

Introduction

Information in the accompanying tables show the effect on Vulcathene of a wide range of chemicals. These results have been obtained from laboratory tests and when assessing them it should be remembered that unadulterated samples were used. In a typical chemical waste drainage application, however, water and other innocuous fluids would be discharged into the system to have a dilutionary effect on any noxious material that may be present.

If in any doubt about the action of any chemicals on Vulcathene or there is the possibility that Vulcathene is to be used in situations where specialised or unusual chemicals are involved, please contact our Technical Services Department.

The tables are intended to serve only as a guide and no guarantees can be given in respect of the data shown, which is based upon information available at the time of printing. Durapipe UK reserves the right to make any modifications deemed necessary by the acquisition of new data.

Classification

- Resistant
- Likely to be resistant
- Not resistant
- No data available

Vulcathene is classed * Likely to be resistant on the basis of the way the material behaves with chemicals of the same family group and where extensive usage by Vulcathene customers indicates suitability.

Vulcathene is classed - Not resistant on the basis of unadulterated test samples. In practice, the routine disposal of a wide variety of hot and cold chemicals is accompanied by appropriate amounts of water for the purpose of dilution and flushing.

Where no data is available, but where details or samples of chemicals can be supplied, Durapipe UK will conduct chemical suitability tests and make recommendations accordingly.

The following notes should be read in conjunction with the chemical resistance tables:

- These are compounds whose general formula is either $(R1)_2SO_4(R2)_2(SO_4)_6 \cdot 24 H_2O$ or $(R1)(R2)(SO_4)_2 \cdot 12 H_2O$, where R1 represents an atom of Potassium, Sodium, Ammonium, Rubidium, Caesium, Silver or Thallium; and (R2) represents an atom of Aluminium, Iron, Chromium, Manganese or Thallium.
- This substance is insoluble in pure water. If conveyed aqueous it would always be in the form of a suspension.
- This substance decomposes in hot water. Unless suitability is indicated refer to Durapipe UK.
- Substances which are generally categorised can have widely variable compositions, and therefore each needs to be tested for suitability. Refer to Durapipe UK.
- This substance is only sparingly soluble in water. If conveyed aqueous it would usually be in the form of a suspension.
- This substance is sparingly soluble in water, which then reacts with it.
- A solution of Chromium trioxide in water, often produced by the action of concentrated Sulphuric acid on Sodium dichromate.

Radioactive Waste

A well-established application for Vulcathene is low level radioactive waste solutions, e.g. in hospitals & research laboratories. To discuss specific requirements please contact our Technical Support Department on +44(0)1543 272445.

COSHH Regulations

Attention is drawn to the requirements of the Health & Safety at Work Act and COSHH regulations. Durapipe UK cannot accept any responsibility for accidents arising from the misuse of its products, faulty installation and incorrect application. Copies of COSHH Regulations are available on request.

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Acetaldehyde, aqueous		40%	+	+	
Acetamide, aqueous	CH ₃ CONH ₂		+	+	
Acetic acid	CH ₃ COOH	100%	+		-
Acetic acid, aqueous		70%	+	+	+
Acetic anhydride	(CH ₃ CO) ₂ O	techn. grade	+		-
Acetone	(CH ₃) ₂ CO	techn. grade	+	+	
Acetophenone	C ₆ H ₅ CO ₂ CH ₃	techn. grade	+		
Acrylonitrile	CH ₂ =CH ₂ CN	techn. grade	+		
Adipic acid, aqueous	(CH ₂ CH ₂ C(COOH)) ₂	saturated	+	+	+
Air			+	+	+
Allyl alcohol (2-Propenol-1)	CH ₂ =CH-CH ₂ OH	96%	+	+	
Aluminium chloride, aqueous	AlCl ₃ ·AlCl ₃ ·6H ₂ O	any	+	+	+
Aluminium chloride, solid			+	+	
Aluminium fluoride	AlF ₃ ·AlF ₃ ·H ₂ O AlF ₃ ·3 1/2 H ₂ O	conc.	+	+	+
Aluminium hydroxide (See Note 2)	Al(OH) ₃		+	+	
Aluminium metaphosphate	Al (PO ₃) ₃		+	+	+
Aluminium sulphate, aqueous	Al ₂ (SO ₄) ₃ ·Al ₂ (SO ₄) ₃ ·18 H ₂ O	saturated	+	+	+
Aluminium sulphate, solid			+	+	
Alum, aqueous (See Note 1)		any	+	+	+
Amino acids			+	+	+
2-Aminoethanol (Ethanolamine)	H ₂ NCH ₂ CH ₂ OH	techn. grade	+		
Ammonia, aqueous	NH ₃	any	+	+	
Ammonia, gaseous			+	+	
Ammonia, liquid			+		
Ammonia water		any	+	+	
Ammonium acetate, aqueous	CH ₃ CO ₂ NH ₄	any	+	+	+
Ammonium carbonate, aqueous (See Note 3)	NH ₄ HCO ₃ ·NH ₂ COONH ₄ ·H ₂ NCOONH ₄	any	+	+	+
Ammonium chloride, aqueous (See Note 3)	NH ₄ Cl	any	+	+	+
Ammonium fluoride, aqueous (See Note 3)	NH ₄ F	saturated	+	+	
Ammonium hydrogen carbonate, aqueous	NH ₄ HCO ₃	saturated	+	+	
Ammonium hydrosulphide, aqueous	NH ₄ HS	any	+	+	
Ammonium nitrate, aqueous	NH ₄ NO ₃	any	+	+	+
Ammonium phosphate(s)	NH ₄ H ₂ PO ₄ ·(NH ₄) ₂ HPO ₄ ·(NH ₄) ₃ PO ₄ ·3H ₂ O	any	+	+	+
Ammonium sulphate, aqueous	(NH ₄) ₂ SO ₄	any	+	+	+
Ammonium sulphide, aqueous	(NH ₄) ₂ S	any	+	+	+
Ammonium thiocyanate	NH ₄ SCN			-	-
Amyl acetate	CH ₃ COO·(CH ₂) ₄ ·CH ₃ , Pentyl acetate	techn. grade		-	-
Amyl alcohol (C ₅ alcohols)	CH ₃ ·(CH ₂) ₃ ·CH ₂ OH, Pentan-1-ol, Butyl carbinol	tech. grade	+	+	+
Aniline	C ₆ H ₅ NH ₂	any	+	+	
Aniline hydrochloride, aqueous	C ₆ H ₅ NH ₂ ·HCl	any	+	+	
Animal oils			+		
Anon (Cyclohexanone)	CH ₂ ·(CH ₂) ₄ ·CO		+		
Anthraquinone sulphonic acid, aqueous (susp.)	C ₆ H ₄ (CO ₂)C ₆ H ₄ SO ₃ H		+		
Antifreeze (automotive) (See Note 4)		as supplied commercially			
Antimony chloride, anhydrous	SbCl ₃		+	+	
Antimony pentachloride	SbCl ₅		+	+	
Antimony trichloride	SbCl ₅ , Antimony (III) chloride, Butter of Antimony		+	+	
Aqua regia	(HCl+HNO ₃)		-	-	

