

Полипропиленот е еден од најотпорните хемиски елементи. Хемиската отпорност на цевките и спојките направени од Полипропилен Рандом Кополимер, според германскиот стандард DIN8078 е прикажана во следната табела. Хемиската отпорност зависи од типот на хемикалијата, нејзиниот состав, концетрација, температурата и времетраењето на изложеност. Затоа, концетрацијата и отпорноста при три различни температури се прикажани во табелата.

Хемиската отпорност е прикажана низ следните четири групи:

- Отпорно
- Ограничено отпорно
- неотпорно
- Недоволно информацији

Следните симболи ја описуваат хемиската концетрација:

VL: Разредено (однос ≤ 10%)

L: Разредено (однос > 10%)

GL: Заситена разреденост на 20°C

H: Комерцијална основа

TR: Технички чисто

Polypropylene is one of the polymers with highest chemical resistance. The chemical resistance of pipes and fittings made of Polypropylene Random Copolymer according to the German Standard DIN 8078 given in the following table.

Chemical resistance is dependent on the kind of chemical, its composition, concentration, temperature and the duration of exposure. Therefore the concentrations of the chemicals and resistance at three different temperatures are included in the table.

Chemical resistance is presented in the following four groups:

- Resistive
- Limited resistance
- Nonresistive
- Insufficient information

The following symbols describe the chemicals concentration:

VL: Diluted (mass ratio ≤ 10%)

L: Diluted (mass ratio > 10%)

GL: Saturated dilution at 20°C

H: Commercial grade

TR: Technically pure

| Agresive Media | Conc tration | Chemical Resistance | | |
|-----------------------------|-----------------|---------------------|------|-------|
| | | 20°C | 50°C | 100°C |
| Acetaldehyde | Rare | ○ | ○ | ○ |
| Acetaldehyde | TR | ● | — | — |
| Acetephonon | TR | ● | ● | — |
| Acetic acid anhydride | TR | ● | — | — |
| Acetic acid, diluted | TR | ● | ● | ○ |
| Acetic acid, diluted | 40% | ● | ● | — |
| Acetone | TR | ● | — | — |
| Acid-acetanhydride | 40% | ● | ● | — |
| Acrylonitrile | TR | ● | ● | — |
| Adipic acid | TR | ● | ● | — |
| Air | TR | ● | ● | ● |
| Alaune Me - Me III sulphate | GL | ● | ● | — |
| Allyl alcohol, diluted | 96% | ● | ● | — |
| Alum | GL | ● | ● | — |
| Aluminium chloride | GL | ● | ● | — |
| Aluminium sulphate | GL | ● | ● | — |
| Amber acid | GL | ● | ● | — |
| 2-Amino-ethanol | TR | ● | — | — |
| Ammonia, gas | TR | ● | ● | — |
| Ammonia, liquid | TR | ● | ● | — |
| Anilin | TR | ● | — | — |
| Ammonia, water | GL | ● | ● | — |
| Ammonium acetate | GL | ● | ● | — |
| Ammonium carbonate | GL | ● | ● | — |
| Ammonium chloride | GL | ● | ● | — |
| Ammonium fluoride | L | ● | ● | — |
| Ammonium nitrate | GL | ● | ● | ● |
| Ammonium phosphate | GL | ● | ● | ● |
| Ammonium sulphate | GL | ● | ● | ● |
| Amyl acetate | TR | ● | — | — |
| Amyl alcohol | TR | ● | ● | ● |
| Aniline | TR | ● | ● | — |
| Aniline hydrochloride | GL | ● | ● | — |
| Anon | TR | ● | ● | — |
| Anon (Cyclohexanone) | TR | ● | ○ | ○ |
| Antifreeze | H | ● | ● | ● |
| Antimony trichloride | 90% | ● | ● | — |
| Apple acid / Јабоков ацет | L | ● | ● | — |
| Apple acid / Јабоков ацет | GL | ● | ● | — |
| Apple wine (ortho) | H | ● | ● | — |
| Aqua regia | H | ● | ● | ● |
| Arsenic acid | 40% | ● | ● | — |
| Arsenic acid | 80% | ● | ● | ● |
| Barium hydroxide | GL | ● | ● | ● |
| Barium salts | GL | ● | ● | ● |
| Battery acid | H | ● | ● | — |
| Beer | H | ● | ● | ● |
| Benzaldehyde | GL | ● | ● | — |

