanoic Acid)	64-18-6	120	4	60
Freon 113 (Trichlorotrifluoroethane or TF)	76-13-1	>240	5	>240
Furfural (2-Furaldehyde)	98-01-1	>480	6	>240
Furfuryl Alcohol	98-00-0	>480	6	>240
GammaButyrolactone Merck 801661	96-48-0	>480	6	NT
Glutardialdehyde (1,5-Pentanedial) 2% in Water	111-30-8	>240	5	>240
Glutardialdehyde (1,5-Pentanedial) 25% in Water	111-30-8	>240	5	>240
Glycerol (Glycerine)	56-81-5	>240	5	>240
Glycerol Monothioglycolate 80%	30618-84-9	>240	5	NT
Glycerolpropoxytriacrylate	-	>240	5	>240
Heptane (2-Heptanone)	142-82-5	>480	6	>240
1,1,1,3,3,3-Hexamethyl Disilazane (HMDS)	999-97-3	>240	5	>240
n-Hexane	110-54-3	>480	6	>240
Hydraulic Oils	-	>240	5	>240
Hydrazin 80% (Diamine)	7803-57-8	>240	5	>240

Chemical Names (and Synonyms)	CAS Reg. nr.	21°C (70°F)		35°C (95°F)
		Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
Hydrochloric Acid 2N	7647-01-0	>240	5	>240
Hydrochloric Acid 37%	7647-01-0	>240	5	NT
Hydrofluoric Acid 10%	7664-39-3	>240	5	120
Hydrofluoric Acid 30%	7664-39-3	>240	5	120
Hydrofluoric Acid 40%	7664-39-3	>240	5	120
Hydrofluoric Acid 49%	7664-39-3	>240	5	30
Hydrofluoric Acid 70%	7664-39-3	60	3	30
Hydrofluoric Acid 100% *	7664-39-3	15	1	NT
Hydrogen Cyanide	74-90-8	>240	5	NT
Hydrogen Peroxide 30%	7722-84-1	>240	5	NT
2-Hydroxyethyl-Methacrylate (HEMA)	868-77-9	>240	5	NT
2-Hydroxyethyl-N,N,N-Trimethyl Ammonium Hydroxide (Choline)	-	>240	5	>240
2-Hydroxyethyl Acrylate	818-61-1	>240	5	>240
Isobutanol (Isobutyl Alcohol)	78-83-1	>240	5	>240
Isophorone	78-59-1	>240	5	>240
Isopropanol (Isopropyl Alcohol or IPA)	67-63-0	>480	6	>240
Isoprophyl Nitrate	1712-64-7	>240	5	NT
Lubricating Oil, DTE 25	-	>240	5	>240
Malathion	121-75-5	>240	5	NT
2-Mercaptoethanol	60-24-2	>240	5	>240
Mercury (Hg) (Quicksilver)	7939-97-6	>480	6	NT
Methacrylic Acid (2-Methylpropanoic Acid)	79-41-4	>480	6	>240
Methacrylic Adhesive	-	>240	5	>240
Methanol	67-56-1	>480	6	30
1-Methoxy-2-Propanol	107-98-2	>240	5	>240
1-Methoxy-2-Propylacetate	108-65-6	>240	5	>240
2-Methoxyethanol	109-86-4	>240	5	>240
2-Methoxyethyl Acetate	110-49-6	>240	5	>240
Methyl Acetate	79-20-9	>480	6	>240
5-Methyl-2-Hexanone (Methyl Isopentyl Ketone)	110-12-3	>480	6	>240
Methyl Isobutyl Ketone (MIBK)	108-10-1	>480	6	>240
Methyl Methacrylate	80-62-6	>480	6	>480
Methylnadic Anhydride (Methyl-5-Norbornene 2,3-Dicarboxylic Anhydride)	25134-21-8	>240	5	NT
Methyl Pentyl Ketone (2-Heptanone)	110-43-0	>240	5	>240
N-Methyl-2-Pyrrolidone (NMP)	872-50-4	>240	5	>240
Methyl-*tert*-Butyl Ether (MTBE)	1634-04-4	>480	6	NT
Methyl Trichlorosilane (Trichloromethylsilane)	75-79-6	>240	5	NT
Methylamine 40%	74-89-5	>240	5	80
Methylene Bisphenyl-4,4-Diisocyanate (MDI)	101-68-8	>480	6	>240
Methylene Chloride (Dichloromethane)	75-09-2	>480	6	>240
Methyl Ethyl Ketone (MEK or 2-Butanone)	78-93-	>480	6	>240
Methyliodide (Iodomethane)	74-88-4	123	4	8
Morpholine (Tetrahydro-14-oxazine)	110-91-8	>480	6	94
Mustard Gas (Bis(2-chloroethyl)sulphide) *	505-60-2	>480	6	>480
N 39/3010 Thinner	-	>480	6	NT

