

Description:

Due to its non-polar nature, the polyethylene resins (PEs) have an exceptionally high resistance to chemicals and other media. It is not affected by aqueous solutions of salts, acids and alkalis. Up to 60°C, PEs are resistant to many solvents. PEs are not resistant to strong oxidizing agents such as nitric acid, fuming sulfuric acid or halogens.

Attached are chemical resistance data, withdraw from the literature, where plastic test specimens were immersed for 60 days in the test substance without mechanical stress and then their tensile properties were tested.

We emphasize, that thickness, stressed areas, and processing conditions are factors that also affect the resin final resistance. Therefore, the only way to estimate the final product resistance is simulating the real situation, inspecting visually and through tests of mechanical resistance the material after exposure to chemical products. The tests can be speed up through the exposition to more severe conditions such as low and high temperatures.

The information provided here is based on Braskem S.A.current knowledge and experience. It should be noted that several factors can affect the properties of the finished product, such as processing conditions and the use of the final product, which are out of Braskem's control. Therefore, the information provided here cannot be used as a guarantee by Braskem, and the transformer is not exempt from the responsibility of carrying out its own controls and tests on the articles it produces. In case of doubt, request guidance or visit from our technicians, through the website: www.braskem.com.br

Rating System

- +** resistant (tensile strength at yield and elongation at break unchanged)
- O** limited resistance (tensile strength at yield and elongation at break slightly reduced)
- not resistant (tensile strength at yield and elongation at break greatly reduced)
- v** possible discoloration
- *** or boiling point
- **** not applicable to welded joints (including joints produced by thermal bending); information available from us or the semifinished product manufacturer.

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Acetaldehyde	techn. grade	+	O	+	-
Acetaldehyde, aqueous	any	+	O	+	
Acetaldehyde + acetic acid	90/10	+		+	
Acetamide		+	+	+	
Acetic acid	100%	+	O v	+	O v
Acetic acid, aqueous	70%	+	+	+	+
Acetic anhydride	techn. grade	+	O v	+	
Acetoacetic acid		+		+	
Acetone	techn. grade	+	+ *	O	
Acetophenone		+		O	
Acetylene		+			
Acids, aromatic		+	+	+	
Acronal® dispersions	as supplied	+	O	+	
Acrylonitrile	techn. grade	+	+	+	O
Adipic acid, aqueous	saturated	+	+	+	+
Adipic ester		+	O		
Air	techn. grade	+	+	+	+
Aktivin® (chloramine, aqueous 1%)		+	+	+	+
Allyl acetate		+	+ to O	+	O
Allyl alcohol (2-propenol-1)	96%	+	+	O	O
Allyl chloride		O	-	-	-
Aluminium chloride, aqueous	any	+	+	+	+
Aluminium chloride, solid		+	+	+	+
Aluminium fluoride	conc.	+	+	+	+
Aluminium hydroxide		+	+	+	+
Aluminium metaphosphate		+	+	+	+
Aluminium sulphate, aqueous	saturated	+	+	+	+
Aluminium sulphate, solid		+	+	+	+
Alum, aqueous	any	+	+	+	+
Amino acids		+	+	+	+
2-aminoethanol (ethanolamine)	techn. grade	+		+	
Ammonia, gaseous		+	+	+	
Ammonia, liquid		+		+	
Ammonia water	any	+	+	+	
Ammonium acetate, aqueous	any	+	+	+	+
Ammonium bicarbonate, aqueous	saturated	+	+	+	+
Ammonium carbonate, aqueous	any	+	+	+	+
Ammonium chloride, aqueous	any	+	+	+	+

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Ammonium fluoride, aqueous	saturated	+	+	+	+
Ammonium hydrosulphide, aqueous	any	+	+	+	+
Ammonium metaphosphate		+	+	+	+
Ammonium nitrate, aqueous	any	+	+	+	+
Ammonium phosphate, aqueous	any	+	+	+	+
Ammonium sulphate, aqueous	any	+	+	+	+
Ammonium sulphide, aqueous	any	+	+	+	+
Ammonium thiocyanate		+	+	+	+
Amyl acetate	techn. grade	+	+	+	O
Amyl alcohol (C5 alcohols)	techn. grade	+	+	+	O
Aniline	any	+	+	+	O
Aniline hydrochloride, aqueous	any	+	+	+	+
Animal oils		+	O	+	O
Aniseed		O	O to -	-	-
Aniseed oil		O	-	-	-
Anisole		+	-	O	-
Anone (cyclohexanone)		+	O	O	-
Anthraquinone sulphonc acid, aqueous (susp.)		+	+	+	+
Antifreeze (automotive)	as supplied	+	+	+	+
Antimony chloride, anhydrous		+	+	+	+
Antimony pentachloride		+	+	+	+
Antimony trichloride		+	+	+	+
Aqua regia (HCl + HNO ₃)		-		-	
Aromatic oils		O	-	O	-
Arsenic acid, aqueous	any	+	+	+	+
Arsenic anhydride		+	+	+	+
Ascorbic acid		+	+	+	+
Asphalt		+	O v	+	O v
Aspirin®		+		+	
Barium hydroxide, aqueous	any	+	+	+	+
Barium salts, aqueous	any	+	+	+	+
Battery acid		+	+	+	+
Beater glue (animal glue)	as supplied	+	+		
Beef tallow		+	+ to O	+	O
Beer		+	+	+	+
Beer sugar colouring	as supplied	+	+	+	+
Beeswax		+	O to -	+	-
Benzaldehyde, aqueous	any	+	+ to O	O	O

