

versalis



Polyethylene & Ethylene Vinyl Acetate

Resistance to chemicals

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Polyethylene and EVA Resistance to Chemicals

The table is intended only as general guide to the resistance of our polyethylene grades to various chemicals, because the specific end use application, part design and or conditions of use may have added effects on part performance in a particular chemical environmental.

R = Resistant

L = Limited Resistance

N = Not Resistant

* = Possible discoloration

** = Informations included in the last page

Substance A	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Acetaldehyde	techn. grade	R	L	R	N	R	L
Acetaldehyde, acq.	any	R	L	R	---	---	---
Acetaldehyde + acetic acid		R	---	R	---	---	---
Acetamide		R	R	R	---	---	---
Acetic acid	100%	R	L *	R	L *	L to N	N
Acetic acid, acq.	70%	R	R	R	R	L	N
Acetic anhydride	techn. grade	R	L *	R	---	---	---
Acetoacetic acid		R	---	R	---	---	---
Acetone	techn. grade	R	R	L	---	L	N
Acetophenone		R	---	L	---	---	---
Acetylene		R	---	---	---	L to N	N
Acids, aromatic		R	R	R	---	---	---
Acronal® dispersions	commerc.	R	L	R	---	---	---
Acrylonitrile	techn. grade	R	R	R	L	—	—
Adipic acid, acq.	saturated	R	R	R	R	R	R
Adipic ester		R	L	---	---	---	---
Air	techn. grade	R	R	R	R	---	---
Allyl acetate		R	R to L	R	L	---	---
Allyl alcohol (2-propenol-1)	96%	R	R	L	L	R	R
Allyl chloride		L	N	N	N	L	L
Aluminium chloride, acq.	any	**		**		R	C
Aluminium chloride, solid		**		**		---	---
Aluminium fluoride	conc.	R	R	R	R	R	L
Aluminium hydroxide		R	R	R	R	R	R
Aluminium metaphosphate		R	R	R	R	---	---
Aluminium sulphate, acq.	saturated	R	R	R	R	R	---
Aluminium sulphate, solid		R	R	R	R	---	---
Alum, acq.	any	R	R	R	R	---	---
Amino acids		R	R	R	R	---	---



Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Ammonia, gaseous		R	R	R	---	R	–
Ammonia, liquid		R	---	R	---	R	L
Ammonia water	any	R	R	R	---	R	–
Ammonium acetate, acq.	any	**		**		---	---
Ammonium bicarbonate, acq.	saturated	**		**		---	---
Ammonium carbonate, acq.	any	**		**		R	–
Ammonium chloride, acq.	any	**		**		R	–
Ammonium fluoride, acq.	saturated	**		**		R	–
Ammonium hydrosulphide	any	**		**		---	---
Ammonium metaphosphate		**		**		---	---
Ammonium nitrate, acq.	any	**		**		---	---
Ammonium phosphate, acq.	any	**		**		---	---
Ammonium sulphate, acq.	any	**		**		R	–
Ammonium sulphide, acq.	any	R	R	R	R	R	–
Ammonium thiocyanate		R	R	R	R	R	–
Amyl acetate	techn. grade	R	R	R	L	L to N	N
Amyl alcohol	techn. grade	R	R	R	L	R	L
Amyl chloride	100%	L	N	N	N	L to N	N
Amyl phthalate		R	L	L	L	---	---
Aniline	any	R	R	R	L	L to N	N
Aniline hydrochloride, acq.	any	R	R	R	R	L to N	N
Animal oils		R	L	R	L	L	N
Aniseed		L	L to N	N	N	---	---
Aniseed oil		L	N	N	N	---	---
Anisole		R	N	L	N	---	---
Anthraquinone sulphonic acid		R	R	R	R	R	–
Antifreeze (automotive)	commerc.	R	R	R	R	---	---
Antimony chloride, anhydrous		R	R	R	R	R	–
Antimony pentachloride		R	R	R	R	---	---
Antimony trichloride		R	R	R	R	---	---
Aqua regia (HCl + HNO ₃)		N	---	N	---	L to N	N
Aromatic oils		L	N	L	N	---	---
Arsenic acid, acq.	any	R	R	R	R	R	–
Arsenic anhydride		R	R	R	R	---	---
Ascorbic acid		R	R	R	R	---	---
Asphalt		R	L *	R	L *	L to N	N
Aspirin®		R	---	R	---	---	---



Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Barium hydroxide, acq.	any	R	R	R	R	R	–
Barium salts, acq.	any	**		**		R	–
Battery acid		R	R	R	R	---	---
Beater glue	commerc.	R	R	---	---	---	---
Beef tallow		R	R to L	R	L	---	---
Beer		R	R	R	R	–	–
Beer sugar colouring	commerc.	R	R	R	R	R	–
Beeswax		R	L to N	R	N	---	---
Benzaldehyde, acq.	any	R	R to L	L	L	L	N
Benzaldehyde in alcohol	1%	R	R	R	L	---	---
Benzene	techn. grade	L	N	L	N	L to N	N
Benzene sulphonic acid		R	R	R	R	---	---
Benzoic acid, acq.	any	R	R	R	R	R	–
Benzoyl chloride		L	L	N	---	L to N	N
Benzyl alcohol		R	R	R	L	---	---
Benzyl chloride		L	N	N	---	---	---
Bichromate – sulphuric acid	conc.	N	---	N	---	---	---
Bismuth salts		**		**		R	–
Bisulphite liquor		R	R	---	---	---	---
Bitumen		R	L *	R	L *	---	---
Bleaching + active chloriness	12.5%	L	N	L	N	R	–
Bone oil		R	R	R	R	---	---
Boric acid, acq.	any	R	R	R	R	R	–
Boric acid methyl ester		R	L to N	R	N	---	---
Boron trifluoride		R	R to L	R	L	R	–
Brake fluid		R	R	R	L	–	–
Brandy		R	R	R	R	---	---
Bromidric Acid, gas	techn. grade	R	R	R	---	---	---
Bromic acid	conc.	N	---	N	---	R	–
Bromine, liquid	100%	N	---	N	---	L to N	N
Bromine vapours		N	---	N	---	---	---
Bromine water	cold saturat.	R	---	R	---	L to N	N
Bromochloromethane		N	---	N	---	---	---
1,3-butadiene, gaseous	techn. grade	L	N	---	---	L to N	N
Butanediol, acq.	any	R	R	R	R	---	---
Butanetriol, acq.	any	R	R	R	R	---	---
Butane, gaseous		R	---	---	---	L to N	N
Butanol, acq.	any	R	R	R	L	R	–
Butanone		R	L to N	R	N	---	---
2-Butenediol-1,4	techn. grade	R	---	R	---	---	---
2-Butinediol-1,4	techn. grade	R	---	R	---	---	---
Butter		R	---	R	---	–	–
Butylene glycol	techn. grade	R	R	R	R	---	---
Butyl acetate	techn. grade	R	L	R	L	L to N	N
Butyl acrylate		R	L	R	L	---	---
Butyl alcohol		R	R	R	L	R	–
Butyl benzyl phthalate		R	R	L	L	---	---
Butyl glycol	techn. grade	R	---	R	---	---	---
Butyl phenol	techn. grade	R	R	L	---	L to N	N
Butyl phenone	techn. grade	N	---	N	---	---	---
Butyl phthalate	techn. grade	R	L	L	L	L to N	N
Butyric acid, acq.	any	R	L	R	L	---	---



Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Cadmium salts		**		**		---	---
Calcium carbide		R	R	R	R	---	---
Calcium carbonate		**		**		R	—
Calcium chlorate, acq.	saturated	**		**		R	—
Calcium chloride, acq.	saturated	**		**		R	—
Calcium hydroxide		R	R	R	R	R	—
Calcium hypochlorite, acq.	any	R	R	R	R	R	—
Calcium nitrate, acq.	50%	**		**		R	—
Calcium oxide		R	R	R	R	---	---
Calcium phosphate		**		**		---	---
Calcium sulphate		**		**		R	—
Calcium sulphide, acq.	£ 10%	**	---	**	---	---	---
Camphor		L	N	L	N	---	---
Camphor oil		N	---	N	---	---	---
Cane sugar, acq.	any	R	R	R	R	R	—
Carbazole		R	R	---	---	---	---
Carbolic acid (phenol)		R	R *	L	L *	---	---
Carbolineum	commerc.	R	---	L	---	---	---
Carbolineum, acq.		R *	L *	L *	L *	---	---
Carbonic acid, acq.	any	R	R	R	R	R	R
Carbonic acid, dry	100%	R	R	---	---	---	---
Carbon dioxide	100%	R	R	---	---	R	—
Carbon disulphide		L	N	L	N	---	---
Carbon monoxide, gas	techn. grade	R	R	---	---	R	—
Carbon tetrachloride		L	N	N	N	L to N	N
Castor oil		R	R	R	L	L	N
Caustic soda solution	any	R	R	R	R	R	—
Chloral hydrate, acq.	any	R	R *	R	R *	L	N
chloramine, acq.	1%	R	R	R	R	---	---
Chloramine, acq.	saturated	R	---	R	---	---	---
Chloric acid, acq.	1%	R	R	R	R	---	---
Chloric acid, acq.	10%	R	R	R	R	---	---
Cloridic Acid, gas		R	R	R	---	---	---
Chlorinated lime		R	R	R	R	---	---
Chlorine, acq.	saturated	R	L	R	L	R	L
Chlorine, gas, dry		L	N	L	N	L to N	N
Chlorine, gas, moist		L	N	L	N	L to N	N
Chlorine, liquid		N	---	N	---	---	---
Chlorine bleaching		L	N	L	N	---	---
Chloroacetic acid, acq.	85%	R	R	R	R	---	---
Chloroacetic acid, acq.	any	R	R	R	L	---	---
trichloroacetaldehyde	techn. grade	R	R	---	---	---	---



Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Chlorobenzene		L	N	L	N	L to N	N
chloroethane	techn. grade	L	---	L	---	---	---
chloroethanol	techn. grade	R	R *	R	R *	---	---
chloromethane, gas	techn. grade	L	---	N	---	---	---
Chloroformic acid ester		R	L	---	---	---	---
Chloroform	techn. grade	L to N	N	N	N	L to N	N
Chloropicrin		R to L	N	---	---	---	---
Chlorosulphonic acid	techn. grade	N	N	N	N	---	---
Chrome anode slime		R	R	R	R	---	---
Chrome salts, acq.	any	**	**	**	**	---	---
Chromic acid, acq.	50%	L	N *	L	N *	L	N
Chromium trioxide, acq.	50%	L	N *	L	N *	---	---
Chromosulphuric acid		N	---	N	---	---	---
Cider		R	R	R	R	R	L
Citric acid, acq.	saturated	R	R	R	R	R	R
Citrus fruit juices		R	R	R	R	---	---
Clophen® A 50 and A 60®		R	L to N	---	---	---	---
Cobalt salt		**		**		---	---
Coal tar oil		R *	L *	R *	L *	L to N	N
Coconut oil		R	L	R	L	L	L
Coconut oil alcohol	techn. grade	R	L	R	L	---	---
Cod liver oil		R	L	R	L	---	---
Coffee extract		R	R	R	R	---	---
Cognac		R	---	R	---	---	---
Cola concentrates		R	R	R	R	---	---
Common salt, acq.	any	R	R	R	R	---	---
Copper chloride, acq.	saturated	**		**		R	—
Copper cyanide, acq.	saturated	R	---	R	---	R	—
Copper fluoride, acq.	saturated	**		**		R	—
Copper nitrate, acq.	30%	**		**		R	—
Copper salts, acq.	saturated	**		**		---	---
Copper sulphate, acq.	any	**		**		R	—
Corn oil		R	L	R	L	—	—
Cottonseed oil	techn. grade	R	R	R	L	---	---
Coumarone resins		R	R	---	---	---	---
Creasote		R	R *	---	---	---	---
Cresol	100%	R	L *	L	N	L to N	N
Cresol, acq.	dilute	R	R *	R	---	L to N	N
Crop protection agents, acq.	commerc.	R	R	R	R	---	---
Crotonaldehyde	techn. grade	R	L	L	---	---	---
Crude oil		R	L	R	L	L to N	N
Cyclanone	commerc.	R	R	R	---	---	---
Cyclohexane		R	R	R	N	L	L
Cyclohexanol		R	R	R	R	R	L
Cyclohexanone (anone)		R	L	L	N	R	L



Polyethylene Chemical Resistance

Substance	D	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
			20°C	60°C	20°C	60°C	20°C	60°C
Decahydronaphthalene		techn. grade	R	L	L	N	---	---
Defoamers			R	R to L	R	L	---	---
Detergents			R	R	R	R	---	---
Detergents, synthetic			R	R	R	R	---	---
Developer solutions (photo)			R *	R *	R *	R *	---	---
Dextrin (starch gum), acq.		18%	R	R	R	R	R	-
Dextrose, acq.		any	R	R	R	R	R	-
1,2-Dibromoethane			L	N	N	N	---	---
Dibutyl ether			R to L	N	L	N	---	---
Dibutyl phthalate		techn. grade	R	L	L	L	---	---
Dibutyl sebacate			R	L	L	L	---	---
Dichloroacetic acid		techn. grade	R	L *	R	N	---	---
Dichloroacetic acid		50%	R	R	R	R	---	---
Dichloroacetic ac. methyl est.			R	R	L	N	---	---
Dichlorobenzene			L	N	N	N	L to N	N
DDT, powder			R	R	R	R	---	---
Dichloroethane			L	L	N	N	---	---
dichloroethane			L	N	L	N	---	---
dichloromethane			L	L	N	N	---	---
Dichloromethaness			L	L	N	N	---	---
Dichloropropane			L	N	N	N	---	---
Dichloropropene			L	N	N	N	---	---
Diesel fuel			R	L	R	N	-	-
Diethanolamine		techn. grade	R	---	R	---	---	---
Diethylene glycol			R	R	R	R	R	L
2-Diethylhexylphthalate			R	L	R	---	---	---
Diethylketone			R	L	L	N	---	---
Diethyl ether			R to L	L	L	---	---	---
Diglycolic acid, acq.		30%	R	R	R	R	R	-
Diisobutylketone		techn. grade	R	L to N	L	N	---	---
Diisooctyl phthalate		techn. grade	R	L	L	---	---	---
Diisopropyl ether			R to L	N	L	N	---	---
Dimethylamine			R	L	L	N	L to N	N
Dimethyl formamide		techn. grade	R	R to L	R	L	---	---
Dimethyl sulphoxide			R	R	R	---	---	---
Dinonyl phthalate (DNP)		techn. grade	R	L	L	---	---	---
Diocetyl phthalate			R	L	L	---	R	L
Dioxane			R	R	R	L	---	---
Diphenylamine			R	L	R	L	---	---
Diphenyl oxide			R	L	R	L	---	---
Disodium phosphate			**		**		R	-
Disodium sulphate			**		**		---	---
Dodecylbenzenesulphonic acid			R	L	R	L	---	---
Drinking water			R	R	R	R	R	R
Dyes			R *	R *	R *	R *	---	---



Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Electrolytic baths		R to L	L	R to L	L	---	---
Emulsifiers		R	R	R	---	---	---
Emulsions (photographic)		R	R	R	R	---	---
Ephetin®, acq.	10%	R	R	R	R	---	---
Epichlorohydrin		R	R	R	R	---	---
Essential oils		R	R	R	L	---	---
Esters, aliphatic	techn. grade	R	R to L	R to L	L to N	---	---
Ethane		R	R	---	---	---	---
Ethanolamine	techn. grade	R	---	R	---	---	---
Ethanol 96%		R	R	R	R	---	---
Ethanol denatured + toluene	96% (v/v)	R	---	R	---	---	---
Ethereal oils		L	N	L	N	---	---
Ether		R to L	L	L	---	L to N	N
Ethylenediamine t-acetic ac.		R	R	R	R	---	---
Ethylene		R	R	---	---	---	---
Ethylene chloride		L	N	L	N	L to N	N
Ethylene diamine	techn. grade	R	R	R	L	---	---
Ethylene dibromide		L	N	L	N	L to N	N
Ethylene glycol		R	R	R	R	R	R
Ethylene oxide, gas		R	R	---	---	L to N	N
Ethyl acetate	techn. grade	R	L	L	N	---	---
Ethyl alcohol	96%	R	R	R	R	L	L
Ethyl benzene	techn. grade	L	---	L	---	---	---
Ethyl ether	techn. grade	R to L	L	L	---	L to N	N
2-Ethyl hexanol		R	L	R	L	---	---
Euron® B		L	L	---	---	---	---
Euron® G		R	R	---	---	---	---

