Vulcathene

Safe chemical drainage

INSTALLATION TO BE IN ACCORDANCE WITH AS/NZS 3500

Technical Data and Dimensions

Vulcathene Material Properties

Manufactured from co-polymer polypropylene with 3% carbon black ultra-violet stabiliser. Vulcathene has very high resistance to chemical attack and is well suited to the conveyance of aggressive chemicals, and other liquids as used in chemical plants and laboratory waste.

The performance specification is based on the need to supply a waste system which has a high chemical resistance rating in respect of the corrosive materials which it has to convey. Good tensile strength, ductility, abrasion resistance, high impact strength, weather resistance, and is stable over the range of temperatures normally encountered in the environment in which it is used.

Vulcathene is resistant to many concentrated acids and alkalis and some organic solvents. Vulcathene also has a good abrasion resistance throughout its operational temperature range of between -20°C and +100°C.

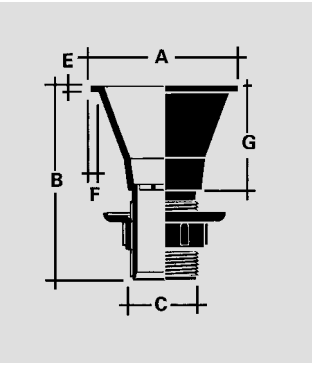
With a smooth bore, it is lightweight with a specific gravity of 0.905. It has high impact strength, which minimises damage during and after installation.

The full specification to which Vulcathene pipe and fittings are manufactured is detailed below.

Property	Test Method	Unit		
Melt flow index (MFI)	230°C/2.16 kg	Granules		6.5
Density (mean)		kg/m³		9.5
Tensile yield stress	ISO 527 ASTM D 638M (50mm/min)	MPa kg/cm²		27.0 295
Flexural modulus	ISO 178 ASTM D 790	GPa kg/cm²		1.15 14100
Izod impact strength	ISO 180 (0.25mm notch radius)	kj/m²	23°C 0°C -20°C -40°C	7.0 4.5 3.0 -
Rockwell hardness	ISO 2039/2, ASTM D 785	R scale		90
Vicat softening temperature (10 N force)	ISO 306A BS 2782; 102 A	°C		147
Heat distortion temperature A - 1.8 MPa (18.6kg/cm²) B - 0.45 MPa (4.6kg/cm²)	ISO 75/A and /B ASTM D 648-A-B	°C °C		55 90
Flammability	ASTM D 635 (3mm thickness) FMVSS 302 (1mm thickness) (2mm thickness)	Burning rate cm/min Burning rate mm/min mm/min		2.3 43 38

501 Small Circular Drip Cup

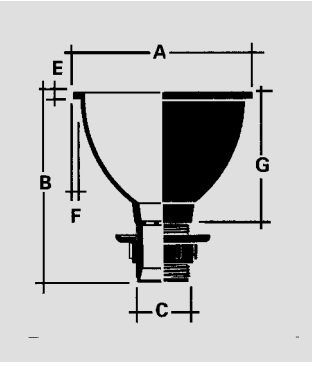
The range of 501 small circular drip cups, come with an integral grating and a wall thickness of 3mm. The small circular drip cup has steeply sloping sides to minimise splashing and the 8mm wide rim gives it stability when top mounted in the working surface. With an opening diameter of 86mm and depth of 73mm it is supplied complete with hose restraining plug and backnut.



Cat. No.	501
A	102mm
B	136mm
C	1 1/2" BSP
E	5mm
F	6mm
G	76mm

500 Large Circular Drip Cup

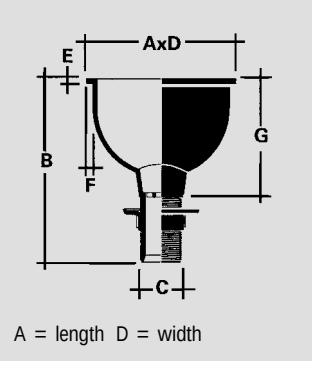
The range of 500 large circular drip cups come with an integral grating and a wall thickness of 3mm. The large circular drip cup is designed for top mounting. With a top opening diameter of 146mm it is 114mm deep and the 11mm wide rim gives it stability when top mounted in the working surface. It is supplied complete with a backnut and hose restraining plug.



Cat. No.	500
A	168mm
B	165mm
C	1 1/2" BSP
E	8mm
F	11mm
G	114mm

497 Small Oval Drip Cup

The range of 497 small oval drip cups are moulded with a 3mm thick wall and have an opening of 166mm x 90mm x 143mm deep. The 6mm wide rim gives it stability when top mounted in the working surface. It has an integral grating, is designed for top mounting and is supplied complete with backnut.

