



Tingley's Chemical Compatibility Chart with standard permeation and degradation guidance is presented on the following pages and is intended as an aid in determining the general suitability of our protective footwear and clothing products for use with specific chemicals. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. These recommendations are based upon information from material suppliers, careful examination of available published information, and/or laboratory testing conducted by Tingley Rubber Corporation and are believed to be accurate and reliable as of the date compiled. However, because the resistance of rubber, plastics and elastomers can be affected by chemical concentration, temperature, presence of other chemicals and other factors, this information should be considered as a general guide rather than an unqualified guarantee.

Again, these recommendations are advisory only. We recommend companies establish safety policies and procedures for wear testing protective clothing under management supervision. The wear tests would set levels and types of exposure to chemicals, procedures for decontamination and/or cleaning after exposure and outline care and inspection by the user.

No representation, warranty, or guarantee is made as to its accuracy, reliability or completeness. No warranty of merchantability, fitness for any particular purpose, or any other warranty express or implied, is made concerning the information herein provided. It is the user's responsibility to satisfy him/herself as to the suitability and completeness of such information for his/her own particular use. Neither Tingley Rubber Corporation nor its representatives accept liability for any loss or damage that may occur from the use of this information.

THE SUITABILITY OF THE PROTECTIVE FOOTWEAR AND/OR CLOTHING FOR A SPECIFIC JOB MUST BE DETERMINED BY THE END USER.

Explanation of the Chemical Compatibility Chart Ratings

Degradation Ratings

Rating	Explanation
E	Excellent - No significant change in physical properties
G	Good - Minor change in physical properties
F	Fair - A change affecting durability and service life
NR	Not Recommended
-	No Data Available

Permeation Ratings

Rating	Breakthrough Time
5	Over 3 hours
4	Over 1 hour
3	30 to 60 minutes
2	15 to 25 minutes
1	1 to 14 minutes
-	No Data Available