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Benzaldehyde in isopropyl alcohol	1%	+	+	+	0
Benzene	techn. grade	0	-	0	-
Benzene sulphonic acid		+	+	+	+
Benzoic acid, aqueous	any	+	+	+	+
Benzoyl chloride		0	0	-	
Benzyl alcohol		+	+	+	0
Benzyl chloride		0	-	-	
Bichromate – sulphuric acid	conc.	-		-	
Bismuth salts		+	+	+	+
Bisulphite liquor		+	+		
Bitumen		+	0 V	+	0 V
Bleaching solution with 12.5% active chlorine**		0	-	0	-
Bone oil		+	+	+	+
Borax (sodium tetraborate), aqueous	saturated	+	+	+	+
Boric acid, aqueous	any	+	+	+	+
Boric acid methyl ester		+	0 to -	+	-
Bromine, liquid	100%	-	-	-	-
Bromochloromethane		-	-	-	-
1,3-butadiene, gaseous	techn. grade	0	-		
Butanediol, aqueous	any	+	+	+	+
Butanetriol, aqueous	any	+	+	+	+
Butane, gaseous		+			
Butanol, aqueous	any	+	+	+	0
Butanone		+	0 to -	+	-
2-Butenediol-1,4	techn. grade	+		+	
2-Butinediol-1,4	techn. grade	+		+	
Butoxyl® (methoxybutylacetate)		+	0		
Butter		+		+	
Butylene glycol	techn. grade	+	+	+	+
Butyl acetate (acetic acid butyl ester)	techn. grade	+	0	+	0
Butyl acrylate		+	0	+	0
Butyl alcohol		+	+	+	0
Butyl benzyl phthalate		+	+	0	0
Butyl glycol (ethylene glycol monobutylether)	techn. grade	+		+	
Butyl phenol	techn. grade	+	+	0	
Butyl phenone	techn. grade	-		-	
Butyl phthalate (dibutyl phthalate)	techn. grade	+	0	0	0
Butyric acid, aqueous	any	+	0	+	0
Calcium carbide		+	+	+	+
Calcium carbonate		+	+	+	+
Calcium chlorate, aqueous	saturated	+	+	+	+
Calcium chloride, aqueous	saturated	+	+	+	+
Calcium hydroxide		+	+	+	+
Calcium hypochlorite, aqueous (suspension)	any	+	+	+	+
Calcium nitrate, aqueous	50%	+	+	+	+
Calcium oxide (powder)		+	+	+	+
Calcium phosphate		+	+	+	+
Calcium sulphate		+	+	+	+
Calcium sulphide, aqueous	≤10%	0	0		
Camphor		0	-	0	-
Camphor oil		-		-	
Cane sugar, aqueous	any	+	+	+	+
Carbazole		+	+		
Carbolic acid (phenol)		+	+ V	0	0 V
Carbolineum	as supplied	+		0	
Carbolineum, aqueous (for fruit trees)		+ V	0 V	0 V	0 V
Carbonic acid, aqueous	any	+	+	+	+
Carbonic acid, dry	100%	+	+		