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Aromatic oils			-	-	
Arsenic acid, aqueous	HA ₃ O ₃	any	+	+	
Arsenic acid anhydride			+	+	
Ascorbic acid			+	+	
Asphalt			+		
®Asprin			+		
Barium hydroxide, aqueous	Ba(OH) ₂ ·8H ₂ O	any	+	+	+
Battery acid	conc. H ₂ SO ₄ diluted with water to about 25%		+	+	
Beater glue (animal glue)		as supplied	+	+	
Beef tallow			+	+	
Beer			+	+	
Beer sugar colouring		as supplied commercially	+	+	
Beeswax			+		
Benzaldehyde, aqueous	C ₆ H ₅ .CHO	any	+		
Benzene	C ₆ H ₆	techn. grade	-	-	
Benzene sulphonic acid	C ₆ H ₅ SO ₃ H		+	+	
Benzoic acid, aqueous	C ₆ H ₅ CO ₂ H		+	+	+
Benzyl alcohol	C ₆ H ₅ .CH ₂ OH		+	+	
Benzyl chloride	C ₆ H ₅ .CH ₂ Cl		-	-	-
Bichromate - sulphuric acid		conc.	-	-	-
Bismuth salts			+		
Bisulphite liquor			+	+	
Bitumen			+		
Bleaching solution containing 12.5% active chlorine**			-	-	-
Bone oil			+	+	
Borax (Sodium tetraborate), aqueous	Na ₂ B ₄ O ₇ , Na ₂ B ₄ O ₇ ·10H ₂ O, di-Sodium tetraborate	saturated	+	+	+
Boric acid, aqueous	H ₃ BO ₃	any	+	+	+
Brandy			+	+	
Bromic acid	Hbr	conc.	-	-	-
Bromine, liquid	Br ₂	100%	-	-	-
Bromine vapours			-	-	-
Butanediol, aqueous	HO(CH ₂) ₄ OH	any	+	+	+
Butanetriol, aqueous	HOCH ₂ CH ₂ CH(OH)CH ₂ OH	any	+	+	
Butanol, aqueous	CH ₃ (CH ₂) ₃ OH	any	+		
Butanone	C ₂ H ₅ COCH ₃		+		
2-Butenediol-1.4	HOCH ₂ CH=CHCH ₂ OH	techn. grade	+	+	
2-Butynediol-1.4	HOCH ₂ C≡CCH ₂ OH	techn. grade	+		
®Butoxyl (Methoxybutylacetate)	CH ₃ COO(CH ₂) ₄ OCH ₃		+		
Butter			+	+	
Butylene glycol	HO(CH ₂) ₄ OH	techn. grade	+		
Butyl acetate	CH ₃ .COO.(CH ₂) ₃ .CH ₃		-	-	-
Butyl acrylate	H ₂ C=CHCO ₂ (CH ₂) ₃ CH ₃		+		
Butyl alcohol	CH ₃ .(CH ₂) ₃ OH, Buton-1-ol		+		
Butyl phenol	C ₂ H ₅ CH(CH ₃)C ₆ H ₄ OH	techn. grade	+		
Butyl phenone	C ₆ H ₅ O(CH ₂) ₄ CH ₃	techn. grade	-	-	-
Butyl phthalate (Dibutyl phthalate)	C ₆ H ₄ O(COOC ₄ H ₉) ₂	techn. grade	+		
Butyric acid, aqueous	CH ₃ .CH ₂ .CH ₂ .COOH,	any	+		
Calcium carbide	CaC ₂		+	+	
Calcium carbonate (See Note 5)	CaCO ₃		+	+	+
Calcium chlorate, aqueous	Ca(ClO ₃) ₂	saturated	+	+	
Calcium chloride, aqueous	CaCl ₂ , CaCl ₂ ·2H ₂ O, CaCl ₂ ·6H ₂ O	saturated	+	+	+
Calcium hydroxide (See Note 5)	Ca(OH) ₂		+	+	+

Classification: + = Resistant ◻ = Likely to be resistant - = Not resistant ◻ = No data available