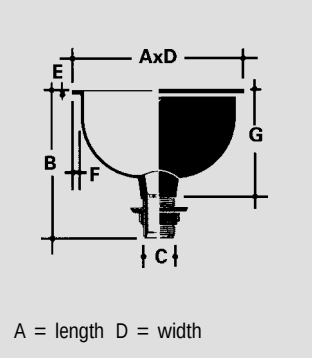


A = length D = width

Cat. No.	497
A	178mm
B	216mm
C	1 1/2" BSP
D	102mm
E	6mm
F	6mm
G	143mm

499B/499T/499W Large Oval Drip Cup

The range of 499 Large Oval Drip Cups are moulded with a 3mm thick wall, offering a choice of 3 alternative flange fixings. Moulded with deeply curved bowls, they have integral gratings and are supplied complete with backnuts and a hose restraining plug. The 499B and 499T are designed for top mounting, whilst the 499W is designed for wall mounting using integral bracket mounts.

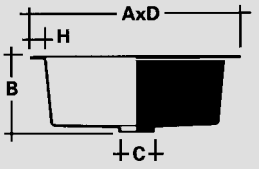


A = length D = width

Cat. No.	499B	499T	499W
A	264mm	305mm	264mm
B	225mm	225mm	225mm
C	1 1/2" BSP	1 1/2" BSP	1 1/2" BSP
D	111mm	152mm	117mm
E	6mm	6mm	6mm
F	13mm	32mm	13mm
G	161mm	161mm	161mm

601 Sink

The 601 sink is extremely robust and has a self draining base. Its recessed outlet will accept the flange of the 1½" BSP 504 non-overflow threaded outlet but, if required, a 509 overflow assembly can be fitted. These sinks are designed for mounting on the underside of work surfaces.

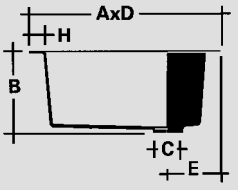


A = length D = width

Cat. No.	601
A	492mm
B	171mm
C	76 mm
D	241mm
H	32mm
gms	1030

602 Sink

The 602 sink is extremely robust and has a self draining base. Its recessed outlet will accept the flange of the 1½" BSP 504 non-overflow threaded outlet but, if required, a 509 overflow assembly can be fitted. These sinks are designed for mounting on the underside of work surfaces.

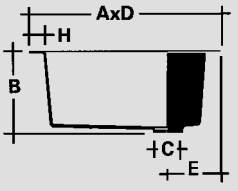


A = length D = width

Cat. No.	602
A	552mm
B	231mm
C	74mm
D	400mm
E	152mm
H	35mm
gms	2668

604 Sink

Available in three sizes the 604 range of sinks are extremely robust and have a self draining base. The 76mm recessed outlet will accept the flange of the 1½" BSP 504 non-overflow threaded outlet but, if required, a 509 overflow assembly can be fitted. These sinks are designed for mounting on the underside of work surfaces, the 48mm wide top rim, which gives rigidity, has a recess flange to accept the self adhesive sealing strip supplied with each sink.

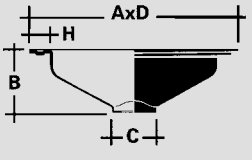


A = length D = width

Cat. No.	604/1	604/2	604/4
A	343mm	445mm	492mm
B	140mm	140mm	165mm
C	76mm	76mm	76mm
D	288mm	343mm	419mm
E	152mm	152mm	152mm
H	48mm	48mm	41mm
gms	2765		

605/1 Trough

This trough has a self draining base which incorporates a 76mm recessed outlet to accept a 1½".BSP 504 non-slotted threaded waste. These troughs are designed for mounting on the underside of work surfaces. Each trough is supplied with a self adhesive sealing strip which, when positioned in the recess in the trough lip, will form a watertight seal between the trough and the work surface.



A = length D = width

Cat. No.	605/1
A	403mm
B	111mm
C	76mm
D	190mm
H	38mm

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:

1. These are compounds whose general formula is either $(R1)_2SO_4(R2)_2(SO4)_6.24\ H_2O$ or $(R1)(R2)(SO_4)_2\ 12\ H_2O$, 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.
2. This substance is insoluble in pure water. If conveyed aqueous it would always be in the form of a suspension.
3. This substance decomposes in hot water. Unless suitability is indicated refer to Durapipe - UK.
4. Substances which are generally categorised can have widely variable compositions, and therefore each needs to be tested for suitability. Refer to Durapipe - UK.
5. This substance is only sparingly soluble in water. If conveyed aqueous it would usually be in the form of a suspension.
6. This substance is sparingly soluble in water, which then reacts with it.
7. A solution of Chromium trioxide in water, often produced by the action of concentrated Sulphuric acid on Sodium dichromate.