Chemical Degradation and Permeation Guide*

CHEMICAL	CLOTHING							
	PVC		HI-PERF PVC		NEOPRENE		POLY-URETHANE	
	DEG	PER	DEG	PER	DEG	PER	DEG	PER
ACETALDEHYDE * (ETHANAL)	NR	-	F	-	G	1	F	1
ACETIC ACID - GLACIAL 99%	NR	-	-	2	E	4	NR	1
ACETONE **	NR	-	NR	-	G	1	F	1
ACRYLONITRILE *	NR	-	NR	-	F	-	NR	-
ALLYL ALCOHOL	NR	-	F	-	E	4	F	-
ALLYL CHLORIDE *	F	-	F	-	NR	-	NR	-
ALUMINUM ACETATE (SOL'N)	-	-	-	-	-	-	-	-
ALUMINUM CHLORIDE (SOL'N)	-	-	-	-	-	-	-	-
AMMONIA - ANHYDROUS	G	-	G	-	G	4	NR	-
AMMONIUM CHLORIDE	-	-	-	-	-	-	-	-
AMMONIUM HYDROXIDE - CONC. <5%	-	-	-	-	-	-	-	-
AMMONIUM HYDROXIDE - CONC. <30%	G	-	G	-	E	-	G	5
AMMONIUM HYDROXIDE - CONC. 30-70%	G	-	G	-	E	-	NR	4
AMMONIUM SULFATE (SOL'N)	G	-	E	-	E	-	G	2
AMMONIUM SULFIDE (SOL'N)	-	-	-	-	-	-	-	-
AMYL ACETATE	F	-	F	-	NR	-	F	-
AMYL ALCOHOL	G	3	E	4	E	4	NR	-
ANILINE	F	1	F	3	G	4	NR	1
ASTM OIL #1	G	-	G	-	E	-	E	-
ASTM OIL #3	F	-	F	-	F	-	F	-
BARIUM CHLORIDE (SOL'N)	-	-	-	-	-	-	-	-
BATTERY ACID	G	2	G	5	G	4	NR	-
BENZENE *	NR	1	NR	1	NR	1	G	1
BENZYL ALCOHOL	F	-	G	-	G	-	NR	2
BENZYL CHLORIDE *	NR	-	NR	-	NR	-	NR	-
BUTANE	NR	1	NR	1	E	2	F	5
BUTTER	F	-	F	-	G	-	E	-
BUTTERMILK	G	-	E	-	G	-	G	-
BUTYL ACETATE	NR	-	NR	-	NR	-	F	-
BUTYL ALCOHOL	G	2	G	4	E	4	E	4
BUTYRALDEHYDE	NR	-	NR	-	G	1	NR	-
BUTYRIC ACID - CONC. <20%	-	-	-	-	-	-	-	-
BUTYRIC ACID - CONC. >20%	-	-	-	-	-	-	-	-
CALCIUM CHLORIDE (SOL'N)	E	-	E	-	E	-	E	-
CALCIUM HYPOCHLORITE (SOL'N)	G	-	G	-	F	-	NR	-
CARBOLIC ACID - (PHENOL) 70%	F	1	F	2	NR	-	NR	2
CARBON DISULFIDE **	NR	-	NR	1	NR	1	NR	-
CARBON TETRACHLORIDE *	NR	1	F	2	NR	-	NR	-
CARBONIC ACID - H2O	E	5	E	5	E	5	E	-
CASTOR OIL	G	-	E	-	E	-	E	-
CAUSTIC POTASH	G	1	E	3	E	3	G	-
CHLOROACETONE (TEAR GAS)	NR	-	NR	-	F	-	F	-
CHLOROFORM *-TETRACHLOROM.	NR	-	NR	-	NR	-	F	-
CITRIC ACID - CONC. < 30%	E	4	E	5	E	5	G	4
COCONUT OIL (LAURIC ACID)	G	1	G	3	E	5	G	3
COPPER CHLORIDE	E	-	E	-	E	-	G	-
COPPER SULFATE - CRYST.	F	-	G	-	E	-	G	-
COTTONSEED OIL	NR	-	NR	-	E	-	G	-
CUTTING OIL - MINERAL, CHLOR.	NR	-	G	-	G	-	G	-
CYCLOHEXANE	NR	-	F	1	NR	1	F	2
DIACETONE ALCOHOL	NR	-	F	-	E	-	F	-
DIBENZYL ETHER	NR	-	NR	-	G	3	G	-
DIBUTYL PHTHALATE	NR	-	NR	-	F	-	G	-
DIETHANOLAMINE	NR	-	F	-	F	-	NR	1
ETHYL ACETATE **	NR	-	NR	-	G	1	F	-
ETHYL ETHER	NR	-	NR	-	E	3	G	2
ETHYL FORMATE	F	-	G	-	G	-	-	-
ETHYLENE GLYCOL	G	3	E	4	E	4	G	-
FERRIC CHLORIDE	E	2	E	5	E	5	E	4

