

This chart is only meant to be used as a guide for chemical resistance. Polypropylene is generally high in chemical resistance but should not be used in contact with halogenated and aromatic hydrocarbons or strong oxidizing acids. Varying conditions such as temperature, pressure and exposure time can affect reactivity. Long term exposure is not recommended and some discoloration of the product may occur. Testing of CELLTREAT products with the chemicals and your specific application should be performed prior to use. CELLTREAT does not warrant that the information in this chart is accurate or complete.

### Resistant:

1,2-ethanediol	Ammonium Bifluoride	Butylacetate
1,2-propanediol	Ammonium Bromide	Butyric Acid
1,3-Benzenediol	Ammonium Carbonate	Calcium Bisulfate
1-Hexadecanol	Ammonium Chloride	Calcium Bisulfide
1-Propanol	Ammonium Flouride	Calcium Bisulfite
1-Propyl Alcohol	Ammonium Glycolate	Calcium Carbonate
2,(2-Ethoxyethoxy)ethanol	Ammonium Hydroxide	Calcium Chloride
2-Butanol	Ammonium Nitrate	Calcium Hydroxide
2-Butyl Alcohol	Ammonium Oxalate	Calcium Hypochlorite
2-Propanol	Ammonium Persulfate	Calcium Nitrate
2-Propyl Alcohol	Ammonium Phosphate	Calcium Oxide
3-Pentanone	Ammonium Phosphate, Dibasic	Calcium Salts
Acetaldehyde, 10%	Ammonium Phosphate, Monobasic	Calcium Sulfate
Acetamide	Ammonium Phosphate, Tribasic	Calgon
Acetate Solvent	Ammonium Salts	Carbazole
Acrylamide	Ammonium Sulfate	Carbitol
Acrylonitrile	Ammonium Sulfide	Carbolic Acid (Phenol)
Adipic Acid	Ammonium Sulfite	Carbon Dioxide
Alanine	Amyl Alcohol	Carbon Monoxide
Alcohols:Amyl	Antimony Trichloride	Carbonated Water
Alcohols:Benzyl	Aqua Regia (80% HCl, 20% HNO <sub>3</sub> )	Carbonic Acid
Alcohols:Diacetone	Arsenic Acid	Caustic Potash
Alcohols:Ethyl	Asphalt	Caustic Soda
Alcohols:Isobutyl	Barium Carbonate	Cesium Acetate
Alcohols:Isopropyl	Barium Chloride	Cesium Bromide
Alcohols:Methyl	Barium Hydroxide	Cesium Chloride
Alcohols:Propyl	Barium Nitrate	Cesium Formate
Alconox detergent	Barium Salts	Cesium Iodide
Alkaline Sucrose	Barium Sulfate	Cesium Sulfate
Allyl Alcohol	Barium Sulfide	Cesium Trichloroacetate
Alum	Beer	Cesium Trifluoroacetate
Aluminum Chloride	Beet Sugar Liquids	Cetyl Alcohol
Aluminum Fluoride	Benzenesulfonic Acid	Chloroacetic Acid
Aluminum Hydroxide	Benzoic Acid	Chlorobromomethane
Aluminum Nitrate	Benzol	Chromic Acid, 10%-30%
Aluminum Potassium Sulfate	Benzyl Acetate	Citric Acid
Aluminum Salts	Benzyl Alcohol	Citric Oils
Aluminum Sulfate	Bis(2-ethylhexyl) Phthalate	Copper Chloride
Amines	Borax (Sodium Borate)	Copper Cyanide
Amino Acids	Boric Acid	Copper Nitrate
Ammonia	Brine	Copper Salts
Ammonia Nitrate	Butyl Amine	Copper Sulfate
Ammonium Acetate	Butyl Phthalate	Cottonseed Oil