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Carbon monoxide, gaseous	techn. grade	+	+		
Carbon tetrachloride		0	-	-	-
Cetyl alcohol (hexadecanol)		+	+	+	
Chloral hydrate, aqueous	any	+	+ V	+	+ V
Chloral (trichloroacetaldehyde)	techn. grade	+	+		
Chloramine, aqueous	saturated	+		+	
Chlorinated lime		+	+	+	+
Chlorine, aqueous solution (chlorine water)	saturated	+	0	+	0
Chlorine, gaseous, dry		0	-	0	-
Chlorine, gaseous, moist		0	-	0	-
Chlorine, liquid		-		-	
Chloroacetic acid, aqueous	≤85 %	+	+	+	+
Chloroacetic acid (mono), aqueous	any	+	+	+	0
Chlorobenzene		0	-	0	-
Chloroformic acid ester		+	0		
Chloroform	techn. grade	0 to -	-	-	-
Chloropicrin		+ to 0	-	-	-
Chlorosulphonic acid	techn. grade	-	-	-	-
Chrome anode slime		+	+	+	+
Chrome salts, aqueous	any	+	+	+	+
Chromic acid, aqueous**	50%	0	- V	0	- V
Chromium trioxide, aqueous**	50%	0	- V	0	- V
Chromosulphuric acid		-		-	
Cider		+	+	+	+
Citric acid, aqueous	saturated	+	+	+	+
Citrus fruit juices		+	+	+	+
Clophen® A 50 and A 60®		+	0 to -		
Coal tar oil		+ V	0 V	+ V	0 V
Coconut oil		+	0	+	0
Coconut oil alcohol	techn. grade	+	0	+	0
Cod liver oil		+	0	+	0
Coffee extract		+	+	+	+
Cognac		+		+	
Cola concentrates		+	+	+	+
Common salt, aqueous	any	+	+	+	+
Coolants and lubricants for metalworking		0	0		
Copper chloride, aqueous	saturated	+	+	+	+
Copper cyanide, aqueous	saturated	+		+	
Copper fluoride, aqueous	saturated	+	+	+	+
Copper nitrate, aqueous	30%	+	+	+	+
Copper salts, aqueous	cold saturated	+	+	+	+
Cottonseed oil	techn. grade	+	+	+	0
Coumarone resins		+	+		
Creasote		+	+ V		
Cresol	100%	+	0 V	0	-
Cresol, aqueous	dilute	+	+ V	+	
Crop protection agents, aqueous	as supplied	+	+	+	+
Crotonaldehyde	techn. grade	+	0	0	
Crude oil		+	0	+	0
Cyclanone (fatty alcohol sulphonate)	as supplied	+	+	+	
Cyclohexane		+	+	+	-
Decahydronaphthalene (Dekalin®)	techn. grade	+	0	0	-
Defoamers		+	+ to 0	+	0
Detergents		+	+	+	+
Detergents, synthetic (end use concentration)		+	+	+	+
Developer solutions (photographic)		+ V	+ V	+ V	+ V
Dextrin (starch gum), aqueous	18%	+	+	+	+
Dextrose, aqueous	any	+	+	+	+

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
1,2-Diaminoethane (ethylenediamine)	techn. grade	+	+	+	0
1,2-Dibromoethane		0	-	-	-
Dibutyl ether		+ to 0	-	0	-
Dibutyl phthalate (butyl phthalate)	techn. grade	+	0	0	0
Dibutyl sebacate		+	0	0	0
Dichloroacetic acid	techn. grade	+	0 v	+	-
Dichloroacetic acid	50%	+	+	+	+
Dichloroacetic acid methyl ester		+	+	0	-
Dichlorobenzene		0	-	-	-
Dichlorodiphenyltrichloroethane (DDT, powder)		+	+	+	+
Dichloroethane		0	0	-	-
1,1-Dichloroethylene (vinylidene chloride)	techn. grade	-	-	-	-
Dichloromethane**		0	0*	-	-*
Dichloropropane		0	-	-	-
Dichloropropene		0	-	-	-
Diesel fuel		+	0	+	-
Diethanolamine	techn. grade	+	+	+	
Diethylene glycol		+	+	+	+
2-Diethylhexylphthalate (DOP)		+	0	+	
Diethylketone		+	0	0	-
Diethyl ether		+ to 0	0*	0	
Diglycolic acid, aqueous	30%	+	+	+	+
Diisobutylketone	techn. grade	+	0 to -	0	-
Diisooctyl phthalate	techn. grade	+	0	0	
Diisopropyl ether		+ to 0	-	0	-
Dimethylamine		+	0	0	-
Dimethyl formamide	techn. grade	+	+ to 0	+	0
Dimethyl sulphoxide		+	+	+	
Dioxane		+	+	+	0
Diphenylamine		+	0	+	0
Diphenyl oxide		+	0	+	0
Disodium phosphate		+	+	+	+
Disodium sulphate		+	+	+	+
Dodecylbenzenesulphonic acid		+	0	+	0
Drinking water, also chlorinated		+	+	+	+
Dyes		+ v	+ v	+ v	+ v
Eau de Javelle (potassium hypochlorite bleaching solution)		+ to 0	-	+ to 0	-
Eau de Labarraque (sodium hypochlorite bleaching solution)		+ to 0	-	+ to 0	-
Electrolytic baths for electroplating		+ to 0	0	+ to 0	0
Ephetin®, aqueous	10%	+	+	+	+
Epichlorohydrin		+	+	+	+
Essential oils		+	+	+	0
Esters, aliphatic	techn. grade	+	+ to 0	+ to 0	0 to -
Ethane		+	+		
Ethanolamine (2-aminoethanol)	techn. grade	+		+	
Ethanol	96%	+	+	+	+
Ethanol denatured with toluene	96%	+		+	
Ethereal oils		0	-	0	-
Ether		+ to 0	0*	0	
Ethylenediamine tetraacetic acid		+	+	+	+
Ethylene		+	+		
Ethylene chloride		0	-	0	-
Ethylene chlorohydrin (chloroethanol)	techn. grade	+	+ v	+	+ v
Ethylene diamine (1,2-diaminoethane)	techn. grade	+	+	+	0
Ethylene dibromide		0	-	0	-
Ethylene dichloride (dichloroethane)		0	-	0	-
Ethylene glycol		+	+	+	+
Ethylene glycol monobutyl ether (butyl glycol)	techn. grade	+		+	