| Agresive Media | Conc tration | Chemical Resistance | | |
|-----------------------------------|-----------------|---------------------|------|-------|
| | | 20°C | 50°C | 100°C |
| Benzine - Benzol mixture | 80%/ 20% | ● | ○ | ○ |
| Benzol | TR | ● | ○ | ○ |
| Benzl chloride | TR | ● | — | — |
| Borax | L | ● | ● | — |
| Boric acid | GL | ● | ● | ● |
| Bromine | TR | ○ | ○ | ○ |
| Bromine vapours | AI | ● | ○ | ○ |
| Butadiene, gas | TR | ● | ○ | ○ |
| Butane (2)dol(1,4) | TR | ● | ● | — |
| Butanediol | TR | ● | ● | — |
| Butanetriol(1,2,4) | TR | ● | ● | — |
| Butin(2)dol(1,4) | TR | ● | — | — |
| Butyl acetate | TR | ● | ○ | ○ |
| Butyl alcohol | TR | ● | ● | ● |
| Butyl phenol | GL | ● | — | — |
| Butyl phenon | TR | ○ | — | — |
| Butylene glycol | 10% | ● | ● | — |
| Butylene glycol | TR | ● | — | — |
| Butylene liquid | TR | ● | — | — |
| Calcium carbonate | GL | ● | ● | ● |
| Calcium chloride | GL | ● | ● | ● |
| Calcium hydroxide | GL | ● | ● | ● |
| Calcium hypochlorite | L | ● | — | — |
| Calcium nitrate | GL | ● | ● | — |
| Carbofinc | H | ● | — | — |
| Carbon dioxide, gas | AI | ● | ● | — |
| Carbon dioxide, liquid | AI | ● | ● | — |
| Carbonhydride | Rare | ● | ● | — |
| Carbonmonoxide | AI | ● | ● | — |
| Carbonsulphide | TR | ○ | ○ | ○ |
| Caustic soda | 60% | ● | ● | ● |
| Chlord | TR | ● | ● | — |
| Chloramine | L | ● | — | — |
| Chlorethand | TR | ● | ● | — |
| Chloric acid | 1% | ● | ● | ○ |
| Chloric acid | 10% | ● | ● | ○ |
| Chloric acid | 20% | ● | ○ | ○ |
| Chlorine | 0,5% | ○ | — | — |
| Chlorine | 1% | ○ | ○ | ○ |
| Chlorine | GL | ● | ○ | ○ |
| Chlorine, gas | TR | ○ | ○ | ○ |
| Chlorine water | TR | ○ | ○ | ○ |
| Chloroacetic acid | L | ● | ● | — |
| Chlorobenzol | TR | ● | — | — |
| Chloroform | TR | ● | ○ | ○ |
| Chlorosulphon acid | TR | ○ | ○ | ○ |
| Chromic acid | 40% | ● | ● | ○ |
| Chromic acid/Sulphuric acid/water | 15/35/51% | ○ | ○ | ○ |