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 adic, aqueous		70%	+	+	+
Acetetic anhydride	$(CH_3CO)_2O$	techn. grade	+		-
Acetone	$(CH_3)_2CO$	techn. grade	+	+	
Acetophenone	$C_6H_5CO._2CH_3$	techn. grade	+		
Acrylonitrile	CH_2:CH.$_2$CN	techn. grade	+		
Adipic acid, aqueous	$(CH_2CH_2C.COOH)_2$	saturated	+	+	+
Air			+	+	+
Ally alcohol (2-Propenol-1)	$CH_2CH:CH_2OH$	96%	+	+	
Aluminium chloride, aqueous	$AlCl_3$,$AlCl_3.6H_2O$	any	+	+	+
Aluminium cloride, solid			+	+	
Aluminium floride	AlF_3,$AlF_3.H_2O$ $AlF_3.3^1/_2H_2O$	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_2O	saturated	+	+	+
Aluminium sulphate, solid			+	+	
Alum, aqueous (See Note 1)		any	+	+	+
Amino acids			+	+	+
2-Aminoethanol (Ethanolamine)	$H_2NCH_2CH_2OH$	techn. grade	+		
Ammonia, aqueous	NH_3	any	+	+	
Ammonia, gaseous			+	+	
Ammonia, liquid			+		
Ammonia water		any	+	+	
Ammonium acetate, aqueous	$CH_3CO_4NH_4$	any	+	+	+
Ammonium carbonate, aqueous (See Note 3)	$NH_4HCO_3NH_2COONH_4$,$H_2NCOONH_4$	any	+	+	+
Ammonium chloride, aqueous (See Note 3)	NH_4Cl	any	+	+	+
Ammonium floride, aqueous (See Note 3)	NH_4F	saturated	+	+	
Ammonium hydrogen carbonate, aqueous	NH_4HCO_3	saturated	+	+	
Ammonium hydrosulphide, aqueous	NH_4HS	any	+	+	
Ammonium nitrate, aqueous	NH_4NO_3	any	+	+	+
Ammonium phosphate(s)	$NH_4H_2PO_4$,$(NH_4)_2HPO_4$,$(NH_4)3PO_4.3H_2O$	any	+	+	+
Ammonium sulphate, aqueous	$(NH_4)_2SO_4$	any	+	+	+
Ammonium sulphide, aqueous	$(NH_4)_2S$	any	+	+	+
Ammonium thiocyanate	NH_4SCN			-	-
Amyl acetate	$CH_3.COO.(CH_2)_4.CH_3$, Pentyl acetate	techn. grade		-	-
Amyl alcohol (C_5 alcohols)	$CH_3.(CH_2)_3.CH_2OH$, Pentan-1-ol, Butyl carbinol	tech. grade	+	+	+
Aniline	$C_6H_5NH_2$	any	+	+	
Aniline hydrochloride, aqueous	$C_6H_5NH_2.HCl$	any	+	+	
Animal oils			+		
Anon (Cyclohexanone)	$CH_2.(CH_2)_4.CO$		+		
Anthraquinone sulphonic acid, aqueous (susp.)	$C_6H_4(CO_2)C_6H_4SO_3H$		+		
Antifreeze (automotive) (See Note 4)		as supplied commercially			
Antimony chloride, anhydrous	$SbCl_3$		+	+	
Antimony pentachloride	$SbCl_3$		+	+	
Antimoney trichloride	$SbCl_5$, Antimony (III) chloride, Butter of Antimony		+	+	
Aqua regia	($HCl + HNO_3$)		-	-	