Chemical Names (and Synonyms)		CAS Reg. nr.	21°C (70°F)		35°C (95°F)
			Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
Nicotine		54-11-5	>240	5	>240
Nitric Acid 2N		7697-37-2	>480	6	>240
Nitric Acid 65%		7697-37-2	>240	5	NT
Nitric Acid 100% (red fuming)		7697-37-2	180	4	60
Nitrobenzene (o-Nitrochlorobenzene)		98-95-3	>480	6	>240
4-Nitrodiphenylamine		119-75-5	>240	5	>240
Nitroethane		79-24-1	>480	6	>240
Nitroglycerol (Nitroglycerin)		55-63-0	>240	5	NT
Nitroglycol		-	>240	5	NT
Nitromethane		75-52-5	>480	6	>240
2-Nitropropane		79-46-9	>240	5	>240
Orthocid 83		133-06-2	>240	5	NT
Orthotoluidin	*	95-53-4	>480	6	>480
Pcb 12/60 Chloric		1336-36-3	>240	5	>240
Pentane		109-66-0	>480	6	>240
Perchloric Acid 70% (Perchlorobutadiene)		7501-90-3	>240	5	>240
Perchloroethylene (Tetrachlore-Ethylene)	*	127-18-4	>480	6	>480
Petrole (Gasoline) 95/96 (unleaded/leaded)		93572-29-3	>240	5	>240
Petroleum Ether 80/110		8032-32-4	>480	6	>480
Phthalic Acid Anhydride		85-44-9	>240	5	NT
Phosphoric Acid 85%		7664-38-2	>240	5	>240
Phosphorylic Chloride		10025-87-3	>240	5	>240
Polyethylenglycol		25322-68-3	>480	6	NT
Potassium Hydroxyde 50%		1310-58-3	>240	5	>240
Potassium Permanganate Solution, Saturated		7722-64-7	>240	5	NT
1-Propanol		71-23-8	>240	5	>240
Propiophenone		93-55-0	>240	5	>240
Propyl Acetate		109-60-4	>480	6	>240
Propylene Glycol (1,2-Propanediol)		57-55-6	>240	5	>240
Propylene Glycol Monoethylether Acetate		19234-20-9	>240	5	>240
1,2-Propylene Oxide		75-56-9	>480	6	NT
1,2-Propylene Oxide in Water		75-56-9	>240	5	26
Pyridine (Azine)		110-86-1	>480	6	>240
Quinoline		91-22-5	>240	5	>240
Silver Cyanide 4%		506-64-9	>240	5	NT
Sodium Hydroxide 2N		1310-73-2	>480	6	>240
Sodium Hydroxide 50%	**CE 0200**	1310-73-2	>480	6	>240
Sodium Hydroxide 96-98%	**CE 0200** *	1310-73-2	>480	6	NT
Sodium Hypochlorite 15% in water		7681-52-9	>240	5	>240
Styrene (Vinylbenzene)		100-42-5	>480	6	>240
Sulphuric Acid 90%	**CE 0200**	7664-93-9	>480	6	>240
Sulphuric Acid 93%		7664-93-9	>480	6	NT
Sulphuric Acid 96% w. 65% SO3 (oleum)		7664-93-9	120	4	30
Sulphuric Acid 2N		7664-93-9	>240	5	>240
Tetrachloroethylene		127-18-4	>480	6	>240
Tetrafluoroboric Acid (HBF4) 35%		16872-11-0	>240	5	NT