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Calcium hypochlorite, aqueous (suspension)	Ca(OCl) ₂		*	*	-
Calcium nitrate, aqueous	Ca(NO ₃) ₂ , Ca(NO ₃) ₂ ·4H ₂ O	50%	+	+	+
Calcium oxide (powder) (See Note 6)	CaO		+	+	
Calcium sulphate (See Note 5)	CaSO ₄ , CaSO ₄ ·2H ₂ O (Gypsum), CaSO ₄ ·½ H ₂ O (Plaster of Paris)		+	+	+
Camphor oil		any	-	-	-
Cane sugar, aqueous		any	+	+	
Carbazole	(C ₆ H ₄) ₂ NH		+	+	
Carbolic acid (Phenol)	C ₆ H ₅ OH		+		
Carbonic acid, aqueous	H ₂ CO ₃	any	+	+	
Carbonic acid, dry		100%	+	+	
Carbon dioxide	CO ₂	100%	+	+	
Carbon monoxide, gaseous	CO	techn. grade	+	+	
Castor oil			+	+	
Caustic soda solution	NaOH,	any	+	+	+
Cetyl alcohol (Hexadecanol)	CH ₃ (CH ₂) ₁₅ OH		+		
Chloral (Trichloroacetaldehyde)	CCl ₃ CHO	techn. grade	+	+	
Chloramine, aqueous	NH ₂ Cl	saturated	+		
Chloric acid, aqueous	HClO ₃	10%	+		-
Chloric acid, aqueous		20%	+	-	-
Chlorinated lime			+	+	
Chlorine, aqueous solution (chlorine water)	Cl ₂ + H ₂ O	saturated	*	-	-
Chlorine, gaseous, dry			-	-	-
Chlorine, gaseous, moist			-	-	-
Chlorine, liquid			-	-	-
Chlorine bleaching solution with 12.5% active chlorine			-	-	-
Chloroacetic acid, aqueous	ClCH ₂ CO ₂ H	<85%	+	+	
Chlorobenzene	C ₆ H ₅ Cl		-	-	-
Chloroform	CHCl ₃	techn. grade	-	-	-
Chloromethyl bromide	CH ₂ ClBr		-	-	-
Chlorosulphonic acid	ClSO ₃ H	techn. grade	-	-	-
Chrome alum (Potassium chromic sulphate) aqueous		saturated	+	+	+
Chrome anode slime			+		
Chromic acid, aqueous (See Note 7)		50%	-	-	-
Chromium trioxide, aqueous	CrO ₃	50%	-	-	-
Chromosulphuric acid			-	-	-
Cider			+	+	+
Citric acid, aqueous	C(OH)(COOH)(CH ₂ COOH) ₂ ·H ₂ O	saturated	+	+	+
Citrus juices			+	+	
Coal tar oil			-	-	-
Coconut oil			+		
Coconut oil alcohol		techn. grade	+		
Cod liver oil			+		
Coffee extract			+	+	
Cognac			+		
Cola concentrates			+	+	
Common salt, aqueous	NaCl	any	+	+	+
Copper chloride, aqueous	CuCl, CuCl ₂ , CuCl ₂ ·2H ₂ O	saturated	+	+	+
Copper cyanide, aqueous	Cu CN ₂	saturated	+	+	
Copper fluoride, aqueous	Cu F ₂	saturated	+		
Copper nitrate, aqueous	Cu(NO ₃) ₂ ·3H ₂ O, Cupric nitrate	30%	+	+	
Copper sulphate, aqueous	CuSO ₄ , CuSO ₄ ·5H ₂ O, Cupric sulphate	any	+	+	+

Classification: + = Resistant □ = Likely to be resistant - = Not resistant ■ = No data available

