

CHEMICAL RESISTANCE GUIDE

CHEMICAL	Silver Shield (0,10 mm)			Viton (0,23 mm)			Butyl (0,43 mm)			Nitrile (0,28 mm)		
	D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR
Acetaldehyde	E	> 6 hrs	ND	P	0 min	281.9	E	9.6 hrs	0.066	F	4 min	161
Acetone	E	> 6 hrs	ND	P	ID	ID	E	>17 hrs	ND	P	ID	ID
Acetonitrile	E	> 8 hrs	ND	ID	ID	ID	E	> 8 hrs	ND	ID	ID	ID
Acrylic Acid	ID	ID	ID	G	5.9 hrs	0.23	E	> 8 hrs	ND	F	ID	ID
Acrylonitrile	E	ID	ID	F	1 min	176	G	3.1 hrs	0.000048	P	3 min	176
Aldehyde		E	> 6 hrs	ND	P	0 min	281.9	E	9.5 hrs	0.0665	P	4 min
161												
Aniline	E	> 8 hrs	ND	G	10 min	18.7	E	> 8 hrs	ND	P	1.1 hrs	45.0
Benzaldehyde	ID	ID	ID	G	9.9 hrs	4.0	E	9 hrs	ND	P	ID	ID
Benzene	E	> 8 hrs	ND	G	6 hrs	0.012	P	31 min	32.3	P	ID	ID
Benzoyl Chloride	ID	ID	ID	E	> 8 hrs	ND	F	6.2 hrs	16.6	P	ID	ID
Bromobenzene	E	ID	ID	E	8 hrs	ND	P	32 min	39.8	P	13 min	9.1
Butyl Acetate	E	> 6 hrs	ND	P	ID	ID	G	1.9 hrs	7.61	P	29 min	54.4
p-t Butyltoluene	E	> 8 hrs	ND	E	> 8 hrs	ND	G	1.7 hrs	8.0	P	ID	ID
Butyraldehyde	E	ID	ID	P	54 min	9.0	E	> 15 hrs	ND	P	ID	ID
Carbon Disulfide	E	> 8 hrs	ND	E	> 8 hrs	ND	P	7 min	98.0	P	1 min	51
Carbon Tetrachloride	E	> 6 hrs	ND	E	> 13 hrs	ND	P	ID	ID	G	3.4 hrs	5
Cellosolve		E	> 6 hrs	ND	F	ID	ID	G	ID	ID	P	ID
ID												
Chlorobenzene	E	ID	ID	E	> 8 hrs	ND	P	35 min	308	P	ID	ID
Chloroform	P	10 min	0.009	E	9.5 hrs	0.46	P	ID	ID	P	4 min	352
Chloronaphthalene	E	> 8 hrs	ND	E	> 16 hrs	ND	P	ID	ID	P	2.9 hrs	> 1.32
Chloroprene	ID	ID	ID	E	> 8 hrs	ND	P	28 min	18	ID	ID	ID
Cyclohexane	E	> 6 hrs	ND	E	> 7 hrs	ND	P	1.1 hrs	20.3	P	ID	ID
Cyclohexanol	E	> 6 hrs	ND	E	> 8 hrs	ND	E	> 11 hrs	ND	E	> 16 hrs	ND
Cyclohexanone	E	> 6 hrs	ND	P	29 min	86.3	E	> 16 hrs	ND	P	ID	ID
Dibutylphthalate	E	> 6 hrs	ND	E	> 8 hrs	ND	E	> 16 hrs	ND	E	> 16 hrs	ND
1,1, Dichloroethane	ID	2.4 hrs	6	G	1.5 hrs	31	ID	ID	ID	P	ID	ID
1,2, Dichloroethane	E	> 6 hrs	ND	E	6.9 hrs	0.81	P	2 hrs	53	P	8 min	311
Diethylamine	E	> 8 hrs	ND	P	35 min	852	P	47 min	46	F	ID	ID
Diethylaminoethanol	E	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	E	> 8 hrs	ND
1,4-Diethylene Dioxide	E	> 8 hrs	ND	P	23 min	26.8	E	> 20 hrs	ND	P	28 min	77.1
Diethylenetriamine	ID	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	P	ID	ID
Diisobutyl Ketone 80%	E	> 6 hrs	ND	F	1.2 hrs	90.6	G	3.3 hrs	41.2	F	3 hrs	48.9
Dimethyl Acetamide	ID	1.5 hrs	0.728	P	25 min	3	E	> 8 hrs	ND	ID	ID	ID
Dimethyl Formamide	E	> 8 hrs	ND	P	8 min	6.5	E	> 8 hrs	ND	F	1 min	> 15
Dimethylsulfoxide	G	ID	ID	F	1.5 hrs	5	E	> 8 hrs	ND	F	ID	ID
Dioxane	E	> 8 hrs	ND	F	23 min	26.8	E	> 20 hrs	ND	P	28 min	77.1
Divinyl Benzene	E	> 8 hrs	ND	E	> 17 hrs	ND	F	2.2 hrs	238	P	ID	ID
Epichlorohydrin	ID	ID	ID	P	2 hrs	4	E	> 8 hrs	ND	P	ID	ID
Ether	ID	> 6 hrs	ND	P	12 min	21.5	P	8 min	92.2	P	14 min	21.8
Ethyl Acetate	E	> 6 hrs	ND	P	ID	ID	G	7.6 hrs	3.4	P	8 min	145
Ethyl Ether		ID	> 6 hrs	ND	P	12 min	21.5	P	8 min	92.2	P	14 min
21.8												
Ethylamine (70% in water)	E	47 min	7.64	P	ID	ID	E	> 12 hrs	ND	F	1.1 hrs	30.1
Ethylene Dibromide	E	ID	ID	E	> 8 hrs	ND	F	3.3 hrs	6.0	P	ID	ID
Formaldehyde (37% in water)	E	> 6 hrs	ND	E	> 16 hrs	ND	E	16 hrs	ND	E	> 21 hrs	ND