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

Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20˚C	60˚C	80˚C
Aromatic oils			-	-	
Arsenic acid, aqueous	HA_5O_3	any	+	+	
Arsenic acid anhydride			+	+	
Ascorbic acid			+	+	
Asphalt			+		
®Asprin			+		
Barium hydroxide, aqueous	$Ba(OH)_28H_2O$	any	+	+	+
Battery acid	conc. H_2SO_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	$C_6H_5.CHO$	any	+		
Benzene	C_6H_6	techn. grade	-	-	
Benzene sulphonic acid	$C_6H_5SO_3H$		+	+	
Benzoic acid, aqueous	$C_6H_5CO_2H$		+	+	+
Benzyl alcohol	$C_6H_5.CH_2OH$		+	+	
Benzyl chloride	$C_6H_5.CH_2Cl$		-	-	-
Bichromate - sulphuric acid		conc.	-	-	-
Bismuth salts			+		
Bisulphite liquor			+	+	
Bitumen			+		
Bleaching solution containing 12.5% active chlorine**			*	*	-
Bone oil			+	+	
Borax (Sodium tetraborate), aqueous	Na_2B_4O7, $Na_2B_4O_7.10H_2O$, di-Sodium tetraborate	saturated	+	+	+
Boric acid, aqueous	H_3BO_3	any	+	+	+
Brandy			+	+	
Bromic acid	Hbr	conc.	-	-	-
Bromine, liquid	Br_2	100%	-	-	-
Bromine vapours			-	-	-
Butanediol, aqueous	$HO(CH_2)_4OH$	any	+	+	+
Butanetriol, aqueous	$HOCH_2CH_2CH(OH)CH_2OH$	any	+	+	
Butanol, aqueous	$CH_3(CH_2)_3OH$	any	+		
Butanone	$C_2H_5COCH_3$		+		
2-Butenediol-1.4	$HOCH_2CH=CHCH_2OH$	techn. grade	+	+	
2-Butynediol-1.4	$HOCH_2C=CCH_2OH$	techn. grade	+		
®Butoxyl (Metoxybutylacetate)	$CH_3COO(CH_2)_4OCH_3$		+		
Butter			+	+	
Butylene glycol	$HO(CH_2)_4OH$	techn. grade	+		
Butyl acetate	$CH_3.COO.(CH_2)_3.CH_3$		*	-	-
Butyl acrylate	$H_2C=CHCO_2(CH_2)_3CH_3$		+		
Butyl alcohol	$CH_3.(CH_2)_3OH$, Buton-l-ol		+		
Butyl phenol	$C_2H_5CH(CH_3)C_6H_4OH$	techn. grade	+		
Butyl phenone	$C_6H_5O(CH_2)_4CH_3$	techn. grade	-	-	-
Butyl phthalate (Dibutyl phthalate)	$C_6H_4O(COOC_4H_9)_2$	techn. grade	+		
Butyric acid, auqeous	$CH_3.CH_2.CH_2.COOH$,	any	+		
Calcium carbide	CaC_2		+	+	
Calcium carbonate (See Note 5)	$CaCO_3$		+	+	+
Calcium chlorate, aqueous	$Ca(ClO_3)_2$	saturated	+	+	
Calcium chloride, aqueous	$CaCl_2$,$CaCl_2.2H_2O$,$CaCl_2.6H_2O$	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)	$Ca(OCl)_2$	any	*	*	-
Calcium nitrate, aqueous	$Ca(NO_3)_2$, $Ca(NO_3)_2.4H_2O$	50%	+	+	+
Calcium oxide (powder) (See Note 6)	CaO		+	+	
Calcium sulphate (See Note 5)	$CaSO_4$, $CaSO_4.2H_2O$ (Gypsum), $CaSO_4.^1/_2H_2O$ (Plaster of Paris)		+	+	+
Camphor oil		any	-	-	-
Cane sugar, aqueous		any	+	+	
Carbazole	$(C_6H_4)_2NH$		+	+	
Carbolic acid (Phenol)	C_6H_5OH		+		
Carbonic acid, aqueous	H_2CO_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_3CHO	techn. grade	+	+	
Chloramine, aqueous	NH_2Cl	saturated	+		
Chloric acid, aqueous	$HClO_3$	10%	+		-
Chloric acid, aqueous		20%	+	-	-
Chlorinated lime			+	+	
Chlorine, aqueous solution (chlorine water)	$Cl_2 + H_2O$	saturated	*	-	-
Chlorine, gaseous, dry			-	-	-
Chlorine, gaseous, moist			-	-	-
Chlorine, liquid			-	-	-
Chlorine bleaching solution with 12.5% active chlorine			*		-
Chloroacetic acid, aqueous	$ClCIH_2CO_2H$	< 85%	+	+	
Chlorobenzene	C_6H_5Cl		-	-	-
Chloroform	$CHCl_3$	techn. grade	-	-	-
Chloromethyl bromide	CH_2ClBr		-	-	-
Chlorlsulphonic acid	$ClSO_3H$	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	$C(OH)(COOH)(CH_2COOH)_2.H_2O$	saturated	+	+	+
Citrus juices			+	+	
Coal tar oil			+		
Coconut oil			+		
Coconut oil alchohol		techn. grade	+		
Cod liver oil			+		
Coffee extract			+	+	
Cognac			+		
Cola concentrates			+	+	
Common salt, aqueous	NaCl	any	+	+	+
Copper chloride, aqueous	CuCl, $CuCl_2$, $CuCl_2.2H_2O$	saturated	+	+	+
Copper cyanide, aqueous	$Cu\ CN_2$	saturated	+	+	
Copper fluoride, aqueous	$Cu\ F_2$	saturated	+		
Copper nitrate, aqueous	$Cu(NO_3)_2.3H_2O$, Cupric nitrate	30%	+	+	
Copper sulphate, aqueous	$CuSO_4$, $CuSO_4.5H_2O$, 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	$CH_3(C_6H_4)OH$	100%	+		
Cresol, aqueous	Isomers of $CH_3.C_6H_4.OH$, Cresylic acid	dilute	+		
Crotonaldehyde	$CH_3CH=CHCHO$	techn. grade	+		
Cyclanone (fatty alcohol sulponate)		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	$O(CH.OH)_4.CH.CH_2OH$, D-Glucose	any	+	+	+
1.2-Diaminoethane (Ethylenediamine)	$H_2NCH_2CH_2NH_2$	techn. grade	+	+	
1.2-Dibromoethane	$BrCH_2CH_2Br$		-	-	-
Dibutyl ether	$[CH_3(CH_2)_3]O$		-	-	-
Dibutyl phthalate (Butyl phthalate)	$C_6H_4(COOC_4H_9)_2$	techn. grade	+		
Dibutyl sebacate	$CH_3(CH_2)_3O_2C(CH_2)_8CO_2(CH_2)_3CH_3$		+		
Dichloroacetic acid	$Cl_2CHCOOH$	techn. grade	+		
Dichloroacetic acid methyl ester	$Cl_2CHCO_2CH_3$		-	-	-
Dichlorobenzene	$C_6H_4Cl_2$		-	-	-
Dichlorodiphenyltrichloroethane (DDT, powder)			+	+	
Diethanolamine	$[CH_2(OH).CH_2]_2NH$	techn. grade	+		
Diethylene glycol	$(HOCH_2CH_2)_2O$		+	+	
Diethyl ether	$(C_2H_5)_2O$		-	-	-
Diglycolic acid, aqueous	$O(CH_2CO_2H)_2$	30%	+	+	
Dihexyl phthalate	$C_6H_4(COOC_6H_{11})_2$	techn. grade	+		
Diisobutylketone	$[(CH_3)_2CH.CH_2]_2CO$	techn. grade	+	-	-
Diisoctyl phthalate	$C_6H_4(COOC_8H_{17})_2$	techn. grade	+		
Dimethylamine	$(CH_3)_2NH$		+		
Dimethyl formamide	$H.Co.N(CH_3)_2$, DMF, N. N-Dimethylformamide	techn. grade	+	+	
Dinonyl phthalate (DNP)	$C_6H_4(COOC_9H_{19})_2$	techn. grade	+		
Dioctyl phthalate	$C_6H_4[COO.CH_2.CH(C_2H_5)(CH_2)_3CH_3]_2$, Di-(2-ethylhexyl) phthalate, DOP		+		
Disodium phosphate	Na_2HPO_4		+	+	+
Disodium sulphate	Na_2SO_4		+	+	+
Dodecylbenzenesulphonic acid	$C_{12}H_{25}C_6H_4SO_3H$		+		
Drinking water, also clorinated	H_2O		+	+	+
Emulsions (photographic)			+	+	
Epichlorohydrin	$ClCH_2(CH_2)_2O$		+		
Ethanolamine (2-Aminoethanol)	$H_2NCH_2CH_2OH$	techn. grade	+		
Ethanol	CH_3CH_2OH	96%	+	+	+
Ether, Diethyl ether	$(C_2H_5)_2O$		*		
Ethylenediamine tetraacetic acid	$[CH_2.N(CH_2.COOH_2)]_2$		+	+	+
Ethylene chlorohydrin (Chloroethanol)	$ClCH_2CH_2OH$	techn. grade	+		
Ethylene diamine (1.2-Diaminoethane)	$H_2NCH_2CH_2NH_2$	techn. grade	+	+	
Ethylene dichloride (Dichloroethane)	$ClCH_2CH_2Cl$		-	-	-
Ethylene glycol	$CH_2(OH).CH_2OH$		+	+	+