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Corn oil			+	+	
Cottonseed oil		techn. grade	+	+	
Coumarone resins			+		
Creosote			*		
Cresol	CH ₃ (C ₆ H ₄)OH	100%	+		
Cresol, aqueous	Isomers of CH ₃ -C ₆ H ₄ -OH, Cresylic acid	dilute	+		
Crotonaldehyde	CH ₃ CH=CHCHO	techn. grade	+		
Cyclanone (fatty alcohol sulphonate)		as supplied commercially	+	+	
Cyclohexanol	CH ₂ -(CH ₂) ₄ -CH.OH []		+	+	
Cyclohexanone (Anon)	CH ₂ -(CH ₂) ₄ -CO []		+		
Decahydronaphthalene (®Dekalin)	C ₁₀ H ₁₈	techn. grade	-	-	
Detergents			+	+	
Developer solutions (photographic)			+	+	
Dextrin (starch gum), aqueous		18%	+	+	+
Dextrose, aqueous	O(CH.OH) ₄ .CH.CH ₂ OH, D-Glucose	any	+	+	+
1.2-Diaminoethane (Ethylenediamine)	H ₂ NCH ₂ CH ₂ NH ₂	techn. grade	+	+	
1.2-Dibromoethane	BrCH ₂ CH ₂ Br		-	-	-
Dibutyl ether	[CH ₃ (CH ₂) ₃]O		-	-	-
Dibutyl phthalate (Butyl phthalate)	C ₆ H ₄ (COOC ₄ H ₉) ₂	techn. grade	+		
Dibutyl sebacate	CH ₃ (CH ₂) ₃ O ₂ C(CH ₂) ₈ CO ₂ (CH ₂) ₃ CH ₃		+		
Dichloroacetic acid	Cl ₂ CHCOOH	techn. grade	+		
Dichloroacetic acid methyl ester	Cl ₂ CHCO ₂ CH ₃		-	-	-
Dichlorobenzene	C ₆ H ₄ Cl ₂		-	-	-
Dichlorodiphenyltrichloroethane (DDT, powder)			+	+	
Diethanolamine	[CH ₂ (OH).CH ₂] ₂ NH	techn. grade	+		
Diethylene glycol	(HOCH ₂ CH ₂) ₂ O		+	+	
Diethyl ether	(C ₂ H ₅) ₂ O		-	-	-
Diglycolic acid, aqueous	O(CH ₂ CO ₂ H) ₂	30%	+	+	
Dihexyl phthalate	C ₆ H ₄ (COOC ₆ H ₁₃) ₂	techn. grade	+		
Diisobutylketone	[(CH ₃) ₂ CH.CH ₂] ₂ CO	techn. grade	+	-	-
Diisooctyl phthalate	C ₆ H ₄ (COOC ₈ H ₁₇) ₂	techn. grade	+		
Dimethylamine	(CH ₃) ₂ NH		+		
Dimethyl formamide	H.Co.N(CH ₃) ₂ , DMF, N. N-Dimethylformamide	techn. grade	+	+	
Dinonyl phthalate (DNP)	C ₆ H ₄ (COOC ₉ H ₁₉) ₂	techn. grade	+		
Diocetyl phthalate	C ₆ H ₄ [COO.CH ₂ .CH(C ₂ H ₅)(CH ₂) ₃ CH ₃] ₂ , Di-(2-ethylhexyl) phthalate, DOP		+		
Disodium phosphate	Na ₂ HPO ₄		+	+	+
Disodium sulphate	Na ₂ SO ₄		+	+	+
Dodecylbenzenesulphonic acid	C ₁₂ H ₂₅ C ₆ H ₄ SO ₃ H		+		
Drinking water, also chlorinated	H ₂ O		+	+	+
Emulsions (photographic)			+	+	
Epichlorohydrin	ClCH ₂ (CH ₂) ₂ O		+		
Ethanolamine (2-Aminoethanol)	H ₂ NCH ₂ CH ₂ OH	techn. grade	+		
Ethanol	CH ₃ CH ₂ OH	96%	+	+	+
Ether, Diethyl ether	(C ₂ H ₅) ₂ O		-	-	-
Ethylenediamine tetraacetic acid	[CH ₂ .N(CH ₂ .COOH) ₂] ₂		+	+	+
Ethylene chlorohydrin (Chloroethanol)	ClCH ₂ CH ₂ OH	techn. grade	+		
Ethylene diamine (1.2-Diaminoethane)	H ₂ NCH ₂ CH ₂ NH ₂	techn. grade	+	+	
Ethylene dichloride (Dichloroethane)	ClCH ₂ CH ₂ Cl		-	-	-
Ethylene glycol	CH ₂ (OH).CH ₂ OH		+	+	+

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Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Ethylene glycol monobutyl ether	HOCH ₂ CH ₂ OC ₄ H ₉	techn. grade	+		
Ethylene oxide, gaseous	CH ₂ .CH ₂ O		+		
Ethyl acetate	CH ₃ .COO.C ₂ H ₅	techn. grade	+		
Ethyl alcohol	C ₂ H ₅ OH	techn. grade	+	+	+
Ethyl alcohol + Avetic acid (fermentation mixture)		as used in brewing	+	+	
Ethyl benzene	C ₆ H ₅ CH ₂ CH ₃	techn. grade	-	-	-
Ethyl chloride	C ₂ H ₅ Cl	techn. grade	-	-	-
Ethyl chloride (Chloroethane)	CH ₃ CH ₂ Cl	techn. grade	-	-	-
Ethyl ether	(C ₂ H ₅) ₂ O	techn. grade	-	-	-
Ethyl ether (Diethyl ether)	(C ₂ H ₅) ₂ O		-	-	-
Fatty acids			+	+	
Fatty acid amides			+		
Fatty alcohols			+		
Ferric ammonium sulphate, aqueous	NH ₄ Fe(SO ₄) ₂ .12H ₂ O saturated		+	+	+
Ferric chloride	FeCl ₃ .FeCl ₃ .6H ₂ O, Iron (III) chloride	saturated	+	+	+
Ferric nitrate, aqueous	Fe(NO ₃) ₃ .9H ₂ O, Iron (III) nitrate	saturated	+	+	+
Ferric sulphate, aqueous (See Note 3)	Fe ₂ (SO ₄) ₃ , Fe ₂ (SO ₄) ₃ .xH ₂ O, Iron (III) sulphate	saturated	+	+	+
Ferrous chloride, aqueous	FeCl ₂ .4H ₂ O	saturated	+	+	+
Ferrous sulphate, aqueous	FeSO ₄ .7H ₂ O	saturated	+	+	+
Fertilizer salts, aqueous		any	+	+	+
Fluorine, gaseous	F ₂		-	-	-
Formaldehyde, aqueous	HCHO	up to 40%	+	+	
Formamide	HCONH ₂		+	+	
Formic acid, aqueous	H.COOH	10%	+	+	
Formic acid, aqueous		85%	+		
Fructose	O.CH ₂ .(CH.OH) ₃ .C(OH).CH ₂ OH, Laevulose		+	+	+
Fruit juices		any	+	+	+
Fruit juices, fermented			+	+	+
Fruit pulp			+	+	+
Fuming sulphuric acid	(H ₂ SO ₄ + SO ₃)	any	-	-	-
Furfuryl alcohol	O.CH:CH.CH:C.CH ₂ OH	+			
Gas, manufactured		as supplied commercially	+		
Gas, natural		techn. grade	+		
Geletin			+	+	+
Gin			+		
Glacial acetic acid (100% acetic acid)	CH ₃ COOH	techn. grade	+		-
Glauber's salt, aqueous	Na ₂ SO ₄ .10H ₂ O	any	+	+	+
Glucose, aqueous		any	+	+	+
Glycerin(e)	CH ₂ OH.CHOH.CH ₂ OH, Glycerol 1,2,3-Propanetriol	any	+	+	+
Glycine (Aminoacetic acid)	H ₂ NCH ₂ CO ₂ H		+	+	
Glycolic Acid, aqueous	HOCH ₂ CO ₂ H	up to 70%	+		
Heptane	CH ₃ (CH ₂) ₅ CH ₃		-	-	-
Hexafluorosilicic acid, aqueous	H ₂ SiF ₆	40%	+	+	
Hexane	CH ₃ (CH ₂) ₄ CH ₃		-	-	-
Hexanetriol	HO(CH ₂) ₄ CH(OH)CH ₂ OH		+	+	+
Honey			+	+	+
Hydrazine hydrate	NH ₂ .NH ₂ .H ₂ O		+		
Hydrobromic acid, aqueous	HBr	50%	+	+	
Hydrochloric acid, aqueous	HCl	any	+	+	
Hydrocyanic acid	HCN		+	+	