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Ethylene oxide, gaseous		+	+		
Ethyl acetate (acetic acid ethyl ester)	techn. grade	+	0	0	-
Ethyl alcohol	96%	+	+	+	+
Ethyl alcohol + acetic acid (fermentation mixture)		+	+	+	+
Ethyl benzene	techn. grade	0		0	
Ethyl chloride (chloroethane)	techn. grade	0*		0*	
Ethyl ether (diethyl ether)	techn. grade	+ to 0	0*	0	
2-Ethyl hexanol		+	0	+	0
Euron® B		0	0		
Euron® G		+	+		
Fatty acids (>C6)		+	+ to 0	+	0
Fatty acid amides		+	0	+	0
Fatty alcohols		+	0	+	0
Ferric chloride, aqueous	any	+	+	+	+
Ferric nitrate, aqueous	saturated	+	+	+	+
Ferric sulphate, aqueous	saturated	+	+	+	+
Ferrous chloride, aqueous	saturated	+	+	+	+
Ferrous sulphate, aqueous	saturated	+	+	+	+
Fertilizer salts, aqueous	any	+	+	+	+
Fixing salt, aqueous	any	+	+	+	+
Fixing salt, solid		+	+	+	+
Fluorine, gaseous		-	-	-	-
Fluoroboric acid, aqueous		+	0	+	0
Fluorosilicic acid	any	+	+	+	+
Fluorosilicic acid, aqueous	any	+	+	+	+
Formaldehyde, aqueous	≤40%	+	+	+	+
Formamide		+	+	+	+
Formic acid, aqueous	10%	+	+	+	+
Formic acid, aqueous	85%	+	+	+	+
Fruit juices, fermented		+	+	+	+
Fruit juices, unfermented	Any	+	+	+	+
Fruit pulp		+	+	+	+
Fuel oil		+	0	0	-
Fuming sulphuric acid (H ₂ SO ₄ + SO ₃)	any	-	-	-	-
Furfural		+	0	0	-
Furfuryl alcohol		+	+ v	+	+ v
Gas, manufactured	as supplied	+		+	
Gas, natural	techn. grade	+		+	
Gas, liquor		+	+	+	+
Gasoline, regular-grade (DIN 51635)		+	0	0	-
Gelatin		+	+	+	+
Genantin®		+	+		
Gin		+		+	
Glacial acetic acid (100% acetic acid)	techn. grade	+	0 v	+	0 v
Glauber's salt, aqueous	any	+	+	+	+
Glucose, aqueous	any	+	+	+	+
Glue		+	+	+	+
Glycerin, aqueous	any	+	+	+	+
Glycerin chlorohydrin		+	+	+	+
Glycerol		+	+	+	+
Glycine		+	+	+	+
Glycolic acid, aqueous	≤70%	+	+	+	+
Glycolic acid butyl ester		+	+	+	
Glycol, aqueous	as supplied	+	+	+	+
Glystantin®		+	+	+	+
Grisiron® 8302		0	0		
Grisiron® 8702		+	+		
Halothan®		0	0 to -		