D = Degradation, BT = Breakthrough Time, PR = Permeation Rate, ND = None Detected, ID = Insufficient Data

Permeation Chart Colour Key

	Good for Total Immersion
	Good for Accidental Splash/ Intermittent Exposure
	Not Recommended

Key to Degradation and Permeation Ratings

E	Excellent	Fluid has no effect
G	Good	Fluid has minor effect
F	Fair	Fluid has moderate effect
P	Poor	Fluid has severe effect, ranging from moderate to complete destruction
ND		None detected
ID		Insufficient data, data not available or conflicting data

CHEMICAL	Silver Shield (0,10 mm)			Viton (0,23 mm)			Butyl (0,43 mm)			Nitrile (0,28 mm)		
	D	BT	PR	D	BT	PR	D	BT	PR	D	BT	PR
n-Hexane		E	> 6 hrs	ND	E	> 11 hrs	ND	P	ID	ID	E	ID
ID												
Hydrazine (70% in water)	E	> 6 hrs	ND	P	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND
Hydrochloric Acid (37%)	E	> 6 hrs	ND	E	ID	ID	E	ID	ID	P	ID	ID
Hydrofluoric Acid (50%)	E	> 6 hrs	ND	G	ID	ID	F	ID	ID	P	ID	ID
Isobutyl Alcohol	E	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	E	> 8 hrs	ND
Isobutyraldehyde	E	ID	ID	P	4 min	11.5	E	> 8 hrs	ND	P	ID	ID
Methacrylic Acid	ID	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	P	1.7 hrs	23
Methacrylonitrile	E	ID	ID	F	4 min	462	G	6.8 hrs	0.001	P	7 min	560
Methyl Chloroform	ID	> 6 hrs	ND	E	> 15 hrs	ND	P	ID	ID	P	41 min	76.4
Methyl Cyanide	E	> 8 hrs	ND	ID	ID	ID	E	> 8 hrs	ND	ID	ID	ID
Methyl Ethyl Ketone	E	> 24 hrs	ND	P	ID	ID	E	> 8 hrs	ND	P	ID	ID
Methyl Isocyanate	ID	ID	ID	P	4 min	121	P	1.1 hrs	9.0	P	ID	ID
Methylamine (40% in water)	F	1.9 hrs	2.0	E	> 16 hrs	ND	E	> 15 hrs	ND	E	> 8 hrs	ND
Methylene Chloride	E	> 8 hrs	ND	F	1 hr	7.32	P	24 min	133	P	4 min	766
Methylene Dianiline	E	> 24 hrs	ND	E	> 8 hrs	ND	E	> 24 hrs	ND	F	ID	ID
Monoisopropylamine	ID	ID	ID	P	11 min	556	F	4.06 hrs	6	ID	ID	ID
Morpholine	E	> 8 hrs	ND	G	1.9 hrs	97	E	> 16 hrs	ND	P	48 min	206