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Hydrofluoric acid, aqueous	HF	85%	+		
Hydrogen	H ₂		+	+	
Hydrogen chloride gas, dry and moist			+	+	
Hydrogen peroxide, aqueous	H ₂ O ₂	10%	+	+	
Hydrogen peroxide, aqueous		30%	+		
Hydrogen sulphide, aqueous	H ₂ S	saturated	+	+	
Hydrogen sulphide, gaseous			+	+	
Hydroxylamine sulphated, aqueous	(H ₂ NOH) ₂ .H ₂ SO ₄	12%	+	+	
Hypochlorous acid	HOCl		*	*	
Ink			+	+	
Iodine in potassium iodide solution		3% iodine	*	*	
Iodine tincture		as supplied commercially	*		
Isobutyl alcohol (Isobutanol)	C ₂ H ₅ CH(OH)CH ₃		+		
Isooctane	(CH ₃) ₂ CHCH ₂ C(CH ₃) ₃		-	-	
Isopropanol	(CH ₃) ₂ CHOH	techn. grade	+	+	+
Isopropyl ether	[(CH ₃) ₂ CH] ₂ O	techn. grade	-	-	-
i-Propanol (i-Propyl alcohol)	(CH ₃) ₂ CHOH		+	+	+
Jam			+	+	+
Lactic acid, aqueous	CH ₃ .CHOH.COOH	any	+	+	+
Lactose (milk sugar)			+	+	+
Lanolin	(wool fat)		+		
Latex			+	+	
Lead acetate, aqueous	(CH ₃ .COO) ₂ Pb.3H ₂ O	any	+	+	+
Lead tetraethyl			+		
Lime (See Note 5)	CaO		+	+	+
Lime water			+	+	+
Linseed oil		techn. grade	+	+	+
Lithium bromide			+	+	+
Magnesium carbonate	MgCO ₃ , MgCO ₃ .3H ₂ O, MgCO ₃ .5H ₂ O Magnesite		+	+	+
Magnesium chloride, aqueous	MgCl ₂ , MgCl ₂ .6H ₂ O		+	+	+
Magnesium hydroxide (See Note 5)	Mg(OH) ₂		+	+	+
Magnesium iodide	Mg I ₂	any	+	+	+
Magnesium sulphate (Epsom salts), aqueous	MgSO ₄ , MgSO ₄ .H ₂ O, MgSO ₄ 7H ₂ O	up to 100%	+	+	+
Maleic acid, aqueous	HO ₂ CCH=CHCO ₂ H		+	+	+
Malic acid, aqueous	HO ₂ CCH ₂ CH(OH)CO ₂ H	50%	+	+	+
Manganese sulphate	MnSO ₄		+		
Margarine			+	+	
Mash		as supplied	+	+	
Mayonnaise			+		
Mercury	Hg		+	+	
Metal soaps			+	+	+
Methacrylic acid	H ₂ C=C(CH ₃)CO ₂ H		+	+	
Methanol	CH ₃ OH	techn. grade	+	+	
Methoxybutanol	CH ₃ O(CH ₂) ₄ OH		+		
Methoxybutyl acetate (®Butoxyl)	CH ₃ CO ₂ (CH ₂) ₄ OCH ₃		+		
Methylamine, aqueous	CH ₃ NH ₂	32%	+		
Methylene chloride (dichloromethane)	CH ₂ Cl ₂		-	-	-
Methylisobutyl ketone	(CH ₃) ₂ CH.Ch ₂ .COCH ₃	techn. grade	+		
Methyl acetate (Acetic acid methyl ester)	CH ₃ CO ₂ CH ₃	techn. grade	+	+	
Methyl alcohol	CH ₃ OH		+	+	

