

Table 1: Resistance of various plastics (without obligation)

Sign	Meaning
++	resistant
+	conditionally resistant
=	non-resistant

Material	Concentration	Rubber	Polyamide	Polyurethane	Polypropylene
Acetaldehyde	0,4	+	+	=	+
Acetone	-	++	++	=	+
Acetylene	-	++	++	++	-
Acrylic acid >30°C	-	-	=	=	-
Adhesive	-	-	-	++	-
Alkyl alcohol	-	++	+	=	-
Alkyl benzene	-	-	++	-	-
Aluminium acetate	-	-	++	-	-
Amine, aliphatic	-	-	++	-	-
Amino acid mixtures	-	-	++	-	-
Ammonium bicarbonate	-	-	++	-	-
Ammonium carbonate	-	++	-	=	-
Ammonium hydroxyde	-	-	-	=	-
Ammonium nitrate	-	+	-	++	++
Ammonium rhodanide	-	-	++	-	-
Ammonium salts	-	-	++	-	++
Ammonium sulphate	-	+	-	++	++
Amyl alcohol	-	++	++	+	++
Amylacetate	-	++	++	=	++
Aniline	-	=	+	=	++
Antra quinone, 85%C	-	-	++	-	-
Barium salts	-	++	+	++	++

Chemical material resistances of different plastics

Material	Concentration	Rubber	Polyamide	Polyurethane	Polypropylene
Beer	-	++	++	++	-
Benzene, Petrol ether	-	=	++	++	=
Bitumen	-	=	++	++	-
Borax	-	++	-	++	-
Boric acid, aqueous	0,1	++	+	++	+
Borine	-	=	++	++	-
Butane	-	=	++	++	-
Butter	-	=	=	=	=
Carbolineum	-	=	++	=	-
Carbon monoxide, hot	-	-	++	=	-
Carbonic acid	-	-	-	++	-
Casein	-	-	++	-	-
Caustic potash	-	-	-	=	-
Caustic soda	-	-	-	=	-
Chlorine, chlorine water	-	=	=	=	=
Chromic acids, aqueous	0,1	=	+	+	=
Citric acid, aqueous	0,1	++	++	-	-
Citrus oils	-	-	++	-	-
Cobalt acids, aqueous	0,2	-	+	-	-
Coconut oil	-	=	++	++	-
Copper chloride	-	++	-	++	-
Copper salts, aqueous	0,1	-	=	++	-
Copper sulphate	-	+	+	++	++
Cotton seed oil	-	-	-	++	-
Cresols	-	-	=	++	-
Crude oil	-	=	++	++	-
Cyclohexanol	-	+	++	+	-
Decalcifier, aqueous	0,1	-	++	-	-
De-icing salts (solutions)	-	-	++	-	-
Dichlorobenzol	-	=	++	=	=
Dichlorobutylene	-	=	-	=	-
Diethyleneglycol	-	++	++	++	-

Chemical material resistances of different plastics

Material	Concentration	Rubber	Polyamide	Polyurethane	Polypropylene
Dimethyl formic amide	-	+	++	=	++ (max. 20°C)
Dimethylaniline	-	-	-	=	-
Dimethylether	-	+	++	++	++
Ethanoic acid	0,3	=	++	=	++
Ethanol amine	-	-	-	=	-
Ether	-	-	++	++	-
Ethyl acetate	-	+	++	=	-
Ethyl alcohol	-	++	+	++	++
Ethylene	-	-	-	++	-
Fatty acids	-	-	++	++	-
Fir leaf oil	-	=	-	++	-
Flue gas	-	-	-	=	-
Fluorine	-	=	=	=	=
Formaldehyde	0,3	++	++	+	++
Formic acid	0,1	+	=	=	++ (max. 60°C)
Formic amide, pure	-	++	++	+	-
Furfural	-	-	++	=	-
Gelatine	-	-	-	++	-
Glucose	-	++	-	++	-
Glycerine	-	++	++	++	++
Glycol	-	++	+	+	++
Hexane	-	=	++	++	-
Hydraulic liquids	-	=	++	=	-
Hydrochloric acid, aqueous	0,3	+	=	=	++
Inert gases	-	-	++	-	-
Ink	-	++	++	++	-
Iron chloride, acidic	0,1	+	=	+	++ (max. 20°C)
Iron sulphate	-	-	-	++	-
Isoprophyl ether	-	++	-	++	-
Isopropyl chloride	-	=	-	=	-
Lactic acids	-	=	=	=	++
Lead acetate, aqueous	0,1	+	++	++	=