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Heptane		+	0	+	-
Hexanetriol		+	+	+	+
Honey		+	+	+	+
Hydraulic fluid		+	0	+	
Hydrazine hydrate		+	+	+	+
Hydrobromic acid, aqueous	50%	+	+	+	+
Hydrochloric acid, aqueous	any	+	+	+	+
Hydrocyanic acid		+	+	+	+
Hydrofluoric acid, aqueous	40-85 %	+	0	+	0
Hydrogen		+	+		
Hydrogen bromide, gaseous	techn. grade	+	+	+	
Hydrogen chloride gas, dry and moist		+	+	+	
Hydrogen peroxide, aqueous	10%	0	-	0	-
Hydrogen peroxide, aqueous	30%	0	-	0	-
Hydrogen peroxide	100%	0	0	0	-
Hydrogen sulphide, aqueous	saturated	+	+	+	+
Hydrogen sulphide, gaseous		+	+	+	+
Hydroquinone		+ v	+ v	+ v	+ v
Hypochlorous acid		+ to 0	0	0	
Ink		+	+	+	+
Iodine in potassium iodide solution	3 % iodine	+	+	+	+
Iodine tincture, DAB 6	as supplied	+	0 v	+	0 v
Isoamyl alcohol	techn. grade	+	0	+	0
Isobutyl alcohol (isobutanol)		+	+	+	0
Isobutyric acid	techn. grade	+	0	+	0
Isooctane		+	0	+	-
Isopropanol (isopropyl alcohol)	techn. grade	+	+	+	+
Isopropyl acetate	100%	+	0	+	0
Isopropyl ether	techn. grade	+ to 0	-	0	-
Jam		+	+	+	+
Kerosene		+	0	0	-
Ketones		+ to 0	0 to -	+ to 0	0 to -
Lactic acid, aqueous	any	+	+	+	+
Lactose (milk sugar)		+	+	+	+
Lanolin (wool fat)		+	+	+	+
Latex		+	+	+	+
Lead acetate, aqueous	any	+	+	+	+
Lead tetraethyl		+		+	
Lime		+	+	+	+
Lime water		+	+	+	+
Linseed oil	techn. grade	+	+	+	0
Liqueur		+	+		
Liquid manure		+	+		
Liquid soaps		+	+	+	+
Lithium bromide		+	+	+	+
Lubricating oils	techn. grade	+	+ to 0	+	0
Magnesium carbonate		+	+	+	+
Magnesium chloride, aqueous	any	+	+	+	+
Magnesium fluorosilicate		+	+	+	+
Magnesium hydroxide		+	+	+	+
Magnesium iodide		+	+	+	+
Magnesium salts, aqueous	any	+	+	+	+
Magnesium sulphate, aqueous	any	+	+	+	+
Maleic acid, aqueous	≤ 100%	+	+	+	+
Malic acid, aqueous	50%	+	+	+	+
Manganese sulphate		+	+	+	+
Margarine		+	+	+	+
Mash		+	+	+	+

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Mayonnaise		+		+	
Menthol		+	0	0	-
Mercury		+	+	+	+
Mercury chloride		+	+	+	+
Mercury salts		+	+	+	+
Metal soaps		+	+	+	+
Methacrylic acid		+	+	+	0
Methanol	techn. grade	+	+	+	+
Methylamine, aqueous	32%	+		+	
2-Methylbutanol-2	techn. grade	+	0	+	0
Methylene chloride** (dichloromethane)		0	0*	-	-*
Methylisobutyl ketone		+	0 to -	+	-
Methyl acetate (acetic acid methyl ester)	techn. grade	+		+	
Methyl acrylate		+	+	+	0
Methyl alcohol		+	+	+	+
Methyl benzene		0	-	0	-
Methyl benzoic acids (toluic acids)	saturated	0		0	
Methyl bromide, gaseous	techn. grade	-		-	
Methyl bromide (bromomethane), gaseous	techn. grade	-		-	
Methyl chloride (chloromethane), gaseous	techn. grade	0		-	
Methyl cyclohexane		0	0 to -	0	-
Methyl ethyl ketone	techn. grade	+	0	0	-
Methyl glycol		+	+	+	+
Methyl methacrylate		+	+	+	0
4-Methyl pentanol-2		+	+ to 0 v	+	0 v
Methyl propyl ketone		+	0	0	-
N-Methyl pyrrolidone		+	+	+	
Methyl salicylate (salicylic acid methyl ester)		+	0	+	0
Methyl sulphuric acid	50%	+	+	+	+
Milk		+	+	+	+
Molasses		+	+	+	+
Molasses wort		+	+	+	+
Monochloroacetic acid		+	0	+	0
Monochloroacetic acid ethyl ester		+	+	+	0
Monochloroacetic acid methyl ester		+	+	+	0
Monochlorobenzene		0	-	0	-
Mordants, metallic		+		+	
Morpholine		+	+	+	
Motor oil (heavy duty oil)		+	+ to 0	+	0
Mowilith® emulsions		+	+	+	+
Mustard		+	+	+	+
Nail polish remover		+	0	+	0
Naphthalene		+	-	+	-
Naphtha	techn. grade	+	0	+	0
Naphtha		+	0	+	0
Naphtha/benzene mixture 80/20		+	0	+	0
Nickel chloride		+	+	+	+
Nickel nitrate		+	+	+	+
Nickel salts, aqueous		+	+	+	+
Nickel sulphate, aqueous	any	+	+	+	+
Nicotine		+	+	+	+
Nicotinic acid	≤10%	+		+	
Nitric acid**	25%	+	+	+	+
Nitric acid**	50%	0	-	0	-
Nitric acid	95%	-	-	-	-
2,2'-Nitrilotriethanol (triethanolamine), aqueous	any	+	0	+	0
o-Nitrotoluene		+	0	0	-
Nonyl alcohol (nonanol)		+	+	+	0