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Fatty acids (>C6)		R	R to L	R	L	L	N
Fatty acid amides		R	L	R	L	---	---
Fatty alcohols		R	L	R	L	---	---
Fatty oils		R	L	R	L	---	---
ferric ammonium sulphat, acq.	saturated	**		**		---	---
Ferric chloride, acq.	any	**		**		R	—
Ferric nitrate, acq.	saturated	**		**		R	—
Ferric sulphate, acq.	saturated	**		**		R	—
Ferrous chloride, acq.	saturated	**		**		R	—
Ferrous sulphate, acq.	saturated	**		**		R	—
Fertilizer salts, acq.	any	R	R	R	R	---	---
Fixing salt, acq.	any	R	R	R	R	---	---
Fixing salt, solid		R	R	R	R	---	---
Fluorine, gaseous		N	---	N	---	L to N	N
Fluoroboric acid, acq.		R	L	R	L	R	—
Fluorosilicic acid	any	R	R	R	R	---	---
Fluorosilicic acid, acq.	any	R	R	R	R	R	—
Formaldehyde, acq.	up to 40%	R	R	R	R	R	R



Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
F							
Formamide		R	R	R	R	---	---
Formic acid, acq.	10%	R	R	R	R	R	R
Formic acid, acq.	85%	R	R	R	R	L to N	N
Freon® 12	100%	L	N	L	N	R	–
Fructose, acq.	any	R	R	R	R	R	–
Fruit juices		R	R	R	R	---	---
Fruit pulp		R	R	R	R	R	–
Fuel oil		R	L	L	N	L to N	N
Furfural		R	L	L	N	L to N	N
Furfuryl alcohol		R	R *	R	R *	L to N	N

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
G							
Gas + carbon dioxide	any	R	R	---	---	---	---
Gas + carbon monoxide	any	R	R	---	---	---	---
Gas + carbonic acid	any	R	R	---	---	---	---
Gas + hydrochloric acid	any	R	R	---	---	---	---
Gas + hydrogen fluoride	trace	R	R	---	---	---	---
Gas + nitrogen oxides	trace	R	R	---	---	---	---
Gas + sulphur dioxide	low	R	R	---	---	---	---
Gas + sulphuric acid (moist)	any	R	R	---	---	---	---
Gas, natural	techn. grade	R	---	R	---	L to N	N
Gas, liquor		R	R	R	R	---	---
Gasoline,		R	L	L	N	–	–
Gelatin		R	R	R	R	R	–
Genantin®		R	R	---	---	---	---
Gin		R	---	R	---	---	---
Glauber's salt, acq.	any	R	R	R	R	---	---
Glucose, acq.	any	R	R	R	R	R	–
Glue		R	R	R	R	---	---
Glycerin, acq.	any	R	R	R	R	---	---
Glycerin chlorohydrin		R	R	R	R	---	---
Glycerol		R	R	R	R	R	–
Glycine		R	R	R	R	---	---
Glycolic acid, acq.	up to 70%	R	R	R	R	R	–
Glycolic acid butyl ester		R	R	R	L	---	---
Glycol, acq.	commerc.	R	R	R	R	R	–
Glysantin®		R	R	R	R	---	---
Grisiron® 8302		L	L	---	---	---	---
Grisiron® 8702		R	R	---	---	---	---



Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Halothan®		L	L to N	---	---	---	---
Heptane		R	L	R	N	L to N	N
Hexafluorosilicic acid, acq.	40%	R	R	R	R	---	---
Hexane		R	L	R	N	—	---
hexadecanol		R	R	R	---	L to N	N
Hexanetriol		R	R	R	R	---	---
Honey		R	R	R	R	---	---
Hydraulic fluid		R	L	R	---	---	---
Hydrazine hydrate		R	R	R	R	---	---
Hydrobromic acid, acq.	50%	R	R	R	R	R	—
Hydrochloric acid, acq.	any	R	R	R	R	R	—
Hydrocyanic acid		R	R	R	R	---	---
Hydrofluoric acid, acq.	40-85%	R	L	R	L	R	R
Hydrogen		R	R	---	---	C	—
Hydrogen peroxide, acq.	10%	L	N	L	N	R	L
Hydrogen peroxide, acq.	30%	L	N	L	N	R	L
Hydrogen peroxide	100%	L	L	L	N	L to N	N
Hydrogen sulphide, acq.	saturated	R	R	R	R	---	---
Hydrogen sulphide, gaseous		R	R	R	R	R	—
Hydroquinone		R *	R *	R *	R *	R	—
Hydrosulphite, acq.	up to 10%	R	R	R	R	---	---
Hydroxylamine sulphate, acq.	0,12	R	R	R	R	---	---
Hypochlorous acid		R to L	L	L	---	L	N