| Agresive Media | Conc tration | Chemical Resistance | | |
|-----------------------------|-----------------|---------------------|------|-------|
| | | 20°C | 50°C | 100°C |
| Chrotonic ddehyde | TR | ● | — | — |
| Citic acid | VL | ● | ● | ● |
| Citic acid | VL | ● | ● | ● |
| City gas | H | ● | — | — |
| Coconut fat alcohol | TR | ● | ● | — |
| Coconut oil | TR | ● | — | — |
| Cognac | H | ● | ● | — |
| Copper(II)chloride | GL | ● | ● | — |
| Copper(I) cyanide | GL | ● | ● | — |
| Copper(III) nitrate | 30% | ● | ● | ● |
| Copper sulphate | GL | ● | ● | — |
| Corn oil | TR | ● | ● | — |
| Cotton oil | TR | ● | ● | — |
| Cresol | 90% | ● | ● | — |
| Cresol | >90% | ● | — | — |
| Cyclohexane | TR | ● | — | — |
| Cyclohexanol | TR | ● | ● | — |
| Cyclohexanone | TR | ● | ○ | ○ |
| Dextrine | L | ● | ● | — |
| Dextrine | L | ● | ● | — |
| Dextrose | 20% | ● | ● | ● |
| 1,2 Diaminoethan | TR | ● | ● | — |
| Dichloro acetic acid | TR | ● | — | — |
| Dichloro acetic acid | 50% | ● | ● | — |
| Dichloro benzene | TR | ● | — | — |
| Dichloro ethylene (1,1-1,2) | TR | ● | — | — |
| Diesel oil | H | ● | ● | — |
| Diethyl amine | TR | ● | — | — |
| Diethyl ether | TR | ● | ● | — |
| Diglycolic acid | GL | ● | ● | — |
| Dihexyl phatdate | TR | ● | ● | — |
| Diiso octylphatdate | TR | ● | ● | — |
| Di-iso propylether | TR | ● | ○ | — |
| Dimethylamamide | TR | ● | ● | — |
| Dymethyl amine | 100% | ● | — | — |
| Din butyl ether | TR | ● | — | — |
| Dinonyl phatdate | TR | ● | ● | — |
| Dioctyl phatdate | TR | ● | ● | — |
| Dioxane | TR | ● | ● | — |
| Drinking water | TR | ● | ● | ● |
| Ethanol | L | ● | — | — |
| Ethanol+2% toluene | 98% | ● | — | — |
| Ethyl acetate | TR | ● | ● | ○ |
| Ethyl alcohol | TR | ● | ● | ● |
| Ethyl benzol | TR | ● | ○ | ○ |
| Ethyl chloride | TR | ○ | ○ | ○ |
| Ethylene diamine | TR | ● | ● | — |
| Ethylene glycol | TR | ● | ● | ● |

| Agresive Media | Conce tration | Chemical Resistance | | |
|--------------------------|------------------|---------------------|------|-------|
| | | 20°C | 60°C | 100°C |
| Ethylene oxide | TR | ○ | - | - |
| Fatty acid | 20% | ● | - | - |
| Fatty acids>C4 | TR | ● | ○ | - |
| Fermentation malt | H | ● | ● | - |
| Fertilizer salts | GL | ● | ● | - |
| Film bath | H | ● | ● | - |
| Fluorine | TR | ● | - | - |
| Fluorosilicic acid | 32% | ● | ● | - |
| Formaldehyde | 40% | ● | ● | - |
| Formic acid | 10% | ● | ● | ○ |
| Formic acid | 85% | ● | ● | ○ |
| Fructose | L | ● | ● | ● |
| Fruit juices | H | ● | ● | ● |
| Furfuryl alcohol | TR | ● | ○ | - |
| Gelatine | L | ● | ● | ● |
| Glucose | 20% | ● | ● | ● |
| Glycerine | TR | ● | ● | ● |
| Glycolic acid | 30% | ● | ○ | - |
| Grease | H | ● | - | - |
| HCl/HNO ₃ | 75%/25% | ○ | ○ | ○ |
| Heptane | TR | ● | ○ | ○ |
| Hexane | TR | ● | ○ | - |
| Hexanetriol (1,2,6) | TR | ● | ● | - |
| Hydrazine hydrate | TR | ● | - | - |
| Hydrobromic acid | 48% | ● | ○ | ○ |
| Hydrochloric acid | 20% | ● | ● | - |
| Hydrochloric acid | 20-36% | ● | ○ | ○ |
| Hydrofluoric acid | 40% | ● | ● | - |
| Hydrofluoric acid | 70% | ● | ○ | - |
| Hydrogen | TR | ● | ● | - |
| Hydrogen chloride | TR | ● | ● | - |
| Hydrogen peroxide | 30% | ● | ○ | - |
| Hydroxyacetic acid | TR | ● | ● | - |
| Hydroxylammonium sulfate | 12% | ● | ● | - |
| Iodine solution | H | ● | ○ | - |
| Isooctane | TR | ● | ○ | ○ |
| Isopropyl | TR | ● | ● | ● |
| Kerosen | H | ● | ○ | ○ |
| Lactic acid | 90% | ● | ● | - |
| Lanolin | H | ● | ○ | - |
| Lead acetate | GL | ● | ● | ○ |
| Linseed oil | H | ● | ● | ● |
| Lubricating oils | TR | ● | ○ | ○ |
| Magnesium chloride | GL | ● | ● | ● |
| Magnesium hydrocarbonate | GL | ● | ○ | ○ |
| Magnesium salts | GL | ● | ● | - |
| Magnesium sulphate | GL | ● | ● | ● |
| Menthyl | TR | ● | ○ | - |
| Methanol | TR | ● | ● | - |
| Methanol | 5% | ● | ● | ○ |
| Methyl acetate | TR | ● | ● | - |
| Methyl amine | 32% | ● | - | - |
| Methyl bromide | TR | ○ | ○ | ○ |
| Methyl chloride | TR | ○ | ○ | ○ |
| Methyl ethyl ketone | TR | ● | ○ | - |
| Mercury | TR | ● | ● | - |
| Mercury salts | GL | ● | ● | - |
| Milk | H | ● | ● | ● |
| Mineral water | H | ● | ● | ● |
| Molasses | H | ● | ● | ● |
| Motor oil | TR | ● | ○ | - |
| Natural gas | TR | ● | - | - |
| Nickel salts | GL | ● | ● | - |
| Nitric acid | 10% | ● | ○ | ○ |
| Nitric acid | 10-50% | ● | ○ | ○ |
| Nitric acid | >50% | ○ | ○ | ○ |