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Nut oil		+		+	
Octyl cresol	techn. grade	0	-	0	-
Oils, ethereal		0	-	0	-
Oils, vegetable and animal		+	+ to 0	+	0
Oleic acid		+	0	+	0
Oleum		-	-	-	-
Olive oil		+	+	+	0
Optical brighteners		+	+	+	+
Orange juice		+	+	+	+
Oxalic acid, aqueous	any	+	+	+	+
Oxygen		+	+	+	+
Ozone	50 ppm	0	-	0	-
Palmitic acid		+	+	+	+
Paraffin, liquid		+	+	+	0
Paraffin wax emulsions	as supplied	+	0	+	0
Paraformaldehyde		+	+	+	+
Peanut oil	techn. grade	+		+	
Pentanol		+		+	
Peppermint oil		+		+	
Perchloric acid, aqueous	20%	+	+	+	+
Perchloric acid, aqueous	50%	+	0	+	0
Perchloric acid, aqueous	70%	+	-	+	-
Perchloroethylene		0	-	-	-
Petrol, regular-grade (DIN 51 635)		+	0	0	-
Petroleum		+	0	0	-
Petroleum ether		+	0	+	
Phenolic resin moulding compounds		+	+	+	+
Phenol		+	+ V	0	0 V
Phenyl ethyl alcohol		+	+	+	0
Phenyl hydrazine	techn. grade	0	0 to -	0	-
Phenyl hydrazine hydrochloride		+	-	+	-
Phenyl sulphonate (sodium dodecyl benzene sulphonate)		+	+	+	+
Phosgene, gaseous		0			
Phosgene, liquid	100%	-			
Phosphates, aqueous	any	+	+	+	+
Phosphoric acid, aqueous	50%	+	+	+	+
Phosphoric acid, aqueous	80-95 %	+	0 V	+	0 V
Phosphorus oxychloride		+	0	+	0
Phosphorus pentoxide	100%	+	+	+	+
Phosphorus trichloride		-	-	-	-
Photographic developers		+ V	+ V	+ V	+ V
Photographic emulsions	as supplied	+	+	+	+
Photographic fixing baths	as supplied	+	+	+	+
Phthalic ester		+	+ to 0	+	0
Picric acid, aqueous	1%	+		+	
Pineapple juice		+	+	+	+
Pine needle oil		+		+	
Plasticisers		+	0	0	0
Polyacrylic acid emulsions		+	+	+	+
Polyester plasticisers		+	+ to 0	0	0
Polyester resins		0	-	0	-
Polyglycols		+	+	+	+
Polysolvan® O (glycolic acid butyl ester)		+	+	+	0
Potassium aluminium sulphate, aqueous	any	+	+	+	+
Potassium bicarbonate, aqueous	saturated	+	+	+	+
Potassium bisulphate, aqueous	saturated	+	+	+	+
Potassium bromate, aqueous	≤ 10%	+	+	+	+
Potassium bromide, aqueous	any	+	+	+	+