Information in this chart is intended as a general guide only.
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CHEMICAL	CLOTHING							
	PVC		HI-PERF PVC		NEOPRENE		POLY-URETHANE	
	DEG	PER	DEG	PER	DEG	PER	DEG	PER
FORMALDEHYDE - CONC. < 37% *	G	2	E	3	E	3	G	3
FORMIC ACID	G	2	E	3	E	4	G	4
FURFURAL	NR	-	NR	-	G	2	F	1
GASOLINE (CRACKED)	F	-	F	-	F	-	G	1
GASOLINE (SR)	F	-	F	-	G	-	G	1
GLYCERINE	E	4	E	5	E	5	E	4
GREASE - PETROLEUM BASE	NR	-	F	-	E	-	G	-
HEXANE **	NR	-	NR	1	E	3	G	5
HYDROBROMIC ACID	NR	2	G	3	F	-	NR	1
HYDROCHLORIC ACID - CONC. < 10%	F	4	E	5	E	5	NR	2
HYDROCHLORIC ACID - CONC. > 10%	-	-	-	-	-	-	-	-
HYDROFLUORIC ACID - CONC. 99.99%**	NR	-	G	3	NR	-	NR	1
HYDROGEN PEROXIDE - CONC. 90%	F	2	E	3	NR	-	NR	-
HYDROGEN SULFIDE-GAS	G	1	G	2	G	3	F	-
ISOPROPYL ALCOHOL	-	-	-	-	-	-	-	-
KEROSENE (PET)	NR	2	G	3	G	4	G	5
LACTIC ACID	G	3	E	4	G	5	G	5
LARD	NR	-	F	-	G	-	F	-
LEAD ACETATE (SOL'N)	-	-	-	-	-	-	-	-
LEAD NITRATE (SOL'N)	-	-	-	-	-	-	-	-
LINSEED OIL (SEE COTTON SEED OIL)	-	-	-	-	-	-	-	-
MAGNESIUM CARBONATE (SOL'N)	-	-	-	-	-	-	-	-
MAGNESIUM CHLORIDE (SOL'N)	-	-	-	-	-	-	-	-
MALEIC ACID	F	4	E	5	E	5	G	4
METHYL ACETATE	NR	-	NR	-	G	-	F	-
METHYL ALCOHOL (METHANOL)	F	2	G	4	E	4	G	-
METHYL CELLOSOLVE	F	2	G	3	G	3	F	-
METHYL CHLORIDE	NR	-	NR	-	F	-	NR	-
METHYL ETHYL KEYTONE (MEK)	NR	-	NR	-	G	2	F	-
MILK	F	-	G	-	E	-	G	5
MINERAL OIL	G	-	G	-	G	-	G	-
MONOETHANOLAMINE-METHYL AMINE	NR	-	F	3	F	2	G	-
MORPHOLINE	F	1	F	2	NR	-	NR	-
NAPHTHA	NR	-	F	1	NR	-	G	1
NITRIC ACID - CONC. 10%	G	3	E	5	F	1	F	3
NITRIC ACID - CONC. 70%	NR	-	F	1	NR	-	NR	1
NITROBENZENE **	NR	-	NR	-	NR	-	NR	-
OCTYL ALCOHOL	F	1	G	2	E	3	F	2
OLEIC ACID	NR	-	NR	-	G	-	E	3
OLIVE OIL	NR	-	NR	-	G	-	E	-
OXALIC ACID	-	-	-	-	-	-	-	-
PAINT REMOVER	NR	-	NR	-	F	-	NR	-
PETROLEUM SOLVENT	NR	-	F	1	F	1	F	1
PHOSPHORIC ACID - CONC. 86%	F	-	G	-	G	-	NR	1
PINE OIL	NR	-	F	-	NR	-	G	-
POTASSIUM CARBONATE (SOL'N)	-	-	-	-	-	-	-	-
POTASSIUM DICHROMATE (SOL'N)	G	-	G	-	E	-	G	-
POTASSIUM NITRATE (SOL'N)	-	-	-	-	-	-	-	-
POTASSIUM PERMANGANATE (SOL'N)	-	-	-	-	-	-	-	-
PROPANE	F	2	G	3	G	4	G	5
PROPYL ACETATE	NR	-	NR	-	NR	-	NR	-
PROPYL ALCOHOL	F	2	G	3	E	3	G	3
SOAPS	G	-	E	-	G	-	F	-
SODIUM ACETATE (SOL'N)	-	-	-	-	-	-	-	-
SODIUM CHLORIDE (SOL'N)	-	-	-	-	-	-	-	-
SODIUM FLUORIDE (SOL'N)	-	-	-	-	-	-	-	-
SODIUM HYDROXIDE - CONC. 50%	-	-	-	-	-	-	-	-
SODIUM HYPOCHLORITE (BLEACH)	E	-	E	-	E	-	E	-
SOYBEAN OIL (WESSON)	NR	-	F	-	F	-	G	-

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CHEMICAL	CLOTHING							
	PVC		HI-PERF PVC		NEOPRENE		POLY-URETHANE	
	DEG	PER	DEG	PER	DEG	PER	DEG	PER
STEARIC ACID	NR	-	G	-	G	-	G	-
SULFURIC ACID - CONC. > 90% **	NR	-	G	4	F	3	NR	-
SULFURIC ACID - CONC. < 30%	NR	-	E	5	G	4	NR	-
TALLOW (BEEF TALLOW)	NR	-	F	-	G	-	E	-
TANNIC ACID *	E	3	E	3	E	3	G	2
TETRACHLOROETHYLENE	-	-	-	-	-	-	-	-
TIN CHLORIDE - FUMING LIQ.	F	-	G	-	G	-	NR	-
TOLUENE **	NR	-	NR	-	NR	-	NR	1
TRICHLOROETHYLENE *	NR	-	F	1	NR	-	F	1
TRICRESOL PHOSPHATE	F	2	F	3	F	3	F	-
TRIETHANOLAMINE	NR	3	F	4	F	4	NR	2
TRINITROTOLUENE (YEL. TNT)	G	-	G	-	G	-	F	-
TURPENTINE (PINE OIL)	F	2	F	3	NR	-	G	3
XYLENE	NR	-	F	2	NR	-	NR	1