Chemical Names (and Synonyms)	CAS Reg. nr.	21°C (70°F) Break-through time minutes	21°C (70°F) Protection Index as per EN 374	35°C (95°F) Break-through time minutes
Tetrahydrafuran (THF)	109-99-9	>480	6	>240
Tetramethyl Ammonium Hydroxide in water	75-59-2	>240	5	>240
Thioglycolic Acid (Mercaptoacetic Acid)	123-93-3	>240	5	NT
Toluene (Methylbenzene) **CE 0200**	108-88-3	>480	6	>240
Tributyl Phosphate (TBP)	126-73-8	>240	5	>240
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	>480	6	>240
Trichlororethylene (Trichloroethene)	79-01-6	>480	6	>240
Triethanolamine (TEA) 50% in water	102-71-6	>240	5	>240
Triethylenediamine (TED)	280-57-9	>480	6	NT
Triethylenediamine (TED) 25% in water	280-57-9	>240	5	220
Trifluoroacetic Acid (Perfluoroacetic Acid)	76-05-1	>240	5	>240
Tripropyleneglycol Diacrylate	-	>240	5	>240
Vinyl Acetate	108-05-4	>480	6	>240
Vinyl Chloride 99% (Chloroethene) *	75-01-4	>480	6	NT
N-Vinylpyrrolidone (1-Vinyl-2-Pyrrolidone)	88-12-0	>240	5	>240
White Spirit (Naphtha)	8052-41-3	>480	6	>240
Xylene (Dimethyl Benzene)	1330-20-7	>480	6	>240

Mixtures	CAS Reg. nr.	21°C (70°F) Break-through time minutes	21°C (70°F) Protection Index as per EN 374	35°C (95°F) Break-through time minutes
ACCUMIX® N-Alkyl Dimethyl Benzyl Amm. Chloride N-Alkyl Dimethyl Ethylbenzyl Amm. Chloride Water Ethyl Alcohol	68391-01-5 68956-79-6 7732-18-5 64-17-5	>240	5	NT
Acetone/Petrol 1:1	64-64-1 8032-32-4	9	-	3
Acetone/Toluene/ Methylated Spirit/ Conc. Ammonia 2:1:1:1	67-64-1 108-88-3 7664-41-7	190	4	40
Acrylamide 15% in MEK	79-06-1 78-93-3	>240	5	>240
Acrylamide Mixture	79-06-1 110-26-9	>240	5	>240
Acrylate UV Lacquer (Ethylacetate/Butylacetate)	-	>240	5	>240
AeroShell Fluid 4	-	>240	5	>240
BENLATE® (Benomyl)	17804-35-2	>240	5	NT
Bisphenol A Diglycidyl Ether (EPOXY) 50% in MEK	1675-54-3 78-93-3	>480	6	>240