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Potassium carbonate, aqueous	any	+	+	+	+
Potassium chlorate, aqueous	any	+	+	+	+
Potassium chloride, aqueous	any	+	+	+	+
Potassium chromate, aqueous	40%	+	+	+	+
Potassium chromic sulphate (chrome alum), aqueous	saturated	+	+	+	+
Potassium cyanide, aqueous	any	+	+	+	+
Potassium dichromate, aqueous	any	+	+	+	+
Potassium ferrocyanide and ferricyanide, aqueous	any	+	+	+	+
Potassium fluoride, aqueous	any	+	+	+	+
Potassium hexacyanoferrate, aqueous	any	+	+	+	+
Potassium hydroxide		+	+	+	+
Potassium hydroxide, aqueous	any	+	+	+	+
Potassium hydroxide solution	50%	+	+	+	+
Potassium hypochlorite, aqueous	saturated	0	-	0	-
Potassium iodide, aqueous	any	+	+	+	+
Potassium nitrate, aqueous	any	+	+	+	+
Potassium perborate		+	+	+	+
Potassium perchlorate, aqueous	≤10%	+	0	+	0
Potassium perchlorate, aqueous	1%	+		+	
Potassium permanganate	20%	+	+ V	+	+ V
Potassium permanganate, aqueous	≤6%	+	+ V	+	+ V
Potassium persulphate, aqueous	any	+	+	+	+
Potassium phosphate, aqueous	saturated	+	+	+	+
Potassium sulphate, aqueous	any	+	+	+	+
Potassium sulphide, aqueous	saturated	+	+	+	+
Potassium sulphite, aqueous	saturated	+	+	+	+
Potassium tetracyanocuprate, aqueous	saturated	+	+	+	+
Potassium thiosulphate, aqueous	saturated	+	+	+	+
Propane, gaseous	techn. grade	+			
Propanol-(2) (isopropyl alcohol)		+	+	+	+
n-Propanol (n-propyl alcohol)		+	+	+	+
Propanol (propyl alcohol)		+	+	+	+
Propylene dichloride	100%	-		-	
Propylene glycol		+	+	+	+
Propylene oxide		+	+		
Pseudocumene		0	0		
Pyridine		+	0	+	0
Quinine		+	+	+	+
Release agents		+	+		
Roasting gases, dry	any	+	+		
Rubber dispersions (latex)		+	+	+	+
Sagrotan®		+	0	+	0
Saturated steam condensate		+	+	+	+
Sauerkraut (pickled cabbage)		+	+	+	+
Sea water		+	+	+	+
Silicic acid, aqueous	any	+	+	+	+
Silicone emulsion	as supplied	+	+	+	+
Silicone oil	techn. grade	+	+	+	+
Silver nitrate		+	+	+	+
Silver nitrate, aqueous	any	+	+	+	+
Silver salts, aqueous	cold saturated	+	+	+	+
Soap solution, aqueous	any	+	+	+	+
Soda (sodium carbonate), aqueous	any	+	+	+	+
Sodium acetate, aqueous	any	+	+	+	+
Sodium aluminium sulphate		+	+	+	+
Sodium benzoate, aqueous	any	+	+	+	+
Sodium bicarbonate, aqueous	saturated	+	+	+	+
Sodium bisulphate, aqueous	saturated	+	+	+	+

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Sodium bisulphite, aqueous	saturated	+	+	+	+
Sodium borate		+	+	+	+
Sodium bromide		+	+	+	+
Sodium carbonate, aqueous	any	+	+	+	+
Sodium chlorate, aqueous	saturated	+	+	+	+
Sodium chloride, aqueous	any	+	+	+	+
Sodium chlorite, aqueous	50%	+		+	
Sodium chromate		+	+	+	+
Sodium cyanide		+	+	+	+
Sodium dichromate		+	+	+	+
Sodium dodecylbenzenesulphonate		+	+	+	+
Sodium ferricyanide, aqueous	saturated	+	+	+	+
Sodium ferrocyanide		+	+	+	+
Sodium fluoride		+	+	+	+
Sodium hexametaphosphate, aqueous	saturated	+	+	+	+
Sodium hydroxide, aqueous	any	+	+	+	+
Sodium hydroxide, solid		+	+	+	+
Sodium hypochlorite, aqueous with 12.5 % active chlorine**		0	-	0	-
Sodium iron cyanide		+	+	+	+
Sodium nitrate, aqueous	any	+	+	+	+
Sodium nitrite, aqueous	any	+	+	+	+
Sodium peroxide, aqueous	saturated	0		0	
Sodium peroxide, aqueous	10%	+	+	+	+
Sodium phosphate, aqueous	saturated	+	+	+	+
Sodium silicate		+	+	+	+
Sodium silicate, aqueous	any	+	+	+	+
Sodium sulphate, aqueous	cold saturated	+	+	+	+
Sodium sulphide, aqueous	any	+	+	+	+
Sodium tetraborate (borax), aqueous	saturated	+	+	+	+
Sodium thiosulphate, aqueous	saturated	+	+	+	+
Spermaceti		+		0	
Spindle oil		+ to 0	0	0	
Spirits		+		+	
Stain remover		+ to 0	0	0	
Starch, aqueous	any	+	+	+	+
Starch gum (dextrin), aqueous	18%	+	+	+	+
Starch syrup		+	+	+	+
Stearic acid		+	0	+	0
Styrene		0	-	0	-
Succinic acid, aqueous	50%	+	+	+	+
Sugar beet juice		+	+	+	+
Sugar syrup		+	+	+	+
Sulphates, aqueous solutions	any	+	+	+	+
Sulphur		+	+	+	+
Sulphuric acid, aqueous	≤ 50%	+	+	+	+
Sulphuric acid, aqueous	70%	+	0	+	0
Sulphuric acid, aqueous	80%	+	0	+	0
Sulphuric acid, aqueous	98%	0	-	0	-
Sulphurous acid		+	+	+	+
Sulphuryl chloride (sulphonyl chloride)		-		-	
Sulphur dioxide, aqueous	any	+	+	+	+
Sulphur dioxide, gaseous		+	+		
Sulphur trioxide		-		-	
Tallow	techn. grade	+	+	+	+
Tannic acid (tannin), aqueous	10%	+	+	+	+
Tanning extracts, vegetable	as supplied	+		+	
Tartaric acid, aqueous	any	+	+	+	+
Tetrabromomethane		0 to -	-	-	-