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CHEMICAL	FOOTWEAR															
	RUBBER		NEOPRENE		POLY-URETHANE		EVA		AEREX 1.5.5		GEN PURP PVC		PREMIER PVC		HAZPROOF PVC	
	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER
ACETALDEHYDE * (ETHANAL)	NR	2	G	2	NR	-	G	-	-	-	NR	-	F	-	F	-
ACETIC ACID - GLACIAL 99%	G	2	E	4	NR	-	NR	-	G	-	F	3	F	3	F	3
ACETONE **	F	3	G	3	F	-	F	-	E	5	NR	4	NR	4	NR	4
ACRYLONITRILE *	F	3	F	3	G	5	-	-	E	5	F	2	F	3	F	4
ALLYL ALCOHOL	G	4	E	5	E	-	E	-	E	-	F	4	F	5	F	5
ALLYL CHLORIDE *	NR	3	NR	3	-	-	F	-	G	-	F	3	F	4	F	5
ALUMINUM ACETATE (SOL'N)	-	-	-	-	G	-	-	-	-	-	-	-	-	-	-	-
ALUMINUM CHLORIDE (SOL'N)	-	-	-	-	F	-	G	-	-	-	-	-	-	-	-	-
AMMONIA - ANHYDROUS	F	4	E	4	-	-	E	-	G	-	G	3	G	3	G	3
AMMONIUM CHLORIDE	-	-	-	-	F	-	G	-	G	-	-	-	-	-	-	-
AMMONIUM HYDROXIDE - CONC. <5%	-	-	-	-	F	-	E	-	-	-	-	-	-	-	-	-
AMMONIUM HYDROXIDE - CONC. <30%	F	5	E	5	-	-	E	-	E	-	G	5	G	5	G	5
AMMONIUM HYDROXIDE - CONC. 30-70%	NR	5	E	5	NR	-	-	-	-	-	G	5	G	5	G	5
AMMONIUM SULFATE (SOL'N)	E	5	E	5	-	-	E	-	-	-	E	5	E	5	E	5
AMMONIUM SULFIDE (SOL'N)	-	-	-	-	G	-	E	-	-	-	-	-	-	-	-	-
AMYL ACETATE	F	3	NR	3	F	-	NR	-	F	-	F	3	G	4	G	4
AMYL ALCOHOL	G	5	E	5	-	-	G	-	E	-	G	4	E	4	E	5
ANILINE	F	3	G	4	-	-	NR	-	G	-	G	5	G	4	G	4
ASTM OIL #1	NR	-	E	-	-	-	-	-	E	-	G	-	E	-	E	-
ASTM OIL #3	NR	-	E	-	-	-	-	-	G	-	F	-	E	-	E	-
BARIUM CHLORIDE (SOL'N)	-	-	-	-	G	-	E	-	-	-	-	-	-	-	-	-
BATTERY ACID	G	5	G	5	-	-	-	-	-	-	G	5	G	5	G	5
BENZENE *	NR	1	NR	3	-	-	NR	-	NR	-	NR	3	NR	4	NR	5
BENZYL ALCOHOL	G	-	G	-	-	-	NR	-	E	-	G	-	G	-	G	-
BENZYL CHLORIDE *	NR	-	NR	-	-	-	-	-	NR	-	NR	-	NR	-	NR	-
BUTANE	NR	2	E	3	-	-	NR	-	G	-	NR	4	F	4	F	5
BUTTER	NR	-	E	-	-	-	-	-	-	-	NR	-	G	-	E	-
BUTTERMILK	NR	-	G	-	-	-	-	-	-	-	G	-	E	-	E	-
BUTYL ACETATE	NR	2	NR	3	-	-	NR	-	G	-	NR	4	F	4	G	5
BUTYL ALCOHOL	E	5	E	5	E	-	E	-	E	-	G	5	E	5	E	5
BUTYRALDEHYDE	G	-	G	2	-	-	-	-	G	-	F	-	F	-	F	-
BUTYRIC ACID - CONC. <20%	-	-	-	-	G	-	NR	-	-	-	-	-	-	-	-	-
BUTYRIC ACID - CONC. >20%	-	-	-	-	G	-	-	-	-	-	-	-	-	-	-	-
CALCIUM CHLORIDE (SOL'N)	E	-	E	-	-	-	E	-	E	-	E	-	E	-	E	-
CALCIUM HYPOCHLORITE (SOL'N)	G	-	G	-	-	-	G	-	E	-	G	-	G	-	G	-
CARBOLIC ACID - (PHENOL) 70%	NR	4	G	5	-	-	-	-	E	-	G	4	G	4	G	4
CARBON DISULFIDE **	NR	1	NR	1	-	-	-	-	-	-	NR	2	NR	3	NR	4
CARBON TETRACHLORIDE *	NR	3	NR	3	-	-	NR	-	NR	-	F	3	F	4	F	5
CARBONIC ACID - H2O	E	5	E	5	-	-	G	-	-	-	E	5	E	5	E	5
CASTOR OIL	E	-	G	-	-	-	F	-	-	-	G	-	E	-	E	-
CAUSTIC POTASH	G	5	E	5	-	-	F	-	-	-	E	5	E	5	E	5
CHLOROACETONE (TEAR GAS)	G	-	F	-	-	-	-	-	-	-	NR	-	F	2	F	2
CHLOROFORM *-TETRACHLOROM.	NR	1	NR	2	-	-	NR	-	NR	-	NR	2	NR	4	NR	5
CITRIC ACID - CONC. < 30%	E	3	E	5	F	-	E	-	-	-	E	5	E	5	E	5
COCONUT OIL (LAURIC ACID)	G	4	E	5	-	-	F	-	E	-	F	3	G	4	E	2
COPPER CHLORIDE	E	-	E	5	-	-	E	-	G	-	E	5	E	5	E	5
COPPER SULFATE - CRY.S.	G	-	E	-	-	-	E	-	E	-	G	-	E	-	E	-
COTTONSEED OIL	NR	-	G	-	-	-	E	-	E	-	NR	-	E	-	E	-
CUTTING OIL - MINERAL, CHLOR.	NR	-	G	-	-	-	-	-	-	-	NR	-	G	-	E	-
CYCLOHEXANE	NR	4	F	2	G	-	F	-	E	-	F	2	F	4	F	4
DIACETONE ALCOHOL	F	-	E	-	-	-	-	-	E	-	F	-	F	-	F	-
DIBENZYL ETHER	NR	-	G	-	F	-	-	-	F	-	NR	-	NR	-	NR	-
DIBUTYL PHTHALATE	NR	-	F	-	-	-	-	-	F	-	NR	-	NR	-	NR	-
DIETHANOLAMINE	G	-	F	-	-	-	-	-	E	-	G	-	G	-	G	-
ETHYL ACETATE **	G	3	G	3	F	-	F	-	G	-	NR	4	NR	4	NR	4
ETHYL ETHER	NR	-	E	3	-	-	NR	-	E	-	NR	-	NR	-	NR	-
ETHYL FORMATE	NR	-	G	-	F	-	-	-	E	-	F	4	F	4	G	5
ETHYLENE GLYCOL	E	4	E	4	E	-	E	-	E	-	E	4	E	4	E	5
FERRIC CHLORIDE	E	5	E	5	-	-	E	-	E	-	E	5	E	5	E	5