| Agresive Media | Conce tration | Chemical Resistance | | |
|---|------------------|---------------------|------|-------|
| | | 20°C | 60°C | 100°C |
| 2-Nitrotoluene | TR | ● | ○ | - |
| Nitrous gases | All | ● | ● | - |
| Oleum(H ₂ SO ₄ +SO ₃) | TR | ○ | ○ | ○ |
| Olive oil | TR | ● | ● | ○ |
| Oxalic acid | GL | ● | ● | ○ |
| Oxygen | TR | ● | - | - |
| Ozone | 0.5ppm | ● | ○ | - |
| Paraffin emulsions | H | ● | ● | - |
| Paraffin oil | TR | ● | ● | ○ |
| Perchloric acid | 20% | ● | ● | - |
| Perchloroethylene | TR | ○ | ○ | - |
| Petroleum | TR | ● | ○ | - |
| Petroleum ether | TR | ● | ○ | - |
| Phenol | 5% | ● | ● | - |
| Phenol | 90% | ● | - | - |
| Phenyl hydrazine | TR | ○ | ○ | - |
| Phenyl hydrazine hydrochloride | TR | ● | ○ | - |
| Phosgene | TR | ○ | ○ | - |
| Phosphates | GL | ● | ● | - |
| Phosphoric acid | 85% | ● | ● | ● |
| Phosphorus oxychloride | TR | ○ | - | - |
| Phthalic acid | GL | ● | ● | - |
| Photo emulsions | H | ● | ● | - |
| Photo fixing baths | H | ● | ● | - |
| Picric acid | GL | ● | - | - |
| Potassium bichromate | GL | ● | ● | - |
| Potassium bromate | 10% | ● | ● | - |
| Potassium bromide | GL | ● | ● | - |
| Potassium carbonate | GL | ● | ● | - |
| Potassium chlorate | GL | ● | ● | - |
| Potassium chloride | GL | ● | ● | - |
| Potassium chromate | GL | ● | ● | - |
| Potassium cyanide | L | ● | ● | - |
| Potassium fluoride | GL | ● | ● | - |
| Potassium hydrogen carbonate | GL | ● | ● | - |
| Potassium hydroxide | 50% | ● | ● | ● |
| Potassium iodide | GL | ● | ● | - |
| Potassium nitrate | GL | ● | ● | - |
| Potassium perchlorate | 10% | ● | ● | - |
| Potassium permanganate | GL | ● | ○ | - |
| Potassium persulfate | GL | ● | ● | - |
| Potassium sulfate | GL | ● | ● | - |
| Propane, gas | TR | ● | - | - |
| Propanol (I) | TR | ● | ● | - |
| Propargyl alcohol | 7% | ● | ● | - |
| Propionic acid | >50% | ● | - | - |
| Propylene glycol | TR | ● | ● | - |
| Pyrldin | TR | ○ | ○ | - |
| Seawater, brine | H | ● | ● | ● |
| Silicic acid | All | ● | ● | - |
| Silico fluoric acid | 32% | ● | ● | - |
| Silicone emulsion | H | ● | ● | - |
| Silicone oil | TR | ● | ● | ● |
| Silver nitrate | GL | ● | ● | - |
| Silver salts | GL | ● | ● | - |
| Sodium acetate | GL | ● | ● | ● |
| Sodium benzoate | 35% | ● | ● | - |
| Sodium bicarbonate | GL | ● | ● | ● |
| Sodium bisulphite | GL | ● | ● | - |
| Sodium bisulphite | L | ● | - | - |
| Sodium carbonate | 50% | ● | ● | ○ |
| Sodium chlorate | GL | ● | ● | - |
| Sodium chloride | VL | ● | ● | ● |
| Sodium chlorite | VL | ● | ● | ● |
| Sodium chlorite | 2-20% | ● | ○ | ○ |
| Sodium chromate | GL | ● | ● | ● |