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Substance	Formula	Concentration	Chemical Resistance of Vulcathene		
			20˚C	60˚C	80˚C
Ethylene glycol monobutyl ether	$HOCH_2CH_2OC_4H_9$	techn. grade	+		
Ethylene oxide, gaseous	$CH_2.CH_2O$		+		
Ethyl acetate	$CH_3.COO.C_2H_5$	techn. grade	+		
Ethyl alcohol	C_2H_5OH	techn. grade	+	+	+
Ethyl alcohol + Avetic acid (fermentation mixture)		as used in brewing	+	+	
Ethyl benzene	$C_6H_5CH_2CH_3$	techn. grade	-	-	-
Ethyl chloride	C_2H_5Cl	techn. grade	-	-	-
Ethyl chloride (Chloroethante)	CH_3CH_2Cl	techn. grade	-	-	-
Ethyl ether	$(C_2H_5)_2O$	techn. grade	-	-	-
Ethyl ether (Diethyl ether)	$(C_2H_5)O$		-	-	-
Fatty acids			+	+	
Fatty acid amides			+		
Fatty alcohols			+		
Ferric ammonium sulphate, aqueous	$NH_4Fe(SO_4)_2.\ 12H_2O$ saturated		+	+	+
Ferric chloride	$FeCl_3$, $FeCl_3.6H_2O$, Iron (III) chloride	saturated	+	+	+
Ferric nitrate, aqueous	$Fe(NO_3)_3.9H_2O$, Iron (III) nitrate	saturated	+	+	+
Ferric sulphate, aqueous (See Note 3)	$Fe_2(SO_4)_3$, $Fe_2(SO_4)_3.xH_2O$, Iron (III) sulphate	saturated	+	+	+
Ferrous chloride, aqueous	$FeCl_2.4H_2O$	saturated	+	+	+
Ferrous sulphate, aqueous	$FeSO_47H_2O$	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	$O.CH_2.(CH.OH)_3.C(OH).CH_2OH$, Laevulose		+	+	+
Fruit juices		any	+	+	+
Fruit juices, fermented			+	+	+
Fruit pulp			+	+	+
Fuming sulphuric acid	$(H_2SO_4\ +\ SO_3)$	any	-	-	-
Furfuryl alcohol	$O.CH:CH.CH:C.CH_2OH$		+		
Gas, manufactured		as supplied commercially	+		
Gas, natural		techn. grade	+		
Geletin			+	+	+
Gin			+		
Glacial acetic acid (100% acetic acid)	CH_3COOH	techn. grade	+		-
Glauber's salt, aqueous	$Na_2SO_41OH_2O$	any	+	+	+
Glucose, aqueous		any	+	+	+
Glycerin(e)	CH2OH.CHOH.CH2OH, Glycerol 1,2,3-Propanetriol	any	+	+	+
Glycine (Aminoacetic acid)	$H_2NCH_2CO_2H$		+	+	
Glycolic Acid, aqueous	$HOCH_2CO_2H$	up to 70%	+		
Heptane	$CH_3(CH_2)_5CH_3$		-	-	-
Hexafluorosilicic acid, aqueous	H_2SiF_6	40%	+	+	
Hexane	$CH_3(CH_2)_4CH_3$		-	-	-
Hexanetriol	$HO(CH_2)_4CH(OH)CH_2OH$		+	+	+
Honey			+	+	+
Hydrazine hydrate	$NH_2.NH_2H_2O$		+		
Hydrobromic acid, aqueous	HBr	50%	+	+	
Hydrochloric acid, aqueous	HCl	any	+	+	
Hydrocyanic acid	HCN		+	+	

