

Chemical compatibility of Polymer Products

	Chemical Reagent	LDPE	HDPE	PP	PETG	PC	PS	ABS
Acid	Acetic, Glacial	R	R	R	N	N	N	N
	Acetic, 25%	R	R	R	R	R	L	R
	Hydrochloric, 37% (conc.)	R	R	R	N	L	L	R
	Hydrochloric, 1N	R	R	R	R	L	R	R
	Sulfuric, 98% (conc.)	L	L	N	N	N	N	N
	Sulfuric, 25%	R	R	R	L	L	N	R
	Nitric, (conc.)	N	N	N	N	N	N	N
	Nitric, 10%	R	R	R	L	R	N	N
	Phosphoric, 5%	R	R	R	-	R	L	L
	Phosphoric, 85%	R	R	R		R	R	R
	Formic, 25%	R	R	R	-	R	N	-
	propionic acid	N	L	L	-	N	N	-
	butyrate	N	N	N	-	N	N	-
	formic acid	R	R	R		R	R	R
	boric acid	R	R	R	N	R	R	R
	Trichloroacetic, 10%	-	R	R	-	R	-	-
Alkali	Ammonium Hydroxide, 6N	R	R	R	R	R	R	R
	Sodium Hydroxide, 50%	R	L	R	N	N	R	L
	Sodium Hydroxide, 10%	R	R	R	R	N	R	R
	Sodium Hydroxide, 1%	R	R	R	R	N	R	R
	Potassium hydroxide, 30%	R	R	R	R	N	R	R
	Potassium hydroxide, 1%	R	R	R	R	N	R	R
Alcohol	Pentanol	R	R	R	R	L	L	R
	Benzyl alcohol	N	N	N	-	N	N	R
	1-Butanol	R	R	R	-	L	R	R
	Ethyl Alcohol	R	R	R	-	R	N	R
	Isopropanol	R	R	R	R	R	R	R
	Isobutanol	R	R	R	-	R	R	R
	Methanol	R	R	R	L	L	N	R
	Propanol	R	R	R	R	R	R	R
	Ethylene glycol	R	R	R	R	L	R	R
	Propylene Glycol	R	R	R	-	L	R	R
	Glycerol	R	R	R	R	R	R	R
Hydrocarbon	ethane	N	N	N	-	N	N	N
	propane	N	N	N	-	N	N	L
	Hexane	N	L	L	-	R	N	N
	Toluene	N	N	N	N	N	N	N
	xylene	N	N	N	N	N	N	N
	Benzene	N	N	N	N	N	N	N
	Gasoline	L	R	L	-	R	L	N

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Hydrocarbon	Methylene Chloride	N	L	N	N	N	N	N
	Chloroform	N	L	N	N	N	N	N
	Trichloroethane	N	N	N	-	N	N	N
	Trichloroethylene	N	L	L	N	N	N	N
	perchloroethylene	N	N	N	-	N	N	N
	Chlorobenzene(Mono)	N	N	L	N	N	N	N
	Carbon Tetrachloride	N	R	N	L	L	N	N
	Cyclopentane	N	N	N	-	N	N	N
	cyclohexane	N	N	N	-	R	N	N
	heptane	N	L	N	-	R	N	N
	Octane	R	R	R	-	L	N	N
	nitromethane	N	N	N	N	N	N	N
Ketone	Acetone	L	N	R	N	N	N	N
	Cyclohexanone	N	N	L	N	N	N	N
	cyclohexanone	N	N	N	N	N	N	N
	Methyl Ethyl Ketone	N	N	R	L	N	N	N
	MIBK	N	N	L	N	N	N	N
Ester	Ethyl Acetate	R	R	R	N	N	N	N
	Methyl Acetate	N	L	L	-	N	N	N
	Amyl Acetate	L	R	L	-	N	N	-
	Butyl Acetate	L	R	N	-	-	N	N
	Propyl Acetate	-	R	L	-	N	N	N
	Isopropyl acetate	N	L	N	N	N	N	N
	ethyl lactate	R	R	R	N	N	N	N
	ethyl benzoate	N	L	L	N	N	N	N
Ether	Ethyl Ether	N	N	N	-	N	N	N
	Dioxane	L	L	L	-	N	N	-
	Tetrahydrofuran(THF)	N	R	N	N	N	N	N
	Methyl ether	N	L	N	L	N	N	-
Others	DMSO	R	R	R	N	N	R	R
	Dimethyl Formamide(DMF)	R	R	R	R	R	N	R
	Diethyl Acetamide	-	-	-	-	-	R	R
	Triethanolamine	-	-	-	-	-	R	R
	Aniline	L	R	R	-	N	N	N
	Pyridine	N	N	N	-	N	N	N
	Acetonitrile	R	R	N	-	N	N	N
	Silicone Oil	R	R	R	N	R	R	R
	benzaldehyde	N	N	N	-	N	N	-
	Bromoform	N	N	N	-	N	N	N

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Others	butadiene	N	N	N	-	N	N	N
	butyl chloride	N	N	N	-	N	N	N
	cresol	N	N	L	-	N	N	N
	carbazole	R	R	R	-	N	R	R
	decalin	L	R	L	-	N	N	N
	pine oil	N	N	N	-	N	L	R
	potassium permanganate	R	R	R	-	R	R	R
	salicylaldehyde	R	R	R	-	L	N	-
	resorcinol	R	R	R	-	L	L	L
	sulfate	N	L	N	-	N	N	R
	urea	R	R	R	-	N	R	R
	Tris buffer solution	R	R	R	L	L	N	R
	tincture of iodine	R	R	L	-	N	L	R
	chloroacetate	R	R	R	-	N	N	-
	silver nitrate	R	R	R	-	R	R	R
	freon	R	R	R	L	L	L	R
	glutaraldehyde	R	R	R	-	R	R	R
	tartaric acid	R	R	R	-	R	L	R

R: Resistant. No changes in the appearance or cracking of the product were observed, nor were any signs of chemical corrosion.

L: Limited resistance. Moderate changes in the physical properties or dimensions of the product were noted. It may be suitable for short-term, non-critical use.

N: No resistance. Obvious appearance defects or cracks were noted. It is recommended not to use.

-: Insufficient data. No information available. It is recommended to conduct test trials.