

Chemical Degradation and Permeation Guide for: Tingley® Boot Saver® Disposable Latex Shoe Covers

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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.

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

Chemical Name	Latex Rubber	
	DEG	PER
ETHYL FORMATE	NR	-
ETHYLENE GLYCOL	E	4
FERRIC CHLORIDE	E	5
FORMALDEHYDE - CONC. < 37% *	E	1
FORMIC ACID	E	3
FURFURAL	F	1
GASOLINE (CRACKED)	F	2
GASOLINE (SR)	G	2
GLYCERINE	E	5
GREASE - PETROLEUM BASE	NR	-
HEXANE **	NR	2
HYDROBROMIC ACID	G	-
HYDROCHLORIC ACID - CONC. < 10%	E	5
HYDROCHLORIC ACID - CONC. > 10%	-	-
HYDROFLUORIC ACID - CONC. 99.99% **	NR	4
HYDROGEN PEROXIDE - CONC. 90%	NR	-
HYDROGEN SULFIDE-GAS	NR	-
ISOPROPYL ALCOHOL	-	-
KEROSENE (PET)	F	2
LACTIC ACID	F	2
LARD	NR	-
LEAD ACETATE (SOL'N)	-	-
LEAD NITRATE (SOL'N)	-	-
LINSEED OIL (SEE COTTON SEED OIL)	-	-
MAGNESIUM CARBONATE (SOL'N)	-	-
MAGNESIUM CHLORIDE (SOL'N)	-	-
MALEIC ACID	E	4
METHYL ACETATE	G	3
METHYL ALCOHOL (METHANOL)	E	5
METHYL CELLOSOLVE	NR	-
METHYL CHLORIDE	NR	1
METHYL ETHYL KEYTONE (MEK)	F	4
MILK	F	-
MINERAL OIL	NR	-
MONOETHANOLAMINE-METHYL AMINE	F	-
MORPHOLINE	NR	3
NAPHTHA	NR	NR
NITRIC ACID - CONC. 10%	F	5
NITRIC ACID - CONC. 70%	NR	3
NITROBENZENE **	NR	4
OCTYL ALCOHOL	G	5
OLEIC ACID	NR	-
OLIVE OIL	NR	-
OXALIC ACID	-	-
PAINT REMOVER	NR	-
PETROLEUM SOLVENT	NR	-
PHOSPHORIC ACID - CONC. 86%	G	5
PINE OIL	NR	-
POTASSIUM CARBONATE (SOL'N)	-	-
POTASSIUM DICHROMATE (SOL'N)	G	-
POTASSIUM NITRATE (SOL'N)	-	-
POTASSIUM PERMANGANATE (SOL'N)	-	-
PROPANE	NR	2
PROPYL ACETATE	NR	5
PROPYL ALCOHOL	E	5
SOAPS	G	-

Chemical Name	Latex Rubber	
	DEG	PER
SODIUM ACETATE (SOL'N)	-	-
SODIUM CHLORIDE (SOL'N)	-	-
SODIUM FLUORIDE (SOL'N)	-	-
SODIUM HYDROXIDE - CONC. 50%	-	-
SODIUM HYPOCHLORITE (BLEACH)	G	-
SOYBEAN OIL (WESSON)	NR	-
STEARIC ACID	NR	-
SULFURIC ACID - CONC. > 90% **	NR	4
SULFURIC ACID - CONC. < 30%	F	5
TALLOW (BEEF TALLOW)	NR	-

Chemical Name	Latex Rubber	
	DEG	PER
TANNIC ACID *	E	3
TETRACHLOROETHYLENE	-	-
TIN CHLORIDE - FUMING LIQ.	E	-
TOLUENE **	NR	2
TRICHLOROETHYLENE *	NR	1
TRICRESOL PHOSPHATE	F	-
TRIETHANOLAMINE	G	4
TRINITROTOLUENE (YEL. TNT)	NR	-
TURPENTINE (PINE OIL)	NR	4
XYLENE	NR	2