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Ink		R	R	R	R	R	R
Iodine in potassium iodide	3% iodine	R	R	R	R	L to N	N
Iodine tincture, DAB 6		R	L *	R	L *	---	---
Isoamyl alcohol	techn. grade	R	L	R	L	---	---
Isobutanol		R	R	R	L	---	---
Isobutyric acid	techn. grade	R	L	R	L	---	---
Isooctane		R	L	R	N	---	---
Isopropanol	techn. grade	R	R	R	R	---	---
Isopropyl acetate	100%	R	L	R	L	—	—
Isopropyl ether	techn. grade	R to L	N	L	N	---	---
Jam		R	R	R	R	---	---
Kerosene		R	L	L	N	L to N	N
Ketones		R to L	L to N	R to L	L to N	L	N



Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Lactic acid, acq.	any	R	R	R	R	R	–
Lactose (milk sugar)		R	R	R	R	---	---
Lanolin (wool fat)		R	R	R	R	---	---
Latex		R	R	R	R	---	---
Lead acetate, acq.	any	**		**		R	–
Lead tetraethyl		R	---	R	---	R	R
Lime		R	R	R	R	–	–
Lime water		R	R	R	R	---	---
Linseed oil	techn. grade	R	R	R	L	L	L
Liqueur		R	R	---	---	R	R
Liquid manure		R	R	---	---	---	---
Liquid soaps		R	R	R	R	---	---
Lithium bromide		**		**		---	---
Lubricating oils	techn. grade	R	R to L	R	L	L to N	N
Lysol®		R	L	---	---	---	---

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Machine oil		R	L	R	L	---	---
Magnesium carbonate		**		**		R	–
Magnesium chloride, acq.	any	**		**		R	–
Magnesium fluorosilicate		R	R	R	R	---	---
Magnesium hydroxide		**		**		R	–
Magnesium iodide		**		**		---	---
Magnesium salts, acq.	any	**		**		---	---
Magnesium sulphate, acq.	any	**		**		R	–
Maleic acid, acq.	up to 100%	R	R	R	R	R	R
Malic acid, acq.	50%	R	R	R	R	R	R
Manganese sulphate		**		**		---	---
Margarine		R	R	R	R	---	---
Mash		R	R	R	R	R	–
Mayonnaise		R	---	R	---	–	–
Menthol		R	L	L	N	---	---
Mercury		R	R	R	R	R	L
Mercury chloride		**		**		---	---
Mercury salts		**		**		R	R
Metal soaps		R	R	R	R	---	---
Methacrylic acid		R	R	R	L	---	---
Methanol	techn. grade	R	R	R	R	---	---
Methoxybutanol		R	L	R	L	---	---
Methoxybutyl acetate		R	R	R	L	---	---
Methylamine, acq.	32%	R	---	R	---	---	---
2-Methylbutanol-2	techn. grade	R	L	R	L	---	---
Methylisobutyl ketone		R	L to N	R	N	---	---
Methyl acetate	techn. grade	R	---	R	---	L to N	N
Methyl acrylate		R	R	R	L	---	---
Methyl alcohol		R	R	R	R	R	–



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Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Methyl benzene		L	N	L	N	---	---
Methyl benzoic acids	saturated	L	---	L	---	---	---
Methyl bromide, gas	techn. grade	N	---	N	---	L to N	N
Methyl bromide, gas	techn. grade	N	---	N	---	---	---
Methyl cyclohexane		L	L to N	L	N	---	---
Methyl ethyl ketone	techn. grade	R	L	L	N	L	N
Methyl glycol		R	R	R	R	---	---
Methyl methacrylate		R	R	R	L	---	---
4-Methyl pentanol-2		R	R to L *	R	L *	---	---
Methyl propyl ketone		R	L	L	N	---	---
N-Methyl pyrrolidone		R	R	R	---	---	---
Methyl salicylate		R	L	R	L	---	---
Methyl sulphuric acid	50%	R	R	R	R	R	R
Milk		R	R	R	R	R	L
Mineral oil		R	R to L	R	L	L	L
Mineral water		R	R	R	R	---	---
Molasses		R	R	R	R	---	---
Molibdenum salt		**		**		---	---
Monochloroacetic acid		R	L	R	L	---	---
Monochloroac. Ac. ethyl est.		R	R	R	L	---	---
Monochloroac. Ac. methyl est.		R	R	R	L	---	---
Monochlorobenzene		L	N	L	N	-	-
Mordants, metallic		R	---	R	---	---	---
Morpholine		R	R	R	---	---	---
Motor oil (heavy duty oil)		R	R to L	R	L	---	---
Mowilith® emulsions		R	R	R	R	---	---
Mustard		R	R	R	R	---	---

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Nail polish remover		R	L	R	L	---	---
Naphthalene		R	N	R	N	L to N	N
Naphtha	techn. grade	R	L	R	L	L to N	N
Naphtha		R	L	R	L	---	---
Naphtha/benzene mixture	80/20	R	L	R	L	---	---
Nickel chloride		**		**		R	-
Nickel nitrate		**		**		R	-
Nickel salts, acq.		**		**		---	---
Nickel sulphate, acq.	any	**		**		R	-
Nicotine		R	R	R	R	R	-
Nicotinic acid	£ 10%	R	---	R	---	R	R
Nitric acidss	25%	R	R	R	R	R	L
Nitric acidss	50%	L	N	L	N	L	L
Nitric acid	95%	N	N	N	N	L to N	N
Nitrobenzene		R	L	L	N	L to N	N
Nitrocellulose		R	---	R	---	---	---
o-Nitrotoluene		R	L	L	N	---	---
Nonyl alcohol (nonanol)		R	R	R	L	---	---
Nut oil		R	---	R	---	---	---