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Methyl benzene	$C_6H_5CH_3$		-	-	
Methyl bromide (Bromomethane), gaseous	CH_3Br	techn. grade	-	-	-
Methyl chloride (Chloromethane), gaseous	CH_3Cl	techn. grade	-	-	-
Methyl cyclohexane	$C_6H_{11}CH_3$		-	-	-
Methyl ethyl ketone	$C_2H_5.CO.CH_3$	techn. grade	+		
Methyl glycol			+	+	
4-Methyl pentanol-2	$(CH_3)_2CHCH_2CH(OH)CH_3$		+		
Methyl propyl ketone	$CH_3COCH_2CH_2CH_3$		+		
Methyl salicylate (Salicylic acid methyl ester)	$2-(HO)C_6H_4CO_2CH_3$		+		
Methyl sulphuric acid	CH_3OSO_2OH	50%	+	+	
Milk			+	+	+
Mineral water			+	+	+
Molasses			+	+	
Molasses wort			+	+	
Monochloroacetic acid	$ClCH_2CO_2H$		+	+	
Monochloroacetic acid ethyl ester	$ClCH_2CO_2C_2H_5$		+	+	
Monochloroacetic acid methyl ester	$ClCH_2CO_2CH_3$		+	+	
Morpholine	$NHCH_2CH_2OCH_2CH_2$		+	+	
Mustard			+	+	+
Must			+	+	+
Nail varnish remover	(see note 4)				
Nickel chloride	$NiCl_2, NiCl_2 \cdot 6H_2O$		+	+	+
Nickel nitrate	$Ni(NO_3)_2 \cdot 6H_2O$		+	+	+
Nickel sulphate, aqueous	$NiSO_4, NiSO_4 \cdot 6H_2O$		+	+	+
Nicotinic acid	C_6H_4NCOOH	any	+	+	+
Nitric acid	HNO_3	25%	+	-	-
2,2',2''-Nitrilotriethanol (Triethanolamine),	$(HOCH_2CH_2)_3N$		+	+	
Nitrobenzene	$C_6H_5NO_2$		+	+	
Nitrocellulose			+		
o-Nitrotoluene	$CH_3, C_6H_4NO_2$		+	-	
Nonyl alcohol (nonanol)	$CH_3(CH_2)_8OH$		+		
Nut oil			+		
Octyl cresol	$CH_3(CH_2)_7C_6H_3(CH_2)OH$	techn. grade		-	
Oleic acid	$CH_3(CH_2)_7CH:CH(CH_2)_7COOH$, 9-Octadecanoic acid		+	-	
Olive oil			+	+	+
Orange juice			+	+	+
Oxalic acid, aqueous	$(COOH)_2 \cdot 2H_2O$	any	+	+	+
Oxygen	O_2		+	+	
Ozone	O_3	50 ppm	+	*	
Palmitic acid	$CH_3, (CH_2)_{14}, COOH$		+	+	
Palmityl alcohol			+	+	
Palm nut oil			+	+	
Paraformaldehyde	$(CH_2O)_n$		+		
Peanut oil		techn. grade	+	+	
Pentanol	$CH_3(CH_2)_4OH$		+		
Perchloric acid, aqueous	$HClO_4$	20%	+	+	
Phenol (Carbolic acid)	C_6H_5OH		+	+	
Phenyl ethyl alcohol	$C_6H_5CH_2CH_2OH$		+		

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Phenyl hydrazine hydrochloride	$C_6H_5NHNH_2.HCl$		+		
Phenyl sulphonate (Sodium dodecyl benzene sulphonate)	$C_{12}H_{25}C_6H_4SO_3Na$		+	+	
Phosgene, liquid		100%	-		
Phosphoric acid, aqueous	H_3PO_4	50%	+	+	+
Phosphoric acid, aqueous		80%...95%	+		
Phosphorus oxychloride	$POCl_3$		+		
Phosphorus pentoxide	P_2O_5	100%	+		
Phosphorus trichloride	PCl_3		+		
Phthalic acid, aqueous	$C_6H_4-1, 2-(CO_2H)_2$	50%	+	+	
Phthalic acid dibutyl ester (Dibutyl phthalate)	$C_6H_4(COOC_4H_9)_2$	techn. grade	+		
Picric acid, aqueous	$(O_2N)_3C_6H_2OH$	1%	+		
Pineapple juice			+	+	
Pine needle oil			+	+	
Polyglycols			+	+	
Potassium aluminium sulphate, aqueous	$KAl(SO_4)_2 \cdot 12H_2O$	any	+	+	+
Potassium bicarbonate, aqueous	$KHCO_2$	saturated	+	+	+
Potassium bicromate, aqueous	$K_2Cr_2O_7$	any	+	+	+
Potassium bisulphate, aqueous	$KHSO_4$	saturated	+	+	+
Potassium meta bisulphate, aqueous	$K_2S_2O_5$	saturated	+	+	+
Potassium borate, aqueous	KBO_2	1%	+	+	+
Potassium bromate, aqueous	$KBrO_3$	up to 10%	+	+	+
Potassium bromide, aqueous	KBr	any	+	+	+
Potassium carbonate	$K_2CO_3, K_2CO_3 \cdot 1\frac{1}{2}H_2O$, Potash	any	+	+	+
Potassium chlorate, aqueous	$KClO_3$	any	+	+	+
Potassium chloride, aqueous	KCl	any	+	+	+
Potassium chromate, aqueous	K_2CrO_4	40%	+	+	+
Potassium chromic sulphate (Chrome alum), aqueous	$KCr(SO_4)_2 \cdot 12H_2O$		+	+	+
Potassium cyanide, aqueous	KCN	any	+	+	+
Potassium dichromate, aqueous	$K_2Cr_2O_7$	saturated	+	+	+
Potassium ferricyanide, aqueous	$K_3Fe(CN)_6$	any	+	+	+
Potassium ferrocyanide, aqueous	$K_4Fe(CN)_6 \cdot 3H_2O$	saturated	+	+	+
Potassium fluoride, aqueous	KF	any	+	+	+
Potassium hexacyanoferrate, aqueous	$K_3Fe(CN)_6$ or $K_4Fe(CN)_6 \cdot 3H_2O$	any	+	+	+
Potassium hydrogen carbonate, aqueous	$KHCO_3$	saturated	+	+	+
Potassium hydrogen sulphate, aqueous	$KHSO_4$	saturated	+	+	+
Potassium hydrogen sulphate, aqueous	$K_2S_2O_5$	saturated	+	+	+
Potassium hydroxide, aqueous	KOH	any	+	+	+
Potassium iodide, aqueous	KI	any	+	+	+
Potassium nitrate, aqueous	KNO_3	any	+	+	+
Potassium perchlorate, aqueous	$KClO_4$	1%	+	+	
Potassium permanganate, aqueous	$KMnO_4$	up to 6%	+		
Potassium persulphate, aqueous	$K_2S_2O_8$	any	+	+	+
Potassium phosphate, aqueous	K_2PO_4	saturated	+	+	+
Potassium sulphate, aqueous	K_2SO_4	any	+	+	+
Potassium sulphide, aqueous	K_2S	saturated	+	+	
Potassium sulphite, aqueous	$K_2SO_3 \cdot 2H_2O$	saturated	+	+	+
Potassium thiosulphate, aqueous	$K_2S_2O_3 \cdot H_2O$	saturated	+	+	+
Propanol (Propyl alcohol)	$CH_3 CH_2 CHOH$	techn. grade	+	+	
i-Propanol (i-Propyl alcohol)	$(CH_3)_2CHOH$	techn. grade	+	+	
n-Propanol (n-Propyl alcohol)	$CH_3 CH_2 CHD$	techn. grade	+	+	
Propargyl alcohol, aqueous	$HC \equiv CCH_2OH$	7%	+	+	