Mixtures	CAS Reg. nr.	21°C (70°F)		35°C (95°F)
		Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
Bromoacetic Acid,	79-08-3			
10 w/w% in Diethyl Ether *	60-29-7	>240	5	>240
2-Bromoacetophenone,	70-11-1			
10 w/w% in Acetone *	67-64-1	>240	5	>240
1,4-Butanediol Diglycidyl Ether 50% in MEK	78-93-3	>240	5	>240
Chloroform	67-66-3			
tert-Butanol 80:20	75-65-0	>240	5	8
Chloroform with	67-66-3			
3% Methanol	67-56-1	>240	5	>240
Chromic Acid/	1333-82-0			
Sulphuric Acid	7664-93-9	>240	5	>240
Coal Tar/Benzene 1:1	-/71-43-2	>240	5	>240
Corrosive Fluid (Dyrup49685)	-	102	3	20
CLOVA THINNER # 19®:				
Toluene 50%	108-88-3			
MEK 15%	78-93-3	>240	5	NT
Methanol 15%	67-56-1			
2-Butoxyethanol 10%	111-76-2			
Ethyl Acetate 10%	141-78-6			
	106-44-5			
p-Cresol 50% in MEK	78-93-3	>240	5	>240
Cyclohexylamine 32%	108-91-8			
Morpholine 8%	110-91-8	>240	5	NT
Water 60%	7732-18-5			
CYMBUSH (r)	-	>240	5	NT
DEEP WOODS OFF®				
N,N-Diethyltoluamide	134-62-3	>240	5	NT
Ethanol	64-17-5			
DEGALAN S 309®	-	>240	5	NT
DEGALAN S 696®	-	>240	5	NT
4,4'-Diaminodiphenylmethane (MDA)	537-65-5			
50% in MEK	78-93-3	>480	6	>240
Dichloromethane 90%	75-09-2			
Isoprophyl Alcohol 10%	67-63-0	>480	6	>240
Diethanolamine 50% in water	111-42-2	>240	5	>240
Dimercaptothiodiazole 10% in	1072-71-5			
Butyldioxotol/MEK 1:1	78-93-3	>240	5	>240
DINOL®	-	>240	5	NT
Dinoseb	88-85-7	>240	5	>240
(47,6% in Xylene)	1330-20-7			
2,3-Diphenyl-2-cyclopropenone-1				
2% in Acetone w/10% Propyleneglycol	-	>240	5	>240
Fluoroboric Solution:				
Hydrofluoric Acid	7664-39-3			
Boric Acid	10043-35-3	>240	5	NT
Nitric Acid	7697-37-2			

Mixtures	CAS Reg. nr.	21°C (70°F) Break-through time minutes	21°C (70°F) Protection Index as per EN 374	35°C (95°F) Break-through time minutes
Formaldehyde 37% w/10% Methanol	50-00-0	>480	6	>240
GLANCE®	-	>240	5	NT
GLYMA® (Glycidyl Methacrylate)	-	>240	5	NT
Glyphosat - Isopropylamine Derivate 450 g/l (ROUND UP®)	-	>240	5	NT
Hexane/Benzene 9:1	-	>240	5	>240
Hydrocarbon Mixture (K-Blend)	-	>240	5	NT
Hydrochloric Acid 37% /Nitric Acid 65% 3:1	7647-01-0 7697-37-2	>240	5	>240
Hydroquinon 33% in Ethanol	123-31-9	>240	5	>240
IMRON 192® S/Hexamethylene Diisocyanate 37%	-	>240	5	NT
Isopentyl Alcohol/ Chloroform 1:24	123-51-3 67-66-3	176	4	40
Jet Fuel (Jet A-1/Shell)	-	>240	5	>240
KOVAC's Indolreagent®	-	>240	5	>240
4,4'-Methylenebis (2-Chloroaniline) 50% in Acetone (MOCA, MBOCA or MBOCHA)	101-14-4	>240	5	NT
4,4'-Methylenedianiline 10% in Isopropyl Alcohol	537-65-5 67-63-0	>240	5	NT
Methylenedianiline (MDA) 50% in MEK	537-65- 78-93-3	>480	6	NT
Methyl Ethyl Ketone/ Toluene 1:1	78-93-3 108-88-3	114	3	9
N-Methyl Pyrrolidone Butyrolactone Styrene	872-50-4 96-48-0 100-42-5	>480	6	>480
Methylene Chloride 20% Trichloroethylene 20% Xylene 45% Mineral Spirits 15%	75-09-2 79-01-6 1330-20-7 8032-32-4	>240	5	>240
MEK 66% Cyclohexanone 24% Toluene 10%	78-93-3 108-94-1 108-88-3	>480	6	NT
N 35091 Cleaning agent	-	>480	6	NT
2-Nitrobenzylbromide, 5 w/w% in Cyclohexane *	3958-60-9 110-82-7	>240	5	>240
Naphthalene 25% in Toluene	91-20-3	>240	5	>240
1-Naphthylamine 25% in Isopropanol	134-32-7	>240	5	>240
Ninhydrin 4% in 2-Methoxyethanol	485-47-2	>240	5	>240
PAINTSTRIPPER D23® 30% in Dichloromethane	-	200	4	NT
Parathion 35® KVK	-	>240	5	NT
PERGA KAN® Domo/Master A/S - DK	-	>240	5	>240
PERMA FLUID 'MICA' (8% Ammonia Thioglycolate)	-	>240	5	>240
Petroleum (Shell special gasolene)	-	>240	5	>240