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Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
O							
Octyl cresol	techn. grade	L	N	L	N	---	---
Oils, ethereal		L	N	L	N	R	L
Oils,		R	R to L	R	L	R	L
Oleic acid		R	L	R	L	L to N	N
Oleum		N	N	N	N	L to N	N
Olive oil		R	R	R	L	---	---
Optical brighteners		R	R	R	R	---	---
Orange juice		R	R	R	R	-	-
Oxalic acid, acq.	any	R	R	R	R	R	R
Oxygen		R	R	R	R	R	L
Ozone	50 ppm	L	N	L	N	L to N	N

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
P							
Palmitic acid		R	R	R	R	L	L
Palmityl alcohol		R	R	R	R	---	---
Palm nut oil		R	---	R	---	---	---
Paraffin, liquid		R	R	R	L	---	---
Paraffin wax emulsions	commerc.	R	L	R	L	---	---
Paraformaldehyde		R	R	R	R	---	---
Peanut oil	techn. grade	R	---	R	---	---	---
Pentanol		R	---	R	---	-	-
Peppermint oil		R	---	R	---	---	---
Perchloric acid, acq.	20%	R	R	R	R	R	R
Perchloric acid, acq.	50%	R	L	R	L	---	---
Perchloric acid, acq.	70%	R	N	R	N	R	-
Perchloroethylene		L	N	N	N	-	-
Petrol		R	L	L	N	L to N	N
Petroleum		R	L	L	N	---	---
Petroleum ether		R	L	R	---	L to N	N
Phenolic resin		R	R	R	R	---	---
Phenol		R	R *	L	L *	L to N	N
Phenyl ethyl alcohol		R	R	R	L	---	---
Phenyl hydrazine	techn. grade	L	L to N	L	N	-	-
Phenyl hydrazin hydrochlorid		R	N	R	N	-	-
Phosgene, gas		L	---	---	---	N	N
Phosgene, liquid	100%	N	---	---	---	-	-
Phosphates, acq.	any	R	R	R	R	---	---
Phosphoric acid, acq.	50%	R	R	R	R	R	R
Phosphoric acid, acq.	80%	R	L *	R	L *	R	L
Phosphorus oxychloride		R	L	R	L	---	---
Phosphorus pentoxide	100%	R	R	R	R	R	L
Phosphorus trichloride		N	N	N	N	N	N
Photographic developers		R *	R *	R *	R *	R	R
Photographic emulsions	commerc.	R	R	R	R	R	R
Photographic fixing baths	commerc.	R	R	R	R	R	R
Phthalic acid, acq.	50%	R	R	R	R	---	---
Phthalic acid dibutyl ester	techn. grade	R	L	L	L	---	---
Phthalic ester		R	R to L	R	L	---	---
Picric acid, acq.	1%	R	---	R	---	R	L



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Polyethylene Chemical Resistance

Substance	P	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
			20°C	60°C	20°C	60°C	20°C	60°C
Pineapple juice			R	R	R	R	---	---
Pine needle oil			R	---	R	---	---	---
Plasticisers			R	L	L	L	---	---
Polyacrylic acid emulsions			R	R	R	R	---	---
Polyester plasticisers			R	R to L	L	L	---	---
Polyester resins			L	N	L	N	---	---
Polyglycols			R	R	R	R	---	---
Potassium alum.sulphat, acq.	any		**	**	**	**	---	---
Potassium bicarbonate, acq.	saturated		**	**	**	**	R	-
Potassium bisulphate, acq.	saturated		**	**	**	**	R	-
Potassium bisulphite, acq.	saturated		**	**	**	**	R	-
Potassium borate, acq.	1%		**	**	**	**	R	-
Potassium bromate, acq.	up to 10%		**	**	**	**	R	-
Potassium bromide, acq.	any		**	**	**	**	R	-
Potassium carbonate, acq.	any		**	**	**	**	R	-
Potassium chlorate, acq.	any		**	**	**	**	R	-
Potassium chloride, acq.	any		**	**	**	**	R	-
Potassium chromate, acq.	40%		**	**	**	**	R	-
Potassium chromi sulphat,acq	saturated		**	**	**	**	R	-
Potassium cyanide, acq.	any		**	**	**	**	C	C
Potassium dichromate, acq.	any		R	R	R	R	R	-
Potassium ferrocyanide	any		R	R	R	R	R	-
Potassium fluoride, acq.	any		**	**	**	**	R	-
Potassium 6cyanoferrate,acq.	any		R	R	R	R	---	---
Potassium hydroxide			R	R	R	R	---	---
Potassium hydroxide, acq.	any		R	R	R	R	---	---
Potassium hydroxide solution	50%		R	R	R	R	R	-
potassium hypochlorit bleach			R to L	N	R to L	N	R	-
Potassium hypochlorite, acq.	saturated		L	N	L	N	R	L
Potassium iodide, acq.	any		**	**	**	**	---	---
Potassium nitrate, acq.	any		**	**	**	**	---	---
Potassium perborate			R	R	R	R	R	R
Potassium perchlorate, acq.	up to 10%		R	L	R	L	R	-
Potassium perchlorate, acq.	1%		R	---	R	---	---	---
Potassium permanganate	20%		R	R *	R	R *	---	---
Potassium permanganat, acq.	up to 6%		R	R *	R	R *	L to N	N
Potassium persulphate, acq.	any		R	R	R	R	R	-
Potassium phosphate, acq.	saturated		**	**	**	**	R	R
Potassium sulphate, acq.	any		**	**	**	**	R	-
Potassium sulphide, acq.	saturated		**	**	**	**	R	-
Potassium sulphite, acq.	saturated		**	**	**	**	---	---
Potassium tcyanocuprat, acq.	saturated		R	R	R	R	---	---
Potassium thiosulphate, acq.	saturated		**	**	**	**	---	---
Propane, gaseous	techn. grade		R	---	---	---	L to N	N
Propanol-(2)			R	R	R	R	R	R
n-Propanol			R	R	R	R	R	-
Propargyl alcohol, acq.	7%		R	R	R	R	R	R
Propionic acid, acq.	any		R	R	R	R	---	---
Propylene dichloride	100%		N	---	N	---	---	---
Propylene glycol			R	R	R	R	---	---
Propylene oxide			R	R	---	---	---	---
Pyridine			R	L	R	L	---	---