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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_2O_2	10%	+	+	
Hydrogen peroxide, aqueous		30%	+		
Hydrogen sulphide, aqueous	H_2S	saturated	+	+	
Hydrogen sulphide, gaseous			+	+	
Hydroxylamine sulphated, aqueous	$(H_2NOH)_2.H_2SO_4$	12%	+	+	
Hypochlorous acid	HOCl		*	*	
Ink			+	+	
Iodine in potassium iodine solution		3% iodine	+	+	
Iodine tincture		as supplied commercially	+		
Isobutyl alcohol (Isobutanol)	$C_2H_5CH(OH)CH_3$		+		
Isooctane	$(CH_3)_2CHCH_2C(CH_3)_3$		-	-	
Isopropanol	$(CH_3)_2CHOH$	techn. grade	+	+	+
Isopropyl ether	$[(CH_3)_2CH]_2O$	techn. grade	-	-	-
i-Propanol (i-Propyl alcohol)	$(CH_3)_2CHOH$		+	+	+
Jam			+	+	+
Lactic acid, aqueous	$CH_3.CHOH.COOH$	any	+	+	+
Lactose (milk sugar)			+	+	+
Lanolin	(wool fat)		+		
Latex			+	+	
Lead acetate, aqueous	$(CH_3.COO)_2Pb.3H_2O$	any	+	+	+
Lead tetraethyl			+		
Lime (See Note 5)	CaO		+	+	+
Lime water			+	+	+
Linseed oil		techn. grade	+	+	+
Lithium bromide			+	+	+
Magnesium carbonate	$MgCO_3$, $MgCO_3.3H_2O$, $MgCO_3.5H_2O$				
	Magnesite		+	+	+
Magnesium chloride, aqueous	$MgCl_2$, $MgCl_2.6H_2O$		+	+	+
Magnesium hydroxide (See Note 5)	$Mg(OH)_2$		+	+	+
Magnesium iodide	$Mg\ I_2$	any	+	+	+
Magnesium sulphate (Epsom salts), aqueous	$MgSO_4$, $MgSO_4.H_2O$, $MgSO_4\ 7H_2O$	up to 100%	+	+	+
Maleic acid, aqueous	$HO_2CCH=CHCO_2H$		+	+	+
Malic acid, aqueous	$HO_2CCH_2CH(OH)CO_2H$	50%	+	+	+
Manganese sulphate	$MnSO_4$		+		
Margarine			+	+	
Mash		as supplied	+	+	
Mayonnaise			+		
Mercury	Hg		+	+	
Metal soaps			+	+	+
Methacrylic acid	$H_2C=C(CH_3)CO_2H$		+	+	
Methanol	CH_3OH	techn. grade	+	+	
Methoxybutanol	$CH_3O(CH_2)_4OH$		+		
Methoxybutyl acetate (®Butoxyl)	$CH_3CO_2(CH_2)_4OCH_3$		+		
Methylamine, aqueous	CH_3NH_2	32%	+		
Methylene chloride (dichloromethane)	CH_2Cl_2		-	-	-
Methylisobutyl ketone	$(CH_3)_2CH.Ch_2.COCH_3$	techn. grade	+		
Methyl acetate (Acetic acid methyl ester)	$CH_3CO_2CH_3$	techn. grade	+	+	
Methyl alcohol	CH_3OH		+	+	