Mixtures	CAS Reg. nr.	21°C (70°F)		35°C (95°F)
		Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
Petroleum 80% n-Methyl-2-Pyrrolidone 20%	872-50-4	>240	5	>240
Phenol 50% in MEK	-	>240	5	>240
Phenol Isopentanol Chloroform 25:1:24	108-95-2 123-51-3 67-66-3	130	4	70
1,3-Phenylene-Diamine/Ethylacetate 30/70%	-	>480	6	NT
PHOTO RESIST 1450® (INMOS)	-	>240	5	>240
3-Picolylchloride Hydrochloride 25% in water *	6959-48-4	>240	5	>240
3-Picolylchloride Hydrochloride/Acetonitrile/water 4:3:9 *	6959-48-4 75-05-8	>240	5	>240
4-Picolylchloride Hydrochloride, 10 w/w% in water *	1822-51-1 -	>240	5	>240
Polymer 14435W8® Styrene/Acrylic Polymers, Methyl N-Amyl Ketone	110-43-	>240	5	NT
Polyol mixture	-	>480	6	NT
Posistrip LE, (INMOS)		>240		>240
Pramitol®	1610-18-0	>240	5	NT
PRO STRIP® Monoethanolamine Glycol Ether Isopropanol Polyoxyethylene Phenylether Phosphate Ammonium Hydroxyde	141-43-5 111-76-2 67-63-0 39464-70-5 1336-21-6	>240	5	NT
Propyzamide 50% (Kerb 50®) 10% suspended in Water	23950-58-5	>240	5	NT
PYROTEC HFD 46®	-	>240	5	NT
REGLONE®	85-00-7	>240	5	NT
830-RESIST STRIPPER® (INMOS)	-	>240	5	>240
SADOFOSS PRIMER® 17	-	>240	5	>240
SADOFOSS PRIMER® 513	-	>240	5	64
SKYDROL® (Mix of Tributylphosphate/Dybutylphenolphosphate)	126-73-8	>480	6	NT
SOLMASTER® (Methylene Chloride/Ethanol)		>240	5	>240
STAR THINNER 7040® (Xylene/Butylglycol)	1330-20-7 111-76-2	>240	5	>240
Tetrahydrofuran 50% Toluene 50%	109-99-9 108-88-3	89	3	NT
Thiourea 7,5% in 50% Ethanol	62-56-6 64-17-5	>240	5	>240
Toluene 50% Isoprophylalcohol 25% Methyl Ethyl Ketone 25%	108-88-3 67-63-0 78-93-3	>480	6	NT
Toluene-2,4-Diisocyanate (TDI) 40% in Xylene	26471-62-5 1330-20-7	>480	6	>240