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Polyethylene Chemical Resistance

Substance Q - R - S	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Quinine		R	R	R	R	---	---
Release agents		R	R	---	---	---	---
Roasting gases, dry	any	R	R	---	---	---	---
Rubber dispersions (latex)		R	R	R	R	---	---
Sagrotan®		R	L	R	L	---	---
Salicylic acid		R	R	R	R	R	R
Salt brines	saturated	R	R	R	R	---	---
Saturated steam cond.		R	R	R	R	---	---
Sauerkraut		R	R	R	R	---	---
Sea water		R	R	R	R	R	R
Silicic acid, acq.	any	R	R	R	R	R	—
Silicone emulsion	commerc.	R	R	R	R	---	---
Silicone oil	techn. grade	R	R	R	R	R	R
Silver nitrate		**		**		R	—
Silver nitrate, acq.	Any	**		**		---	---
Silver salts, acq.	cold saturat	**		**		---	---
Soap solution, acq.	any	R	R	R	R	R	L
Soda, acq.	any	R	R	R	R	---	---
Sodium acetate, acq.	any	**		**		R	—
Sodium aluminium sulphate		**		**		---	---
Sodium benzoate, acq.	any	R	R	R	R	R	—
Sodium bicarbonate, acq.	saturated	R	R	R	R	R	—
Sodium bisulphate, acq.	saturated	**		**		R	—
Sodium bisulphite, acq.	saturated	**		**		R	—
Sodium borate		R	R	R	R	---	---
Sodium bromide		**		**		R	—
Sodium carbonate, acq.	any	**		**		R	—
Sodium chlorate, acq.	saturated	**		**		---	---
Sodium chloride, acq.	any	**		**		---	---
Sodium chlorite, acq.	50%	R	---	R	---	R	—
Sodium chromate		**		**		R	—
Sodium cyanide		**		**		R	—
Sodium dichromate		R	R	R	R	R	—
Sodium ferricyanide, acq.	saturated	R	R	R	R	R	—
Sodium ferrocyanide		R	R	R	R	R	—
Sodium fluoride		**		**		R	—
Sodium 6metaphosphate, acq.	saturated	R	R	R	R	---	---
Sodium hydroxide, acq.	any	R	R	R	R	---	---
Sodium hydroxide, solid		R	R	R	R	---	---
Sodium hypochlorite, acq.	saturated	L	N	L	N	R	—
Sodium hypochlorite bleach		R to L	N	R to L	N	R	—



Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Sodium iron cyanide		R	R	R	R	---	---
Sodium nitrate, acq.	any	**		**		R	–
Sodium nitrite, acq.	any	**		**		R	–
Sodium perborate, acq.	any	R	L	R	L	---	---
Sodium perchlorate, acq.	any	R	R	R	R	---	---
Sodium peroxide, acq.	saturated	L	---	L	---	---	---
Sodium peroxide, acq.	10%	R	R	R	R	---	---
Sodium phosphate, acq.	saturated	**		**		R	–
Sodium silicate		**		**		---	---
Sodium silicate, acq.	any	**		**		R	–
Sodium sulphate, acq.	cold saturat	**		**		R	–
Sodium sulphide, acq.	any	**		**		R	–
Sodium tetraborate, acq.	saturated	R	R	R	R	---	---
Sodium thiosulphate, acq.	saturated	**		**		R	–
Soft soap		R	R	R	R	---	---
Soya bean oil		R	R	R	L	---	---
Spermaceti		R	---	L	---	---	---
Spindle oil		R to L	L	L	---	---	---
Spirits		R	---	R	---	---	---
Stain remover		R to L	L	L	---	---	---
Starch, acq.	any	R	R	R	R	---	---
Starch gum (dextrin), acq.	18%	R	R	R	R	L to N	N
Starch syrup		R	R	R	R	---	---
Stearic acid		R	L	R	L	---	---
Styrene		L	N	L	N	–	–
Succinic acid, acq.	50%	R	R	R	R	---	---
Sugar beet juice		R	R	R	R	---	---
Sugar syrup		R	R	R	R	---	---
Sulphates, acq. solutions	any	R	R	R	R	---	---
Sulphur		R	R	R	R	R	–
Sulphuric acid, acq.	up to 50%	R	R	R	R	R	L
Sulphuric acid, acq.	70%	R	L	R	L	L	L
Sulphuric acid, acq.	80%	R	L	R	L	L to N	N
Sulphuric acid, acq.	98%	L	N	L	N	L to N	N
Sulphuric acid	conc.	N	---	N	---	---	---
Sulphurous acid		R	R	R	R	L	L
Sulphuryl chloride		N	---	N	---	L to N	N
Sulphur dioxide, acq.	any	R	R	R	R	R	R
Sulphur dioxide, gaseous		R	R	---	---	---	---
Sulphur trioxide		N	---	N	---	---	---