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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 (Salicyclic acid methyl ester)	$2\text{-}(HO)C_6H_4CO_2CH_3$		+		
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			+		
Nickel chloride	$NiCl_2$, $NiCl_2.6H_2O$		+	+	+
Nickel nitrate	$Ni(NO_3)_2.6H_2O$		+	+	+
NIckel sulphate, aqueous	$NiSO_4$, $NiSO_4.6H_2O$		+	+	+
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	$(COOH)_2 2H_2O$	any	+	+	+
Oxygen	O_2		+	+	
Ozone	O_3	50 pphm	+	*	
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	$C_6H_5CH_2CH_2OH$		+		

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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	$KAl(SO_4)_2.\ 12H_2O$	any	+	+	+
Potassium bicarbonate, aqueous	$KHCO_2$	saturated	+	+	+
Potassium bicromate, aqueous	$K_2Cr_2O_7$	any	+	+	+
Potassium bisulphate, aqueous	$KHSO_4$	saturated	+	+	+
Potassium 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, $K_2CO_3.\ 1^1/_2H_2)$, 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	$KCr)SO_4)_2.\ 12H_2O$		+	+	+
Potassium cyanide, aqueous	KCN	any	+	+	+
Potassium dichromate, aqueous	$K_2Cr_2O_7$	saturated	+	+	+
Potassium ferricyanide, aqueous	$K_3Fe(CN)_6$	any	+	+	+
Potassium ferrocyanide, aqueous	$K_4Fe(CN)_6.\ 3H_2O$	saturated	+	+	+
Potassium fluoride, aqueous	KF	any	+	+	+
Potassium hexacyanoferrate, aqueous	$K_3Fe(CN)_6$ or $K_4Fe(CN)_6.\ 3H_2O$	any	+	+	+
Potassium hydrogen carbonate, aqueous	$KHCO_3$	saturated	+	+	+
Potassium hydrogen sulphate, aqueous	$KHSO_4$	saturated	+	+	+
Potassium hydrogen sulphite, aqueous	$KHSO_3$	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	$K_2SO_5.2H_2O$	saturated	+	+	+
Potassium thiosulphate, aqueous	$K_2S_2O_3.H_2O$	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)	$CH_3\ CH_2\ CHDH$	techn. grade	+	+	
Propargyl alcohol, aqueous	$HC{\equiv}CCH_2OH$	7%	+	+	