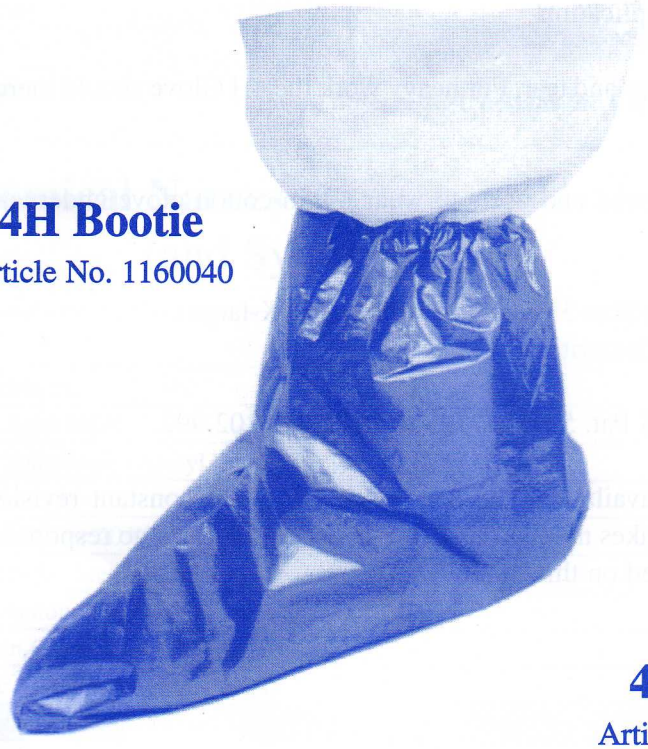
Mixtures	CAS Reg. nr.	21°C (70°F)		35°C (95°F)
		Break-through time minutes	Protection Index as per EN 374	Break-through time minutes
Toluene/Isopropanol 1:1	108-88-3 67-63-0	>240	5	>240
Transformer Oil Nytro 10X, Nyn‰s/Oslo	-	>240	5	>240
Transmission Oil Opel, Dextron GM 6137M	-	>240	5	>240
1,1,1-Trichloroethane w. 3% 1,4-Dioxane	71-55-6 123-91-1	>240	5	>240
1,1,1-Trichloroethane/Ethanol/Turpentine	-	>240	5	>240
1,1,1-Trichloroethane 73% Methylene Chloride 17% Dodecylbenzensulphonacid 10%	71-55-6 75-09-2 2776-87-0	>240	5	NT
1,1,1-Trichloroethane/ Propyleneglycolmonoethyletheracetate 3:1	71-55-6 19234-20-9	>240	5	>240
Triethylene Tetramine (TETA) 50% in MEK	112-24-3 78-93-3	>240	5	>240
Triphosgene, 10 w/w% in Carbon Tetrachloride *	32315-10-9 56-23-5	>240	5	>240
TURCO 5092® (Stripping agent)	-	130	4	28
U-V RESIN 20074®	-	>240	5	>240
XYLAMON®	-	>240	5	NT
Xylene/Ethyl Glycol 1:1	1330-20-7 110-80-5	>240	5	>240
Xylene 60,9% Methylacetate 18,5% MEK 16,9% IPA 3,7%	1330-20-7 79-20-9 78-93-3 67-63-0	119	3	NT

4H Accessoires



4H Sleeve

Article No. 1160030



4H Bootie

Article No. 1160040



4H Apron

Article No. 1160020

IMPORTANT

Read these instructions before using the 4H Glove

The Chemical Protection Guide is designed to be used initially to help you select the proper glove for handling the hazardous chemicals listed in this guide.

- Use all chemicals strictly according to manufacturer's instructions and Material Safety Data Sheets (MSDS).
- Do not exceed the proven protection time for chemicals listed in the 4H Chemical Protection Guide. Protection period should always be calculated **from first contact** with a chemical. Discard the 4H Glove as soon as the protection period has expired.
- Take care to avoid abrasion and punctures in mechanical applications, and never use the 4H products near an open flame or intense heat. If you rip or puncture the 4H Glove, you must dispose of it immediately and clean your skin thoroughly.
- End-users should only use the 4H Chemical Protection Guide as a general guide, since permeation tests are conducted under laboratory conditions. Actual workplace conditions usually dictate a combination of performance capabilities. Safety 4 recommends that the end-users conduct their own tests to confirm the suitability of a particular product prior to a specific application.
- The 4H material is very thin and does not withstand wear and tear. For heavy work the 4H Glove should therefore be protected by a durable over-glove.
- Since the 4H material is totally leaktight, we recommend end-users to wear a thin cotton glove underneath it to absorb perspiration and increase comfort.
- The 4H Glove is available in seven sizes ranging from Size 5 (X-small) to Size 12 (X-large).
  Be sure to wear proper size to achieve perfect fit and dexterity.
- The 4H concept is protected by US Pat. 4,902,558, US Pat. 5,059,477, and EUR Pat. 102,992.

We believe that this information is the best currently available. The data given are under constant revision as additional knowledge and experience is gained. North makes no guarantee of results and assumes no responsibility for the suitability of an end-user selection of gloves based on this guide.

For further information, please contact

NORTH North Safety Products

North Safety Products Europe B.V.
Noordmonsterweg 1
4332 SC Middelburg, The Netherlands
Phone +31(0)118 656415, Fax +31(0)118 627535
E-mail info@northsafety.nl, Internet www.northsafety.nl