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Tetrachloroethane		0 to -	-	-	-
Tetrachloroethylene		0 to -	-	-	-
Tetrachloromethane (carbon tetrachloride)	techn. grade	0	-	-	-
Tetrahydrofuran	techn. grade	0 to -	-	-	-
Tetrahydronaphthalene (Tetralin®)	techn. grade	+	-	0	-
Thioglycolic acid		+	+	+	+
Thionyl chloride		-		-	
Thiophene		0	-	0	-
Tin (II) chloride, aqueous	any	+	+	+	+
Tin (IV) chloride, aqueous	saturated	+	+	+	+
Toluene	techn. grade	0	-	0	-
Toluic acids (methyl benzoic acids)	Saturated	0		0	
Tributyl phosphate		+	+	+	
Trichloroacetaldehyde (chloral)	Techn. grade	+	+	0	-
Trichloroacetic acid	Techn. grade	+	0 to -	0	-
Trichloroacetic acid, aqueous	50%	+	+	+	+
Trichlorobenzene		-	-	-	-
Trichloroethylene	Techn. grade	0 to -	-	-	-
Tri-β-chloroethylphosphate		+	+	+	
Tricresyl phosphate		+	+	+	
Triethanolamine		+	+ V	+	0 V
Trilon®		+	+		
Trimethylol propane, aqueous		+	+	+	+
Trimethyl borate		+	0 to -	+	-
Trioctyl phosphate		+	0	+	
Trisodium phosphate		+	+	+	+
Turpentine oil	Techn. grade	+ to 0	-	0	-
Tutogen® U		+	+		
Tween® 20 and 80		+	-		
Two-stroke oil		+	0		
Urea, aqueous	≤ 33 %	+	+	+	+
Uric acid		+	+	+	+
Urine		+	+	+	+
Vaseline	Techn. grade	+ to 0	0	0	0
Vaseline oil	Techn. grade	+ to 0	0	0	0
Vinegar (wine vinegar)	as supplied	+	+	+	+
Vinylidene chloride (1,1-dichloroethylene)	Techn. grade	-		-	
Vinyl acetate		+	+	+	0
Viscose spinning solutions		+	+	+	+
Vitamin C		+	+		
Vitamin preparations, dry (powder)		+	+		
Walnut oil		+	0	+	0
Washing up liquids	usual	+	+	+	+
Waste gases containing carbonic acid	any	+	+		
Waste gases containing carbon dioxide	any	+	+		
Waste gases containing carbon monoxide	any	+	+		
Waste gases containing hydrochloric acid	any	+	+		
Waste gases containing hydrogen fluoride	trace	+	+		
Waste gases containing nitrogen oxides	trace	+	+		
Waste gases containing sulphur dioxide	low	+	+		
Waste gases containing sulphur trioxide	trace	-		-	
Water, distilled		+	+	+	+
Waxes		+	+ to 0	+	0
Wax alcohols	techn. grade	0	0		
Whey		+	+	+	+
Whisky		+		+	
White spirit	techn. grade	+		0	

Substance	Concent.	MDPE/HDPE		LLDPE	
		20°C	60°C	20°C	60°C
Wood stains (end use concentration)		+	+ to 0		
Xylene		0	-	0	-
Zinc chloride, aqueous	any	+	+	+	+
Zinc oxide		+	+	+	+
Zinc salts, aqueous	any	+	+	+	+
Zinc sludge		+	+	+	+
Zinc stearate		+	+	+	+
Zinc sulphate, aqueous	any	+	+	+	+