| Agresive Media | Conce tration | Chemical Resistance | | |
|---|------------------|---------------------|------|-------|
| | | 20°C | 60°C | 100°C |
| Sodium hydrox | 60% | ● | ● | ● |
| Sodium hypochloride | 20% | ○ | ○ | ○ |
| Sodium hypochlorite | 10% | ● | - | - |
| Sodium hypochlorite | 20% | ● | ● | ○ |
| Sodium nitrate | GL | ● | ● | - |
| Sodium silicate | L | ● | ● | - |
| Sodium sulphate | GL | ● | ● | - |
| Sodium sulphide | GL | ● | ● | - |
| Sodium sulphide | 40% | ● | ● | ● |
| Sodium thiosulphate | GL | ● | ● | - |
| Sodium triphosphate | GL | ● | ● | ● |
| Soyabean oil | TR | ● | ○ | - |
| Strach solution | All | ● | ● | - |
| Strach syrup | All | ● | ● | - |
| Sulphur dioxide | All | ● | ● | - |
| Sulphur dioxide, gas | TR | ● | ● | - |
| Sulphur dioxide, liquid | All | ● | ● | - |
| Sulphuric acid | 10% | ● | ● | ● |
| Sulphuric acid | 10-80% | ● | ● | - |
| Sulphuric acid | 80%-TR | ● | ○ | - |
| Sulphuric acid | | ○ | ○ | ○ |
| Sulphuric acid | All | ● | ● | - |
| Sulphur trioxide | All | ● | ● | - |
| Tar oil | H | ● | ○ | ○ |
| Tetrachloroethanone | TR | ● | ○ | ○ |
| Tetrachloroethylene | TR | ● | ● | - |
| Tetrachloromethane | TR | ○ | ○ | ○ |
| Tetraethyl lead | TR | ● | - | - |
| Tetrahydrofurane | TR | ● | ○ | ○ |
| Tetrahydronaphthalene | TR | ○ | ○ | ○ |
| Thionyl chloride | TR | ● | ○ | ○ |
| Tin (II) chloride | GL | ● | ● | - |
| Tin (IV) chloride | GL | ● | ● | - |
| Toulene | TR | ● | ○ | ○ |
| Trichloroethylene | TR | ○ | ○ | ○ |
| Trichloro acetic acid | 50% | ● | ● | - |
| Tricresyl phosphate | TR | ● | ● | - |
| Triethanolamin | L | ● | - | - |
| Wine vinegar | H | ● | ● | ● |
| Xylene | TR | ● | ○ | ○ |
| Yeast | All | ● | - | - |
| Zink | GL | ● | ● | - |
| Triocetyl phosphate | TR | ● | - | - |
| Urea | GL | ● | ● | - |
| Vaseline oil | TR | ● | ● | - |
| Vinegar | H | ● | ● | ● |
| Vinyl acetate | TR | ● | ● | - |
| Washing powder | VL | ● | ● | - |
| Waste gases containing hydrogen fluoride | Rare | ● | ● | - |
| Water, pure | H | ● | ● | ● |
| Wax | H | ● | ● | - |
| Wine acid | 10% | ● | ● | - |
| Wines | H | ● | ● | - |