

# General Properties of Plastics

## Chemical Resistance Chart

Reagent	HDPE		PC		PP		LDPE		PTFE		TPX	
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C
Cellosolve	E	E	S	N	E	B	E	B	E	E	E	B
Chlorine in air	E	S	E	B	B	N	B	N	E	E	B	N
Chlorine (moist)	B	S	B	S	B	N	B	N	E	E	S	N
Chloroform	B	S	N	N	B	S	S	N	E	E	S	N
Citric add	E	E	E	E	E	E	E	E	E	E	E	E
Cresol	S	N	N	N	B	S	N	N	E	E	N	N
Cyclohexane	E	B	E	B	S	S	B	S	E	E	N	N
p-dihlorobenzene	B	S	N	N	B	S	S	N	E	E	B	S
Diethylene Glycol	E	E	B	S	E	E	E	E	E	E	E	E
Diethylene formamide	E	E	N	N	E	E	E	E	E	E	E	E
Dioxane	B	B	B	S	B	S	B	S	E	E	B	S
Ethyl acetate	E	E	N	N	E	E	E	E	E	E	E	S
Ethyl alcohol	E	E	E	B	E	B	E	B	E	E	E	B
Ethyl chloride	S	S	N	N	S	N	S	N	E	E	S	N
Ethylene chloride	B	S	N	N	S	N	B	N	E	E	N	N
Ethylene oxyde	S	S	S	N	S	S	B	S	E	E	S	N
Ethyl ether	N	N	N	N	N	N	S	N	E	E	N	N
Formaldehyde	E	E	E	B	E	B	E	B	E	E	E	B
Formic acid	E	E	E	S	E	B	E	B	E	E	E	B
Gasoline	B	B	S	S	B	S	S	N	E	E	B	S
Hexane	E	E	N	N	E	E	E	E	E	E	E	S
Hydrochloric acid 35 %	E	E	N	N	E	B	E	E	E	E	E	B
Hydrofluoric acid	E	E	N	N	E	E	E	E	E	E	E	E
Hydrogen peroxide	E	E	E	E	E	B	E	B	E	E	E	B
Kerosene	B	B	B	S	B	S	S	N	E	E	B	S
Lactic acid	E	E	E	B	E	B	E	E	E	E	E	B
Methyl alcohol	E	E	B	S	E	E	E	E	E	E	E	S
Methyl ethyl ketone	E	E	N	N	E	B	E	B	E	E	E	S
Methyl isobutyl ketone	E	B	N	N	B	S	B	S	E	E	S	S
Methylene chloride	B	S	N	N	S	N	S	N	E	E	S	N
Mineral oil	E	E	E	B	E	E	B	N	E	E	E	B
Nitric acid 1-10%	E	E	E	B	E	E	E	E	E	E	E	E
Nitric acid 50%	B	N	B	S	S	N	B	B	E	E	B	N
Nitric acid 65%	B	N	S	N	S	N	N	N	E	E	B	N
Nitrobenzene	S	N	N	N	N	N	N	N	E	E	N	N
Perchloric acid	B	N	N	N	B	N	B	N	B	S	B	N
Petroleum ether	S	N	S	N	B	S	S	N	E	E	B	S
Phenol	B	S	E	N	B	N	B	N	E	E	S	B
Phosphoric acid 85%	E	E	E	B	E	B	E	E	E	E	E	B
Potassium bichromate	E	E	E	B	E	B	E	B	E	E	E	E
Potassium hydroxide conc.	E	E	N	N	E	E	E	E	E	E	E	E
Potassium permanganate	E	E	E	B	E	B	E	B	E	E	E	E
Propane	S	N	S	N	N	N	N	N	E	E	N	N
Propylene glycol	S	N	S	N	N	N	N	N	E	E	N	N
Silver nitrate	E	E	B	S	E	E	E	E	E	E	E	B
Sodium hydroxide conc.	E	B	S	S	E	B	B	S	E	E	B	S
Sodium hypochloride	E	E	N	N	E	E	E	E	E	E	E	E
Sulphuric acid 20%	E	E	B	S	E	E	E	E	E	E	E	E
Sulphuric acid 98%	E	E	E	B	E	B	E	E	E	E	E	B
Tetrahydrofuran	E	E	N	N	E	E	E	B	E	E	E	E
Thionil chloride	B	S	N	N	B	S	S	N	E	E	S	S
Toluene	N	N	N	N	N	N	N	N	E	E	N	N
Trichloroacetic acid	B	B	S	N	B	S	S	N	E	E	S	S
sim-Trichloroethane	S	N	N	N	N	N	N	N	E	E	N	N
Trichloroethylene	S	N	N	N	N	N	N	N	E	E	N	N
Turpentine	B	B	S	N	B	S	S	N	E	E	S	S
Urea	E	E	N	N	E	E	E	E	E	E	E	B
Xylene	B	S	N	N	S	N	B	N	E	E	S	N

**E** EXCELLENT RESISTANCE. No etching

**B** GOOD RESISTANCE. Little etching after 30 days of constant exposure to the reagent

**S** FAIR RESISTANCE. Etching after 7 days of constant exposure

**N** NOT recommended

### REMARKS

The first letter relates to the temperature of 20°C, the second to 50°C (or to the boiling temperature when this is below 50°C)

The data listed in this chart has been given to us by various producers of raw materials in all good faith, but with no guarantee.