Cresylic Acid	Formamide	Magnesium Sulfate (Epsom Salts)
Culture Media	Formic Acid	Maleic Acid
Cupric Acid	Freon 11	Malic Acid
Deionized Water	Freon 12	MEK
DEPC(Diethylpyrocarbonate)	Freon 22	Melamine
Dextran Sulfate	Gallic Acid	Mercuric Chloride
Diacetone Alcohol	Gelatin	Mercuric Cyanide
Dibasic Potassium Phosphate	Glacial Acetic Acid	Mercurous Nitrate
Dibasic Sodium Phosphate	Glucose	Mercury
Dibenzopyrrole	Glutaraldehyde	Mercury Salts
Dichlorodifluoromethane	Glutaraldehyde Disinfectant	Methane
Diesel Fuel	Glycerine	Methanol
Diethanolamine	Glycerol	Methoxyethyl Oleate
Diethyl Ether	Glycolic Acid	Methyl Alcohol (Methanol)
Diethyl Malonate	Guanidine Hydrochloride	Methyl Ethyl Ketone
Diethylamine	Guanidine Isothiocyanate	Methylamine
Diethylene Glycol	Guanidine Thiocyanate	Metrizamide
Diethylene Glycol Monoethyl Ether	Helium	Mineral Spirits
Diethylpyrocarbonate	Hexane	Monobasic Potassium Phosphate
Dimethyl Acetamide	Hydrobromic Acid 20%	Monobasic Sodium Phosphate
Dimethyl Formamide	Hydrochloric Acid 100%	Monoethanolamine
Dimethyl Phthalate	Hydrocyanic Acid	Morpholine
Dimethylacetamide	Hydrofluoric Acid 10%-40%	Motor oil
Dimethylformamide	Hydrofluosilicic Acid	Muriatic Acid
Dimethylsulfoxide (DMSO)	Hydrogen Gas	n-Amyl Alcohol
Diocetyl Phthalate	Hydrogen Peroxide (10%)	n-Butanol
Diphenylenimine	Hydrogen Sulfide	n-Butyl Alcohol
Dipotassium Hydrogen Phosphate	Hydroquinone	n-Octane
Dipropylene Glycol	Iodine Crystals	n-Propanol
Disodium Hydrogen Phosphate	Iodine Solution	n-Propyl Alcohol
Distilled Water	IPA	Naphtha
DMAC	Isobutanol	Naphthalene
DMF	Isobutyl Alcohol	Natural Gas
DMSO	Isopropanol	Nickel Chloride
EDTA	Isopropyl Acetate	Nickel Nitrate
Epsom Salts (Magnesium Sulfate)	Isopropyl Alcohol	Nickel Salts
Ethanol	Isopropyl Ether	Nickel Sulfate
Ethyl Alcohol	Lactic Acid	Nitric Acid 5%-50%
Ethyl Cyanoacetate	Lard	Nitrous Acid
Ethyl Digol	Latex	Nycodenz
Ethyl Lactate	Lead Acetate	Oils:Aniline
Ethylene	Lead Nitrate	Oils:Bone
Ethylene Diamine Tetraacetic Acid	Lead Sulfamate	Oils:Castor
Ethylene Glycol	Ligroin	Oils:Citric
Fatty Acids	Linoleic Acid	Oils:Coconut
Ferric Chloride	Linseed Oil	Oils:Cod Liver
Ferric Nitrate	Lithium Chloride	Oils:Corn
Ferric Sulfate	Lubricants	Oils:Cottonseed
Ferrous Chloride	Lye: Ca(OH) <sub>2</sub> Calcium Hydroxide	Oils:Diesel Fuel (20, 30, 40, 50)
Ferrous Sulfate	Lye: KOH Potassium Hydroxide	Oils:Fuel (1, 2, 3, 5A, 5B, 6)
Ficoll-Hypaque	Lye: NaOH Sodium Hydroxide	Oils:Olive
Fluoboric Acid	Magnesium Bisulfate	Oils:Orange
Fluorides	Magnesium Carbonate	Oils:Pine
Fluosilicic Acid	Magnesium Chloride	Oils:Rosin
Formaldehyde	Magnesium Hydroxide	Oils:Sesame Seed
Formalin	Magnesium Nitrate	Oils:Silicone