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Propionic acid, aqueous	CH ₃ CH ₂ COOH	any	+	+	
Propylene dichloride	CH ₂ Cl CH Cl	100%	-	-	-
Propylene glycol	CH ₂ (CH ₂ OH) ₂ , Propane-1, 2-diol, CH ₂ CH(OH).CH ₂ OH, Propane-1,3-diol		+	+	+
Pyridine	C ₅ H ₅ N		*	*	
Quinine	C ₂₀ H ₂₄ N ₂ O ₂		+	+	
Rubber dispersions (latex)			+	+	
Salicylic acid	HOC ₆ H ₄ COOH		+	+	
Salt brines		saturated	+	+	
Sauerkraut (pickled cabbage)			+	+	+
Sea water			+	+	+
Silicic acid, aqueous	H ₂ SiO ₃	any	+	+	
Silicone emulsion		as supplied commercially			
Silicone oil		technical	+	+	+
Silver nitrate, aqueous	Ag NO ₃	any	+	+	+
Soap solution, aqueous		any	+	+	+
Soda (Sodium carbonate), aqueous		any	+	+	+
Sodium acetate, aqueous	CH ₃ COONa, CH ₃ COONa.3H ₂ O	any	+	+	+
Sodium aluminium sulphate	Na Al(SO ₄) ₂ 12H ₂ O		+	+	+
Sodium benzoate, aqueous	C ₆ H ₅ COONa	any	+	+	+
Sodium bicarbonate, aqueous	NaHCO ₃	saturated	+	+	+
Sodium bisulphate, aqueous	NaHSO ₄ . H ₂ O	saturated	+	+	+
Sodium bisulphite, aqueous	Na ₂ S ₂ O ₅	saturated	+	+	+
Sodium borate	Na ₂ B ₄ O ₇		+	+	+
Sodium bromide	NaBr		+	+	+
Sodium carbonate, aqueous	Na ₂ CO ₃ , Na ₂ CO ₃ 10H ₂ O, Soda	any	+	+	+
Sodium chlorate, aqueous	NaClO ₃	saturated	+	+	
Sodium chloride, aqueous	NaCl	any	+	+	+
Sodium chlorite, aqueous	NaClO ₂	50%	+	+	
Sodium chromate	Na ₂ CrO ₄		+	+	+
Sodium cyanide	NaCN		+	+	+
Sodium dichromate	Na ₂ Cr ₂ O ₇ . 2H ₂ O		+	+	+
Sodium dodecylbenzenesulphonate	C ₁₂ H ₂₅ C ₆ H ₄ SO ₃ Na		+	+	+
Sodium ferricyanide	Na ₃ Fe(CN) ₆ H ₂ O		+	+	+
Sodium fluoride	NaF		+	+	+
Sodium hexacyanoferrate (III) (sodium ferrocyanide), aqueous	Na ₃ Fe(CN) ₆ . H ₂ O		+	+	+
Sodium hexacyanoferrate (II)	Na ₄ Fe(CN) ₆ . 3H ₂ O		+	+	+
Sodium hexametaphosphate, aqueous	(NaPO ₃) ₆	saturated	+	+	+
Sodium hydrogen carbonate, aqueous	Na HCO ₃		+	+	+
Sodium hydrogen sulphate, aqueous	NaHSO ₄	saturated	+	+	+
Sodium hydrogen sulphite, aqueous	NaHSO ₃	saturated	+	+	+
Sodium hydroxide, aqueous	NaOH	saturated	+	+	+
Sodium hydroxide, solid			+	+	
Sodium hypochlorite, aqueous with ≥5% active chlorine	NaOCl		-	-	-
Sodium nitrate, aqueous	NaNO ₃	any	+	+	+
Sodium perborate, aqueous	NaBO ₃ . 4H ₂ O				
Sodium phosphate(s)	Na ₂ HPO ₄ , NaPO ₄ . 12H ₂ O NaH ₂ PO ₄ , Na ₄ P ₂ O ₇ . 10H ₂ O	any	+	+	+
Sodium silicate, aqueous	A waterglass, NaO. x SiO ₂ where x = 3 to 5	any	+	+	+
Sodium sulphate, aqueous	Na ₂ SO ₄ .Na ₂ SO ₄ . 10H ₂ O, Glauber's salt	cold saturated	+	+	+
Sodium sulphide, aqueous		saturated	+	+	

Classification: + = Resistant * = Likely to be resistant - = Not resistant ■ = No data available

