Chemical Resistance

The following table is to serve as a general guideline. The factors given are non-binding recommendations taken from details rendered by plastic manufacturers and from literature. As a matter of principle, it is the user's responsibility to check the resistance of the plastic material under the specific test conditions concerned, including though not limited to applications where any mixtures of chemical substances and modified temperatures are involved.
The first letter refers to the conditions at +20°C, the second to conditions at +60°C.

	LD-PE	HD-PE	PP	PS	PC
1.4-dioxane	G P	G G	P P	N N	N N
acetaldehyde	P N	G P	G N	N N	N N
acetic acid up to 10%	E E	E E	E E	E E	E G
acetic acid up to 50%	E E	E E	E E	G G	P P
acetone	P N	P P	E G	N N	N N
allyl alcohol	P P	EE	——	EP	——
aluminum salts	E E	E E	E E	G G	——
amino acids	E E	E E	E E	E E	E E
ammonia, conc.	E E	E E	E E	G P	N N
ammonium carbonate	E E	E E	E E	E E	P N
ammonium phosphate	E E	E E	E E	G G	——
ammonium sulphate	E E	E E	E E	G G	E G
amyl acetate	N N	P P	P P	N N	N N
amyl chloride	N N	P N	N N	N N	N N
aniline	N N	G G	G P	N N	N N
benzene	N N	P N	P N	N N	N N
benzine	P N	P P	N N	N N	P P
benzyl alcohol	G P	G G	G P	N N	P P
boric acid	E E	E E	E E	E G	E E
bromine	N N	N N	N N	N N	N N
butanol	E P	E E	E P	G G	N N
butyric acid	P N	G P	P N	N N	P N
calcium chloride	E E	E E	E E	E E	E E
calcium hydroxide	E E	E E	E E	G G	N N
calcium sulphate	E E	E E	E E	G G	E E
carbon tetrachloride	N N	P N	N N	N N	N N
chlorine in water	N N	P N	P N	N N	P N
chlorobenzene	N N	N N	N N	N N	N N
chromic acid up to 10%	E E	E E	E P	E E	G P
chromic acid up to 50%	E E	E E	G P	P P	P N
citric acid	E E	E E	E E	E E	E E
cresol	N N	P N	G P	N N	N N
cyclohexane	N N	N N	E –	N N	E –
diethyl ketone	P N	P P	G G	N N	N N
dimethylsulphoxide	E E	E E	E E	E G	N N
ethanol up to 95%	P P	G G	E E	E E	G G
ethyl acetate	P N	E N	P N	N N	N N
ethyl benzene	N N	N N	P N	N N	P P
ethylene glycol	E E	E E	E E	E E	E E
ethylene oxide	P P	G P	P P	N N	P N
fluoride	E E	E E	E E	G G	——
fluorine	N N	N N	P N	N N	——
formaldehyde up to 10%	E E	E E	E E	P N	E G
formaldehyde up to 40%	G P	E G	E G	N N	P P
glacial acetic acid	P N	E P	E P	N N	N N
glycerine	E E	E E	E E	E E	E E
heating oil	P N	G P	E G	N N	G P
hexane	P P	G P	G P	N N	P N
hydrochloric acid up to 5%	E E	E E	E E	E E	E E
hydrochloric acid up to 20%	E E	E E	E E	E E	P P
hydrochloric acid up to 35%	E E	E E	E P	P P	N N
hydrocyanic acid	E E	E E	E E	G G	——
hydrofluoric acid up to 4%	E G	E E	E G	G P	G P
hydrofluoric acid up to 40%	E E	E E	E –	N N	——
hydrofluoric acid up to 48%	E G	E E	E G	N N	N N
hydrogen peroxide up to 3%	E E	E E	E E	E G	E E
hydrogen peroxide up to 30%	E P	E E	E P	E G	E E
isobutyl alcohol	E P	E E	E E	G G	E E
isopropanol	E E	E E	E E	E G	P –
isopropyl acetate	G P	E P	G P	N N	N N
kerosene	N N	N N	G P	N N	P P
lactic acid	E E	E E	E E	G G	E E
lactose	E E	E E	——	E –	E –
lead acetate	E E	E E	E E	E E	——
mercury	E E	E E	E E	E E	E –
methanoic acid	E G	E E	E N	P P	P N
methanol	E P	E E	E P	P N	N N
methyl ethyl ketone	P N	G G	G P	N N	N N
methyl propyl ketone	N N	N N	G P	N N	N N

	LD-PE	HD-PE	PP	PS	PC
methylene chloride	P P	N N	P N	N N	N N
mineral oil	P N	E P	E E	E E	G P
nitric acid up to 10%	E E	E E	E E	E E	G P
nitric acid up to 50%	P N	P N	P N	N N	G P
nitric acid up to 70%	P N	P N	N N	N N	N N
n-octane	N N	P N	P N	N N	E –
oleic acid	P N	G G	G P	G G	E E
oxalic acid, sat.	E E	E E	E E	E G	E E
ozone	N N	P N	P P	N N	N N
perchloric acid	G N	G N	G N	G P	N N
perchloroethylene	N N	N N	N N	N N	N N
phenol up to 90%	P N	G G	G P	N N	N N
phosphoric acid 10%	E E	E E	E E	E –	P N
phosphoric acid 85%	E E	E E	E G	E P	N N
phosphorous trichloride	N N	N N	G P	N N	N N
potassium acetate	E E	E E	E E	E E	N N
potassium bromide	E E	E E	E E	P –	E G
potassium carbonate	E E	E E	E E	E E	G P
potassium hydroxide, conc.	E E	E E	E E	G G	N N
potassium permanganate	E E	E E	E E	P P	N N
propylene glycol	E E	E E	E E	E E	G P
pyridine	P N	G P	P N	N N	N N
salicylic acid, sat.	E E	E E	E E	E G	E G
silver acetate	E E	E E	E E	G G	——
silver nitrate	E E	E E	E G	G P	E E
sodium carbonate	E E	E E	E E	E E	G P
sodium chloride	E E	E E	E E	E E	E E
sodium dichromate	E E	E E	E E	E E	——
sodium hydroxide up to 1%	E E	E E	E E	G G	——
sodium hydroxide up to 50%	E E	E E	E E	G G	N N
sodium hypochlorite up to 15%	——	E E	E –	——	——
sodium nitrate	E E	E E	E E	E E	P N
sodium sulphate	E E	E E	E E	E E	E –
sucrose	E E	E E	E E	E E	——
sulphuric acid up to 6%	E E	E E	E E	E E	E E
sulphuric acid up to 20%	E E	E E	E E	E G	E G
sulphuric acid up to 60%	E G	E E	E G	G N	P N
sulphuric acid up to 98%	P N	P N	P N	N N	N N
tannic acid	E E	E E	E E	G G	N N
tetrahydrofurane	N N	N N	P N	N N	N N
toluene	N N	P N	P N	N N	N N
trichloracetic acid	P N	G P	P N	N N	N –
trichlorethane	N N	P N	N N	N N	N N
turpentine	N N	N N	N N	N N	——
urea, sat.	E E	E E	E E	E G	N N
xylene	N N	N N	N N	N N	N N
zinc chloride	E E	E E	E E	E E	E E

Explanations

E = excellent	This plastic is totally resistant to that substance.
G = good	Influence of that substance for an extended period of time does not cause any or only small defects.
P = partially resistant	Constant exposure of the plastic material might possibly lead to hairline cracks and a reduced mechanical strength or discolouration.
N = non-resistant	Plastics are not suitable for use in combination with this substance. Application is not recommended.
——	There are no tests available.

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