Polyethylene Chemical Resistance

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Tallow	techn. grade	R	R	R	R	R	L
Tannic acid, acq.	0,1	R	R	R	R	R	R
Tanning extracts, vegetable	as supplied	R	---	R	---	R	R
Tartaric acid, acq.	any	R	R	R	R	---	---
Tetrabromomethane		L to N	N	N	N	---	---
Tetrachloroethane		L to N	N	N	N	---	---
Tetrachloroethylene		L to N	N	N	N	---	---
Tetrachloromethane	techn. grade	L	N	N	N	---	---
Tetrahydrofuran	techn. grade	L to N	N	N	N	L to N	N
Tetralin®	techn. grade	R	N	L	N	---	---
Thioglycolic acid		R	R	R	R	---	---
Thionyl chloride		N	---	N	---	L to N	N
Thiophene		L	N	L	N	---	---
Tin (II) chloride, acq.	any	R	R	R	R	---	---
Tin (IV) chloride, acq.	saturated	R	R	R	R	—	—
Toluene	techn. grade	L	N	L	N	L to N	N
Toluic acids	saturated	L	---	L	---	---	---
Tomato juice		R	R	R	R	L	L
Transformer oil	techn. grade	R	L	R	L	L to N	N
Tributyl phosphate		R	R	R	---	—	—
Trichloroacetaldehyde	techn. grade	R	R	L	N	---	---
Trichloroacetic acid	techn. grade	R	L to N	L	N	---	---
Trichloroacetic acid, acq.	50%	R	R	R	R	---	---
Trichlorobenzene		N	N	N	N	L to N	N
Trichloroethylene	techn. grade	L to N	N	N	N	L to N	N
Tricresyl phosphate		R	R	R	---	---	---
Triethanolamine		R	R *	R	L *	---	---
Triethanolamine	any	R	L	R	L	L	—
Triethylene glycol		R	R	R	R	---	---
Trilon®		R	R	---	---	---	---
Trimethylol propane, acq.		R	R	R	R	—	—
Trimethyl borate		R	L to N	R	N	---	---
Trioctyl phosphate		R	L	R	---	---	---
Trisodium phosphate		**		**		R	—
Turpentine	oiltechn.	R to L	N	gra *e L	N	L to N	N
Tutogen® U		R	R	---	---	---	---
Tween® 20 and 80		R	N	---	---	---	---
Two-stroke oil		R	L	---	---	---	---



Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Urea, acq.	up to 33%	R	R	R	R	R	–
Uric acid		R	R	R	R	R	–
Urine		R	R	R	R	---	---
Vaseline	techn. grade	R to L	L	L	L	---	---
Vaseline oil	techn. grade	R to L	L	L	L	---	---
Vinegar (wine vinegar)	commerc.	R	R	R	R	---	---
Vinylidene chloride	techn. grade	N	N	N	N	---	---
Vinyl acetate		R	R	R	L	L to N	N
Viscose spinning solutions		R	R	R	R	---	---
Vitamin C		R	---	R	---	---	---
Vitamin preparations, dry		R	---	R	---	---	---

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Walnut oil		R	L	R	L	---	---
Washing up liquids	usual	R	R	R	R	---	---
Water, distilled		R	R	R	R	R	–
Waxes		R	R to L	R	L	---	---
Wax alcohols	techn. grade	L	L	---	---	---	---
Whey		R	R	R	R	R	L
Whisky		R	---	R	---	–	–
White spirit	techn. grade	R	---	L	---	---	---
Wine		R	---	R	---	–	–
Wine vinegar (table vinegar)	commerc.	R	R	R	R	---	---
Wood stains		R	R to L	---	---	---	---
Xylene		L	N	L	N	L to N	N
Yeast		R	R	R	R	---	---

Substance	Conc.	MDPE / HDPE		LLDPE / LDPE		EVA	
		20°C	60°C	20°C	60°C	20°C	60°C
Zinc carbonate		**		**		---	---
Zinc chloride, acq.	any	**		**		R	–
Zinc oxide		R	R	R	R	---	---
Zinc salts, acq.	any	**		** R		---	---
Zinc sludge		R	R	R	R	---	---
Zinc stearate		R	R	R	R	---	---
Zinc sulphate, acq.	any	**		**		R	–



Information about the salts whose chemical names can be composed out from the following table, are not included in pages above. These salts nor solid nor in an aqueous solution, have no influence on polyethylene.

Cation		Anion	
Aluminium	Nickel	acetate	hydrosulphate
Ammonium	Potassium	arsenate	iodate, iodite
Antimony	Silver	benzoate	metaphosphate
Barium	Sodium	borate	molybdate
Bismuth	Thallium	bromate	nitrate
Cadmium	Tin	bromide	nitrite
Calcium	Zinc	carbonate	oxalate
Chromium		chlorate	perborate
Cobalt		chloride	persulphate
Copper		chromate	phosphate, phosphite
Iron		dicarbonate	rhodanide
Lead		dichromate	salicylate
Lithium		disulphate	silicate
Magnesium		ferric/ferrous cyanide	silicofluoride
Manganese		fluoride	sulphate, sulphite
Mercury		formiate	thiosulphate
Molybdenum		gluconate	