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CHEMICAL	FOOTWEAR															
	RUBBER		NEOPRENE		POLY-URETHANE		EVA		AEREX 1.5.5		GEN PURP PVC		PREMIER PVC		HAZPROOF PVC	
	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER
FORMALDEHYDE - CONC. <37% *	E	1	E	4	NR	-	E	-	E	-	E	3	E	4	E	4
FORMIC ACID	E	3	E	4	NR	-	E	-	E	-	E	3	E	3	E	3
FURFURAL	F	1	G	2	-	-	NR	-	E	-	NR	4	NR	4	NR	4
GASOLINE (CRACKED)	F	2	F	3	-	-	NR	-	G	-	F	3	F	4	F	4
GASOLINE (SR)	G	2	G	4	E	-	NR	-	G	-	G	4	E	5	E	5
GLYCERINE	E	5	E	5	E	-	E	-	E	-	E	5	E	5	E	5
GREASE - PETROLEUM BASE	NR	-	E	-	E	-	-	-	E	-	F	-	E	-	E	-
HEXANE **	NR	2	E	5	-	-	-	-	G	5	NR	4	F	4	F	5
HYDROBROMIC ACID	G	-	F	-	-	-	G	-	-	-	G	5	G	5	G	5
HYDROCHLORIC ACID - CONC. < 10%	E	5	E	5	F	-	E	-	E	5	G	5	G	5	E	5
HYDROCHLORIC ACID - CONC. > 10%	-	-	-	-	NR	4	E	-	E	5	-	-	-	-	-	-
HYDROFLUORIC ACID - CONC. 99.99%**	NR	4	NR	4	NR	-	E	-	E	-	F	4	F	4	F	4
HYDROGEN PEROXIDE - CONC. 90%	NR	-	NR	-	-	-	NR	-	E	-	E	3	E	3	E	3
HYDROGEN SULFIDE-GAS	NR	-	G	3	-	-	E	-	G	-	G	-	G	-	G	-
ISOPROPYL ALCOHOL	-	-	-	-	E	-	E	-	E	-	-	-	-	-	-	-
KEROSENE (PET)	F	2	G	3	E	-	NR	-	E	-	F	3	G	4	G	4
LACTIC ACID	F	2	E	5	F	-	E	-	-	-	E	4	E	5	E	5
LARD	NR	-	G	-	E	-	-	-	E	-	NR	-	E	-	E	-
LEAD ACETATE (SOL'N)	-	-	-	-	-	-	E	-	F	-	-	-	-	-	-	-
LEAD NITRATE (SOL'N)	-	-	-	-	-	-	E	-	F	-	-	-	-	-	-	-
LINSEED OIL (SEE COTTON SEED OIL)	-	-	-	-	-	-	F	-	-	-	-	-	-	-	-	-
MAGNESIUM CARBONATE (SOL'N)	-	-	-	-	F	-	E	-	-	-	-	-	-	-	-	-
MAGNESIUM CHLORIDE (SOL'N)	-	-	-	-	G	-	E	-	-	-	-	-	-	-	-	-
MALEIC ACID	E	4	E	5	-	-	E	-	-	-	E	4	E	5	E	5
METHYL ACETATE	G	3	G	3	-	-	NR	-	E	-	NR	3	NR	4	NR	4
METHYL ALCOHOL (METHANOL)	E	5	E	5	E	-	E	-	E	5	E	4	E	5	E	5
METHYL CELLOSOLVE	NR	-	G	3	-	-	-	-	E	-	G	3	G	3	G	3