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Sodium sulphite, aqueous	$\text{Na}_2\text{SO}_3, \text{Na}_2\text{SO}_3 \cdot 9\text{H}_2\text{O}$	40%	+	+	+
Sodium tetraborate (Borax), aqueous	$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$, Borax	saturated	+	+	+
Sodium thiosulphate, aqueous	$\text{Na}_2\text{S}_2\text{O}_3, \text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$	saturated	+	+	+
Soft soap			+	+	+
Soya bean oil			+		
Spermaceti			+		
Stannic chloride, aqueous	$\text{SnCl}_4, \text{SnCl}_4 \cdot 5\text{H}_2\text{O}$	saturated	+	+	+
Stannous chloride, aqueous	$\text{SnCl}_2, \text{SnCl}_2 \cdot 2\text{H}_2\text{O}$	any	+	+	+
Starch, aqueous	$\text{C}_6\text{H}_{10}\text{O}_5$	any	+	+	+
Starch gum		18%	+	+	+
Starch syrup			+	+	+
Stearic acid (See Note 2)	$\text{CH}_3(\text{CH}_2)_{16}\text{COOH}$		+		
Styrene	$\text{C}_6\text{H}_5\text{CHCH}_2$		+		
Succinic acid, aqueous	$\text{HOOC}(\text{CH}_2)_2\text{COOH}$	50%	+	+	
Sugar syrup			+	+	+
Sulphuric acid, aqueous	H_2SO_4	up to 50%	+	+	
Sulphuric acid, aqueous		80%	+	*	
Sulphuric acid, aqueous		98%	*	-	
Sulphur (See Note 2)	S_8		+	+	+
Sulphurous acid	H_2SO_3		+	+	
Sulphuryl chloride (sulphonyl chloride)	$\text{SO}_2 \text{Cl}_2$	techn. grade	-	-	-
Sulphur dioxide, aqueous	SO_2	any	+	+	
Sulphur dioxide, gaseous			+	+	
Sulphur trioxide	SO_3		-	-	-
Tallow		techn. grade	+	+	
Tannic acid (tannin), aqueous		10%	+	+	
Tanning extracts, vegetable		as supplied	+	*	
Tartaric acid, aqueous	$(\text{CHOH.COOH})_2$	any	+	+	
Tetrachloroethane	$\text{CHCl}_2 \cdot \text{CHCl}_2$		-	-	-
Tetrachloromethane (Carbon tetrachloride)	CCl_4	techn. grade	-	-	-
Tetrahydrofuran	$\text{CH}_2(\text{CH}_2)\text{CH}_2\text{O}$ []	techn. grade	-	-	-
Tetrahydronaphtalene	C_{10}H_8 []	techn. grade	-	-	-
Thioglycolic acid	$\text{HSCH}_2\text{CO}_2\text{H}$		+	+	
Thionyl chloride	SOCl_2		-	-	-
Thiophene	$\text{S}(\text{CH}_2)_3\text{CH}$ []		-	-	-
Toluene	$\text{C}_6\text{H}_5 \cdot \text{CH}_3$	techn. grade	-	-	-
Toluic acids (methyl benzoic acids)	$\text{CH}_3 \cdot \text{C}_6\text{H}_4 \cdot \text{COOH}$	saturated	*		
Tomato juice			+	+	+
Tributyl phosphate	$(\text{C}_4\text{H}_9)_3\text{PO}_4$		+	+	
Trichloroacetaldehyde (chloral)	CCl_3CHO	techn. grade	+	+	
Trichloroacetic acid	CCl_3COOH	techn. grade	+		
Trichloroethylene	$\text{CHCl} \cdot \text{CCl}_2$	techn. grade	-	-	-
Tricesyl phosphate	$(\text{CH}_3 \cdot \text{C}_6\text{H}_{13})_3\text{PO}_4$		+		
Triethanolamine	$(\text{HO} \cdot \text{CH}_2\text{CH}_2)_3\text{N}$		+		
Triethanolamine (2,2'2"- Nitrioltriethanol), aqueous		saturated	+		
Triethylene glycol	$\text{HOCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OH}$		+	+	

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20°C	60°C	80°C
Trioctyl phosphate	$(C_8H_{17})_3PO_4$		+		
Trisodium phosphate	$Na_3PO_4 \cdot 12H_2O$		+	+	+
Tri-B-chloroethylphosphate	$(ClCH_2CH_2O)_3PO$		+		
Turpentine oil		techn. grade	-	-	-
*Tween 20 and 80			+	+	
Urea, aqueous	$NH_2 \cdot CO \cdot NH_2$	up to 33%	+	+	+
Uric acid (See Note 2)	$C_5H_4N_4O_3$		+		
Urine			+	+	
Vaseline		techn. grade	+	*	
Vinegar (wine vinegar)		as supplied commercially	+	+	
Vinylidene chloride (1,1 - Dichloroethylene)	CH_2CCl_2	techn. grade	-	-	-
Vinyl acetate	$CH_3COO \cdot CH_2$		+	*	
Viscose spinning solutions			+	+	
Vitamin C			+		
Vitamin preparations, dry (powder)			+		
Walnut oil			+		
Washing up liquids		usual	+	+	
Water, distilled	H_2O		+	+	+
Whey			+	+	+
Whisky			+		
White spirit		techn. grade	-	-	-
Wine			+	+	
Wine vinegar (table vinegar)		as supplied	+		
Xylene	$C_6H_4(CH_3)_2$		-	-	-
Yeast			+		
Zinc carbonate (See Note 5)	$ZnCO_3 \cdot 2ZnO \cdot 3H_2O$		+	+	+
Zinc chloride, aqueous	$ZnCl_2$	any	+	+	
Zinc oxide (See Note 5)	ZnO		+	+	+
Zinc stearate	$[CH_3(CH_2)_{15}CO_2]_2Zn$		+	+	+
Zinc sulphate, aqueous	$ZnSO_4 \cdot 7H_2O$	any	+	+	+