Oils:Silicone	Pyrogallic Acid	Sodium Sulfide
Oils:Soybean	Resorcinal	Sodium Sulfite
Oils:Transformer	Rosins	Sodium Tetraborate
Oils:Turbine	Rubidium Bromide	Sodium Thiosulfate
Oils:Vegetable	Rubidium Chloride	Stannic Chloride
Oleic Acid	Rust Inhibitors	Stannous Chloride
Oxalic Acid	Sal Ammoniac	Starch
Ozone	Salicylaldehyde	Stearic Acid
p-Chloroacetophenone	Salicylic Acid	Styrene
Palmitic Acid	SDS	Sucrose
Peracetic Acid, 0.2%	Sea Water	Sugar
Percoll	sec-Butanol	Sulfate
Petroleum	sec-Butyl Alcohol	Sulfur Dioxide
Phosphoric Acid	Sera	Sulfuric Acid (>1%-50%)
Phosphoric Acid Anhydride	Shellac	Sulfurous Acid
Phosphorus	Silicone	Sulphurous Acid
Photographic Developer	Silicone Oil	Tallow
Photographic Hypo	Silver Acetate	Tannic Acid
Photographic Solutions	Silver Cyanide	Tartaric Acid
Phthalic Acid	Silver Nitrate	TCA, 10%-50%
Potash (Potassium Carbonate)	Skydrol LD4	tert-Butanol
Potassium Acetate	Soap Solutions	tert-Butyl Alcohol
Potassium Bicarbonate	Soda Ash	TFA
Potassium Bromide	Sodium Acetate	Tin Salts
Potassium Carbonate	Sodium Benzoate	Tincture of Iodine
Potassium Chlorate	Sodium Bicarbonate	Tribasic Potassium Phosphate
Potassium Chloride	Sodium Bisulfate	Trichloroacetic Acid
Potassium Chromate	Sodium Bisulfite	Trichlorotrifluoroethane
Potassium Cyanide	Sodium Borate (Borax)	Tricresyl Phosphate
Potassium Cyanide Solutions	Sodium Bromide	Tricresylphosphate
Potassium Dichromate	Sodium Carbonate	Triethylene Glycol
Potassium Dihydrogen Phosphate	Sodium Chlorate	Trifluoroacetic Acid
Potassium Ferricyanide	Sodium Chloride	Tripotassium Phosphate
Potassium Ferrocyanide	Sodium Cyanide	Tripropylene Glycol
Potassium Hydroxide (Caustic Pot-	Sodium Dichromate	Tris Buffer Solution (TBE, TAE)
Potassium Iodide	Sodium Dihydrogen Phosphate	Trisodium Phosphate
Potassium Nitrate	Sodium Dodecyl Sulfate	Triton X-100
Potassium Permanganate	Sodium Ferrocyanide	TSP
Potassium Phosphate Dibasic	Sodium Fluoride	Undecyl Alcohol
Potassium Phosphate Monobasic	Sodium Hydroxide	Urea
Potassium Phosphate Tribasic	Sodium Iodide	Urine
Potassium Sulfate	Sodium Lauryl Sulfate	Varnish
Potassium Sulfide	Sodium Metaphosphate	Vinegar
Propane (liquefied)	Sodium Metasilicate	Vinyl Acetate
Propanol	Sodium Nitrate	Water
Propionic Acid	Sodium Phosphate	Zephiran Chloride
Propyl Alcohol	Sodium Phosphate Dibasic	Zinc Chloride
Propylene	Sodium Phosphate Monobasic	Zinc Stearate
Propylene Glycol	Sodium Polyphosphate	Zinc Sulfate
Propylene Oxide	Sodium Silicate	
Prussic Acid	Sodium Sulfate	

## Marginal Resistance:

Acetone	Butyl Alcohol	Oils:Mineral
Acetonitrile	Chromic Acid, 40%-100%	Paraffin
Alcohols:Butyl	Hydrogen Peroxide (30%)	Pyridine
Aniline	Kerosene	Sodium Hypochlorite
Benzaldehyde	Manganese Salts	Sodium Perborate
Butane	Methyl Isobutyl Ketone	Sodium Peroxide
Butanol (Butyl Alcohol)	Oils:Linseed	