METHYL CHLORIDE	NR	1	F	2	F	-	NR	-	NR	-	NR	2	NR	4	NR	5
METHYL ETHYL KEYTONE (MEK)	F	4	G	3	F	-	F	-	F	-	NR	4	NR	4	NR	4
MILK	F	-	E	-	E	-	G	-	E	-	F	-	E	-	E	-
MINERAL OIL	NR	-	G	-	E	-	F	-	E	-	NR	-	G	-	E	-
MONOETHANOLAMINE-METHYL AMINE	F	-	NR	3	-	-	-	-	-	-	G	3	G	3	G	3
MORPHOLINE	NR	3	NR	3	-	-	-	-	-	-	F	4	NR	4	NR	5
NAPHTHA	NR	-	NR	2	G	-	NR	-	E	-	F	1	G	2	G	2
NITRIC ACID - CONC. 10%	F	5	F	5	NR	-	G	-	-	-	E	5	E	5	E	5
NITRIC ACID - CONC. 70%	NR	3	NR	3	NR	-	NR	-	-	-	G	5	G	5	G	5
NITROBENZENE **	NR	4	NR	4	-	-	NR	-	F	-	NR	5	NR	5	NR	5
OCTYL ALCOHOL	G	5	E	5	E	-	-	-	E	-	E	4	E	5	E	5
OLEIC ACID	NR	-	G	-	E	-	NR	-	E	5	NR	-	E	-	E	-
OLIVE OIL	NR	-	G	-	E	-	-	-	E	-	NR	-	E	-	E	-
OXALIC ACID	-	-	-	-	NR	-	-	-	-	-	-	-	-	-	-	-
PAINT REMOVER	NR	-	F	-	NR	-	-	-	-	-	NR	-	NR	-	NR	-
PETROLEUM SOLVENT	NR	-	F	1	NR	-	-	-	-	-	F	1	F	1	F	-
PHOSPHORIC ACID - CONC. 86%	G	5	E	5	NR	-	E	-	E	-	G	5	E	5	E	5
PINE OIL	NR	-	NR	-	E	-	-	-	G	-	NR	-	F	-	G	-
POTASSIUM CARBONATE (SOL'N)	-	-	-	-	NR	-	E	-	-	-	-	-	-	-	-	-
POTASSIUM DICHROMATE (SOL'N)	G	-	E	-	-	-	E	-	E	-	G	-	E	-	E	-
POTASSIUM NITRATE (SOL'N)	-	-	-	-	F	-	E	-	-	-	-	-	-	-	-	-
POTASSIUM PERMANGANATE (SOL'N)	-	-	-	-	F	-	NR	-	-	-	-	-	-	-	-	-
PROPANE	NR	2	G	3	-	-	NR	-	E	-	F	3	G	4	G	5
PROPYL ACETATE	NR	5	NR	3	-	-	-	-	G	-	NR	4	NR	4	F	4
PROPYL ALCOHOL	E	5	E	5	E	-	E	-	E	-	E	2	E	4	E	5
SOAPS	G	-	G	-	E	-	E	-	E	-	E	-	E	-	E	-
SODIUM ACETATE (SOL'N)	-	-	-	-	NR	-	E	-	-	-	-	-	-	-	-	-
SODIUM CHLORIDE (SOL'N)	-	-	-	-	E	-	E	-	-	-	-	-	-	-	-	-
SODIUM FLUORIDE (SOL'N)	-	-	-	-	E	-	E	-	-	-	-	-	-	-	-	-
SODIUM HYDROXIDE - CONC. 50%	-	-	-	-	NR	-	-	-	E	5	-	-	-	-	-	-
SODIUM HYPOCHLORITE (BLEACH)	G	-	E	-	F	-	E	-	E	-	E	-	E	-	E	-
SOYBEAN OIL (WESSON)	NR	-	F	-	E	-	-	-	E	-	NR	-	E	-	E	-