Nitric Acid (3 Molar)	E	> 6 hrs	ND	G	ID	ID	F	ID	ID	P	ID	ID
Nitrobenzene	E	> 8 hrs	ND	E	> 8 hrs	ND	E	> 23 hrs	ND	F	33 min	1.7
Nitropropane	E	> 8 hrs	ND	P	21 min	26.1	E	> 8 hrs	ND	P	16 min	29.5
Oxalic Acid		E	> 8 hrs	ND	E	> 8 hrs	ND	E	> 8 hrs	ND	G	ID
ID												
PCB (Aroclor 1254 (50%))	E	> 8 hrs	ND	E	> 8 hrs	ND	P	ID	ID	F	ID	ID
Pentachlorophenol (1% in kerosene)	E	> 8 hrs	ND	E	> 13 hrs	ND	P	ID	ID	E	>13 hrs	ND
n-Pentane		E	> 6 hrs	ND	E	> 8 hrs	ND	P	ID	ID	E	ID
ID												
Perchloroethylene	E	> 6 hrs	ND	E	> 17 hrs	ND	P	ID	ID	F	> 1.3 hrs	5.5
Phenol (85% in water)	E	> 6 hrs	ND	E	> 15 hrs	ND	E	> 20 hrs	ND	P	39 min	> 1500
Propyl Acetate	E	> 6 hrs	ND	P	ID	ID	G	2.7 hrs	2.86	P	17 min	72.5
n-Propyl Acetate	E	> 6 hrs	ND	P	ID	ID	G	2.7 hrs	2.86	P	17 min	72.5
Propylenediamine	ID	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	F	ID	ID
Pyridine	ID	ID	ID	P	38 min	74.0	E	> 8 hrs	ND	P	ID	ID
Red Fuming Nitric Acid	P	35 min	ID	P	ID	ID	P	ID	ID	P	ID	ID
Sodium Hydroxide 50%	E	> 6 hrs	ND	G	ID	ID	E	ID	ID	G	ID	ID
Styrene	G	> 4 hrs	ND	G	ID	ID	P	ID	ID	P	ID	ID
Sulfuric Acid (3 Molar)	E	> 6 hrs	ND	E	ID	ID	G	ID	ID	P	ID	ID
Tetrachloroethylene	E	> 6 hrs	ND	E	> 17 hrs	ND	P	ID	ID	F	1.3 hrs	5.5
Tetraethylenepentamine	ID	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	F	ID	ID
Tetrafluoroethylene	E	ID	ID	E	> 8 hrs	ND	E	> 8 hrs	ND	ID	ID	ID
Tetrahydrofuran	E	> 8 hrs	ND	P	4 min	327	F	31 min	112	P	4 min	167
Thiophene		ID	ID	ID	E	> 8 hrs	ND	P	1.8 hrs	17	P	ID
ID												
Toluene	E	> 6 hrs	ND	E	> 16 hrs	ND	F	21 min	22.1	P	11 min	68.1
Toluene Diisocyanate	E	> 8 hrs	ND	E	> 16 hrs	ND	E	> 8 hrs	ND	G	3.7 hrs	1.8
Trichloroethylene	E	> 6 hrs	ND	G	7.4 hrs	0.24	P	18 min	550	P	8 min	283
1,1,1 Trichloroethane	E	> 6 hrs	ND	E	> 15 hrs	ND	P	ID	ID	F	41 min	76.4

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