## Poor Resistance:

1,2,4-Trichlorobenzene	Chloroacetic Acid	Ethylene Glycol Monomethyl Ether
1,2,4-Trimethylbenzene	Chlorobenzene	Ethylene Glycol Monomethyl Ether
1,2-Dichloroethane	Chloroethane	Ethylene Oxide, 100%
1,3,5-Trimethylbenzene	Chloroform	Fluorine
1,4-Dioxane	Chloromethyl Benzene	Freon 113
1-Chlorobutane	Chlorosulfonic Acid	Freon TF
2,2,4-Trimethylpentane	Chlorosulphonic Acid	Furan Resin
2,4-Dichlorophenol	Chlorotoluene	Furfural
2-Ethoxyethanol	Chromic:Surfuric Acid Mixture, 96%	Furfuraldehyde
2-Ethoxyethanol Acetate	Cresol Mixture	Gasoline
2-Methoxyethanol	Cresols	Heptane
2-Methoxyethanol Acetate	Cumene	Hydraulic Oil
4-Hydroxy-4-methyl-2-pentanone	Cyclohexane	Hydrazine
Acetaldehyde, 100%	Cyclohexanol	Hydrobromic Acid 100%
Acetaldehyde, 40%	Cyclohexanone	Iodine
Acetic Acid 5% to 60%	Decahydronaphthalene	Isopropyl Benzene
Acetic Anhydride	Decalin	Isotane
Acetophenone	Decane	Jet Fuel
Acetyl Chloride	Diacetone	Ketones
Amyl Acetate	Dibutyl Phthalate	Lacquer Thinner
Amyl Chloride	Dichlorobenzene	Lacquers
Aniline Hydrochloride	Dichloroethane	Maleic Anhydride
Antifreeze	Dichloroethylene	Mechanical Oil
Aqua Regia 100%	Dichloromethane	Mesitylene
Arochlor 1248	Diethyl Benzene	Methyl Acetate
Aromatic Hydrocarbons	Diethyl Ketone	Methyl Acrylate
Asymmetrical Trimethylbenzene	Diethylene Dioxide	Methyl Benzene
Barium Cyanide	Dimethyl Aniline	Methyl Bromide
Benzene	Dimethylamine	Methyl Butyl Ketone
Benzene Sulfonic Acid	Dioxane	Methyl Cellosolve
Benzyl Chloride	Diphenyl	Methyl Cellosolve Acetate
Bleach	Diphenyl Oxide	Methyl Chloride
Bromine	Ethane	Methyl Dichloride
Bromobenzene	Ethenylbenzene	Methyl Methacrylate
Bromoform	Ether	Methyl Propyl Ketone
Butadiene	Ethyl Benzene	Methyl-t-Butyl Ether
Butyl Acetate	Ethyl Benzoate	Methylene Chloride
Butyl Chloride	Ethyl Butyrate	Methylisobutylketone (MIBK)
Butyl Ether	Ethyl Chloride	Mineral Oil
Carbon Bisulfide	Ethyl Ether	Monochlorobenzene
Carbon Disulfide	Ethylene Bromide	Monochloroethane
Carbon Tetrachloride	Ethylene Chloride	MTBE
Chlorine	Ethylene Chlorohydrin	n-Amyl Acetate
Chlorine Dioxide	Ethylene Dichloride	n-Butyl Acetate
Chlorine Water	Ethylene Glycol Monoethyl Ether	n-Butyl Phthalate

n-Decane  
n-Heptane  
n-Hexane  
n-Propane  
Nitrating Acid  
Nitric Acid Concentrated  
Nitrobenzene  
Nitrogen Dioxide  
Nitromethane  
Nitrous Oxide  
o-Dichlorobenzene  
Oils:Cedarwood  
Oils:Cinnamon  
Oils:Creosote  
Oils:Hydraulic Oil (Petro)  
Oils:Hydraulic Oil (Synthetic)  
Oils:Paraffin  
Oils:Peanut  
Oils:Petroleum  
Oils:Rapeseed  
Oleum  
p-Dichlorobenzene  
Pentane  
Perc

Perchloric Acid  
Perchloroethylene  
Petrolatum  
Petroleum Ether  
Petroleum Oil  
Phenol  
Phenyl ethylene, pure -  
Phosphorus Chloride  
Phosphorus Oxychloride  
Phosphorus Trichloride  
Phosphoryl Chloride  
Phthalic Anhydride  
Picric Acid  
Propane (gaseous)  
Propyl Acetate  
Pseudocumene  
Stoddard Solvent  
Sulfur Chloride  
Sulfur Salts  
Sulfur Trioxide  
Sulfuric Acid (>50%-100%)  
Sulfuryl Chloride  
sym-Trimethylbenzene  
TCA, 50%-100%

Tetrachloroethane  
Tetrachloroethylene  
Tetrahydrofuran  
Tetrahydronaphthalene  
Tetralin  
Tetrahydrofuran (THF)  
Thionyl Chloride  
Toluene  
Toluene (Toluol)  
Tributyl Citrate  
Tributyl Phosphate  
Trichlorobenzene  
Trichloroethane  
Trichloroethylene  
Triethanolamine  
Triethyl Phosphate  
Trimethylamine  
Turpentine  
Vinyl benzene  
Vinylidene Chloride  
White Paraffin  
Xylene  
Xylol