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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	$CH_2 (CH_2OH)_2$, Propane-1, 2-diol, CH_3 CH(OH).CH_2OH, 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_6H_4COOH		+	+	
Salt brines		saturated	+	+	
Sauerkraut (pickled cabbage)			+	+	+
Sea water			+	+	+
Silicic acid, aqueous	H_2SiO_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.$3H_2O$	any	+	+	+
Sodium aluminium sulphate	Na $Al(SO_4)_2 12H_2O$		+	+	+
Sodium benzoate, aqueous	C_6H_5. COONa	any	+	+	+
Sodium bicarbonate, aqueous	$NaHCO_3$	saturated	+	+	+
Sodium bisulphate, aqueous	$NaHSO_4$. H_2O	saturated	+	+	+
Sodium bisulphite, aqueous	$Na_2S_2O_5$	saturated	+	+	+
Sodium borate	$Na_2B_4O_7$		+	+	+
Sodium bromide	NaBr		+	+	+
Sodium carbonate, aqueous	Na_2CO_3, Na_2CO_3 $10H_2O$, Soda	any	+	+	+
Sodium chlorate, aqueous	$NaClO_3$	saturated	+	+	
Sodium chloride, aqueous	NaCl	any	+	+	+
Sodium chlorite, aqueous	$NaClO_2$	50%	+	+	
Sodium chromate	Na_2CrO_4		+	+	+
Sodium cyanide	NaCN		+	+	+
Sodium dichromate	$Na_2Cr_2O_7$. $2H_2O$		+	+	+
Sodium dodecylbenzenesulphonate	$C_{12}H_{25}C_6H_4SO_3Na$		+	+	+
Sodium ferricyanide	$Na_3fe(CN)_6$ H_2O		+	+	+
Sodium fluoride	NaF		+	+	+
Sodium hexacyanoferrate (III) (sodium ferrocyanide), aqueous	$Na_3Fe(CN)_6$. H_2O		+	+	+
Sodium hexacyanoferrate (II)	$Na_4Fe(CN)_6$. $3H_2O$		+	+	+
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 12.5% active chlorine	NaOCl		*	*	-
Sodium nitrate, aqueous	$NaNO_3$	any	+	+	+
Sodium perborate, aqueous	$NaBO_3$. $4H_2O$				
Sodium phosphate(s)	Na_2HPO_4, $NaPO_4$. $12H_2O$ NaH_2PO_4, $Na_4P_2)_7$. $10H_2O$	any	+	+	+
Sodium silicate, aqueous	A waterglass, NaO. x SiO_2 where x = 3 to 5	any	+	+	+
Sodium sulphate, aqueous	Na_2SO_4,Na_2SO_4. $10H_2O$, Glauber's salt	cold saturated	+	+	+
Sodium sulphide, aqueous		saturated	+	+	

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			20˚C	60˚C	80˚C
Sodium sulphite, aqueous	Na_2SO_3, $Na_2SO_3 9H_2O$	40%	+	+	+
Sodium tetraborate (Borax), aqueous	$Na_2B_4O_7$. $10H_2O$, Borax	saturated	+	+	+
Sodium thiosulphate, aqueous	$Na_2S_2O_3$, $Na_2S_2O_3$. $5H_2O$	saturated	+	+	+
Soft soap			+	+	+
Soya bean oil			+		
Spermaceti			+		
Stannic chloride, aqueous	$SnCl_4$, $SnCl_4.5H_2O$	saturated	+	+	+
Stannous chloride, aqueous	$SnCl_2$, $SnCl_2.2H_2O$	any	+	+	+
Starch, aqueous	$C_6H_{10}O_5$	any	+	+	+
Starch gum		18%	+	+	+
Starch syrup			+	+	+
Stearic acid (See Note 2)	$CH_3.(CH_2)_{16}.COOH$		+		
Styrene	$C_6H_5CHCH_2$		+		
Succinic acid, aqueous	$HOOC(CH_2)_2COOH$	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)	SO_2 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	$(CHOH.COOH)_2$	any	+	+	
Tetrachloroethane	$CHCl_2$. $CHCl_2$		-	-	-
Tetrachloromethane (Carbon tetrachloride)	CCl_4	techn. grade	-	-	-
Tetrahydrofuran	CH_2 (CH_2). CH_2O	techn. grade		-	-
Tetrahydronaphtalene	$C_6H_4CH_2CH_2CH_2CH_2$	techn. grade	-	-	-
Thioglycolic acid	$HSCH_2$ CO_2 H		+	+	
Thionyl chloride	$SOCl_2$		-	-	-
Thiophene	$S(CH)_3CH$			-	-
Toluene	C_6H_5. CH_3	techn. grade	-	-	-
Toluic acids (methyl benzoic acids)	CH_3. C_6H_4 COOH	saturated	*		
Tomato juice			+	+	+
Tributyl phosphate	$(C_4H_9)_3$ PO_4		+	+	
Trichloroacetaldehyde (chloral)	CCl_3 CHO	techn. grade	+	+	
Trichloroacetic acid	CCl_3 COOH	techn. grade	+		
Trichloroethylene	CHCl: CCl_2	techn. grade	-	-	-
Tricesyl phosphate	$(CH_3.C_6H_4)_3PO_4$		+		
Triethanolamine	(HO $CH_2CH_2)_3N$		+		
Triethanolamine (2,2'2"- Nitrilotriethanol), aqueous		saturated	+		
Triethylene glycol	$HOCH_2CH_2OCH_2CH_2OCH_2CH_2OH$		+	+	

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