Chemical material resistances of different plastics

Material	Concentration	Rubber	Polyamide	Polyurethane	Polypropylene
Lead nitrate	-	++	-	++	-
Lees, 80°C	-	++	++	-	-
Liquid ammonia	0,2	++	++	=	++
Magnesium salts, aqueous	0,1	-	++	++	++
Malic acid	-	-	++	+	++ (max. 60°C)
Manganese salts	0,1	-	+	-	-
Mercury	-	++	++	++	++
Mercury chloride	-	-	=	++	++
Methyl alcohol	-	+	+	++	++
Methyl ethyl ketone	-	=	++	=	++
Methyl pyrrolidone	-	-	-	=	-
Methylene chloride	-	=	=	=	-
Milk	-	++	++	++	-
Mineral oils	-	=	++	++	-
Mono bromo benzol	-	=	-	=	-
Mortars, cements, lime	-	++	++	-	-
Mustard	-	-	-	++	-
Naphthalene	-	=	++	=	++ (crystalline)
Nickel chloride, aqueous	0,1	++	+	++	-
Nickel salts, aqueous	0,1	-	+	++	-
Nickel sulphate, aqueous	0,1	+	+	++	-
Nirohydrochloric acid	-	=	=	=	=
Oleic acid	-	=	++	++	-
Oxalic acids, aqueous	0,1	-	+	-	++
Ozone	-	=	+	++	-
Palmitic acid	-	=	++	=	-
Paraffin	-	=	++	++	-
Phenyl benzol	-	=	-	=	-
Phenyl ethyl ether	-	=	-	++	-
Phosphoric acid, aqueous	0,1	+	=	-	++
Potassium chloride	0,1	+	++	++	++ (max. 20°C)
Potassium cyanide	-	-	-	+	-

Chemical material resistances of different plastics

Material	Concentration	Rubber	Polyamide	Polyurethane	Polypropylene
Potassium hydroxide	-	-	++	=	++
Potassium salts	-	-	-	+	++
Potassium sulphate	-	++	-	++	++
Propane	-	=	++	++	-
Propyl alcohol	-	-	-	+	-
Pure acetic acid	-	+	-	=	++
Ricinol	-	-	-	++	-
Silver nitrate	-	+	-	++	++
Soda lye	0,5	++	+	=	++
Soda solution, aqueous	0,1	++	++	-	-
Sodium carbonat, aqueous	0,1	-	++	=	++
Sodium chloride, aqueous	0,1	+	=	++	++ (max. 20°C)
Sodium cyanide, aqueous	0,1	-	++	=	-
Sodium hydroxyde, aqueous	-	-	-	=	++
Sodium nitrate, aqueous	0,1	++	++	++	++
Sodium phosphate, aqueous	0,1	++	++	++	++
Sodium silicate, aqueous	0,1	++	++	+	-
Sodium sulphate, aqueous	0,1	++	++	++	-
Sodium sulphide, aqueous	0,1	+	++	+	-
Sodium thiosulfate	0,1	++	++	+	-
Stearic acid	-	=	++	=	-
Sulphuric acid	-	+	+	=	++
Tannin acid	0,1	++	-	-	-
Tartaric acid, aqueous	0,1	++	++	+	-
Tetrachloro carbons	-	=	++	=	-
Tincture of iodine	-	++	=	=	++
Toluol	-	=	++	=	=
Trichloroethylene	-	=	+	=	=
Turpentine oil	-	=	++	+	=
Uranium fluoride	-	-	=	-	-
Uric acid, aqueous	0,1	++	++	-	-
Urine	-	++	++	-	-

Chemical material resistances of different plastics

Material	Concentration	Rubber	Polyamide	Polyurethane	Polypropylene
Vaseline	-	-	++	-	++ (max. 60°C)
Vegetable oils	-	=	++	++	-
Vinyl chloride, 80°C	-	-	++	-	-
Wastewater	-	-	++	+	-
Water (seawater)	-	++	++	+	-
Water, cold	-	++	++	++	-
Water, up to 80°C	-	+	++	=	-
Wax, 80°C	-	-	++	-	-
Xylol	-	=	++	=	=
Zinc chloride, aqueous	0,1	++	+	=	++
Zinc rhodanide	0,3	-	=	-	-