Information in this chart is intended as a general guide only. The ultimate determination of suitability of a product for a particular application is the sole responsibility of the end user.

Chemical Degradation and Permeation Guide*

CHEMICAL	FOOTWEAR															
	RUBBER		NEOPRENE		POLY-URETHANE		EVA		AEREX 1.5.5		GEN PURP PVC		PREMIER PVC		HAZPROOF PVC	
	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER	DEG	PER
STEARIC ACID	NR	-	G	-	E	-	-	-	E	-	NR	-	E	-	E	-
SULFURIC ACID - CONC. > 90% **	NR	4	F	4	NR	-	NR	-	G	5	F	4	F	4	F	4
SULFURIC ACID - CONC. < 30%	F	5	G	5	F	-	G	-	E	5	G	5	G	5	G	5
TALLOW (BEEF TALLOW)	NR	-	G	-	E	-	E	-	-	-	NR	-	E	-	E	-
TANNIC ACID *	E	3	E	3	-	-	E	-	E	-	E	3	E	3	E	3
TETRACHLOROETHYLENE	-	-	-	-	F	-	-	-	-	-	-	-	-	-	-	-
TIN CHLORIDE - FUMING LIQ.	E	-	G	-	-	-	-	-	-	-	G	-	G	-	G	-
TOLUENE **	NR	2	NR	3	-	-	NR	-	G	4	NR	3	NR	4	F	4
TRICHLOROETHYLENE *	NR	1	NR	2	F	-	NR	-	NR	-	NR	3	F	4	F	5
TRICRESOL PHOSPHATE	F	-	F	3	-	-	NR	-	E	-	F	3	G	3	G	3
TRIETHANOLAMINE	G	4	F	4	F	-	F	-	E	-	G	3	G	4	G	4
TRINITROTOLUENE (YEL. TNT)	NR	-	G	-	-	-	-	-	-	-	G	-	G	-	G	-
TURPENTINE (PINE OIL)	NR	4	F	3	E	-	NR	-	-	-	NR	4	F	5	F	5
XYLENE	NR	2	NR	3	G	-	NR	-	-	-	F	3	F	4	F	4

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