Chemical resistance of PE-LD

In respect of their chemical resistance, the plastics are divided into the following categories:

"+" Very good chemical resistance
Constant exposure to the medium does not result in any damage to the plastic within a period of 30 days.
The plastic can remain resistant for years.

"0" Good to partial chemical resistance
Constant exposure to the medium results in minimal damage within a period of 7 to 30 days. In some cases, this damage (e.g. swelling, softening, reduction in mechanical stability, discolouration) is reversible.

"-" Low chemical resistance
Unsuitable for constant exposure to the medium. Damage can occur immediately
(e.g. reduction in mechanical stability, deformation, discolouration, cracks, decomposition).

Chemical resistance of PE-LD

Medium	PE-LD	
	20°C	50°C
Acetaldehyde	+	-
Acetone	+	0
Acetonitrile	+	0
Acetophenone	-	-
Acetylacetone	+	
Acetyl chloride	+	
Acrylonitrile	+	+
Acrylic acid	+	
Adipic acid	+	+
Allyl alcohol	+	+
Aluminium chloride	+	+
Aluminium hydroxide	+	+
Formic acid, 98 - 100%	+	+
Amino acids	+	+
Ammonium chloride	+	+
Ammonium fluoride	+	+
Ammonium hydroxide, 30% (ammonia)	+	+
Ammonium sulfate	+	+
n-Amyl acetate	0	-
Amyl alcohol (pentanol)	+	+
Amyl chloride (chloropentane)	-	-
Aniline	+	0
Barium chloride	+	+
Benzaldehyde	+	+
Gasoline (petrol)	0	-
Benzene	0	-
Benzoyl chloride	0	-
Benzyl alcohol	0	-

Benzylamine	0	-
Benzyl chloride		

Chemical resistance of PE-LD to substance groups

Substance groups at 20°C	PE-LD
Aliphatic alcohols	+
Ether	0
Aldehydes	0
Ester	0
Aliphatic compounds	0
Aromatic hydrocarbons	0
Halogenated hydrocarbons	0
Ketones	0
Lyes	+
Acids, strong or concentrated	+
Acids, weak or dilute	+
Oxidising acids, oxidising agents	-

The purpose of the carefully compiled recommendations of the manufacturers of raw materials, or found in specialist literature, is to inform and advise. However, they cannot replace the user's own suitability testing requirements which are carried out under the relevant operating conditions.

Chemical resistance of PE-LD

	PE-LD	
	20°C	50°C
Boric acid, 10%	+	+
Bromine	-	-
Bromobenzene	-	-
Bromonaphthaline		
Bromoform	-	-
Hydrobromic acid	+	+
1-Butanol	+	+
Butanediol	+	+
Butyric acid	-	-
n-Butyl acetate	0	0
n-Butylamine		
Butyl methyl ether	0	-
Calcium carbonate	+	+
Calcium chloride	+	+
Calcium hydroxide	+	+
Calcium hypochlorite	+	+
Chloroacetaldehyde, 45%		
Chloroacetone		

Chlorobenzene	-	-
Chlorobutane	0	-
Chloroacetic acid	+	+
Chloronaphthalene		
Chloroform	-	-
Chlorosulfuric acid		
Chromic acid, 10%	+	+
Chromic acid, 50%	+	0
Chromic-sulfuric acid mixture	+	-
Cumene (isopropylbenzene)	0	-
Cyclohexane	0	-
Cyclohexanone	-	-
Cyclopentane	-	-
Decane		
1-Decanol		
Dibenzyl ether		
Dibromoethane		
Dibutyl phthalate	0	-
Dichlorobenzene	0	-
Dichloroacetic acid	0	-
Dichloroethane	0	-
Dichloromethane	0	-
Diesel oil (heating oil)	0	-
Diethanolamine		
Diethylamine	-	-
1,2-Diethylbenzene	-	-
Diethylene glycol	+	+
Diethyl ether	-	-
Dimethylaniline		
Dimethylformamide (DMF)	+	+
Dimethyl sulfoxide (DMSO)	+	+
1,4 Dioxane	+	0
Diphenyl ether		
(Glacial) acetic acid, 100%	+	0
Acetic acid, 50%	+	+
Acetic anhydride	-	-
Ethanol	+	+
Ethanolamine		
Ethyl acetate	+	+
Ethylbenzene	-	-
Ethylene glycol (glycol)	+	+
Ethylene oxide	0	0
Ethyl methyl ketone	0	-
Fluoroacetic acid		

Hydrofluoric acid, 40%	+	+
Hydrofluoric acid, 70%	+	-
Formaldehyde, 40%	+	+
Formamide	+	+
Glycolic acid, 50%	+	+
Glycerin	+	+
Urea	+	+
Heating oil (diesel oil)	0	-
Heptane	0	-
Hexane	0	-
Hexanol	+	+
Hexanoic acid		
Lugol's solution (iodine-potassium iodide)	-	-
Hydriodic acid	+	+
Isoamyl alcohol	+	+
Isobutanol	+	+
Isooctane		
Isopropanol (2-propanol)	+	+
Diisopropyl ether	-	-
Potassium chloride	+	+
Potassium dichromate		
Potassium hydroxide	+	+
Potassium permanganate	+	+
Aqua regia (nitrohydrochloric acid)	-	-
Cresol	-	-
Copper sulfate	+	+
Methanol	+	0
Methoxybenzene		
Methylene chloride	0	-
Methyl formate		
Methyl propyl ketone	+	0
Lactic acid	+	+
Mineral oil (motor oil)	+	0
Monochloroacetic acid	+	+
Sodium acetate	+	+
Sodium chloride	+	+
Sodium dichromate	+	+
Sodium fluoride	+	+
Sodium hydroxide, 30%	+	+
Nitrobenzene	-	-
Oleic acid		
Oxalic acid	+	+
Ozone	0	-
n-Pentane		

Perchloroethylene	-	-
Perchloric acid	+	-
Peracetic acid		
Petroleum ether	0	
Kerosene	0	-
Phenol	+	0
Phenyl alcohol		
Phenylhydrazine		
Phosphoric acid, 85%	+	+
Piperidine		
Propylene glycol	+	+
Propanol	+	+
Propanoic acid	0	-
Pyridine	+	0
Mercury	+	+
Mercury chloride	+	+
Salicylaldehyde	+	+
Salicyclic acid	+	+
Nitric acid, 10%	+	+
Nitric acid, 30%	0	0
Nitric acid, 70%	-	-
Hydrochloric acid, 10%	+	+
Hydrochloric acid, 20%	+	+
Hydrochloric acid, 37%	+	+
Carbon disulfide	-	-
Sulfuric acid, 60%	+	+
Sulfuric acid, 98%	0	-
Silver acetate	+	+
Silver nitrate	+	+
Turpentine	0	-
Tetrachloroethylene		
Carbon tetrachloride	-	-
Tetrahydrofuran (THF)	0	-
Tetramethylammonium hydroxide		
Toluene	0	-
Trichlorobenzene	-	-
Trichloroacetic acid	0	-
Trichloroethane	-	-
Trichloroethylene	-	-
Trichlorotrifluoroethane		
Triethanolamine		
Triethylene glycol	+	+
Trifluoroacetic acid (TFA)		
Trifluoroethane		
Tripropylene glycol	+	+

Hydrogen peroxide, 35%	+	+
Tartaric acid	+	+
Xylene	0	-
Zinc chloride, 10%	+	+
Zinc sulfate, 10%	+	+