Plexiglass Chemical Resistance Properties (Acrylic)

E – 30 days of constant exposure with no damage. Plastic may even tolerate chemical for years.

G – Little or no damage after 30 days of constant exposure to the reagent.

F – Some effect after 7 days of constant exposure to the reagent. Solvents may cause softening, and swelling.

N – Not recommended for continuous use. Immediate damage may occur such as severe crazing, cracking, or permeation losses.

	Conditions at 20°C (68°F)	Conditions at 50°C (122°F)
Acetaldehyde	G	F
Acetamide,saturated	E	E
Acetic Acid, 5%	E	G
Acetic Acid, 50%	N	N
Acetic Acid, glacial	N	N
Acetic Anhydride	N	N
Acetone	N	N
Acetonitrile	N	N
Acrylonitrile	N	N
Adipic Acid	G	F
Alanine	E	G
Allyl Alcohol	N	N
Aluminum Hydroxide	G	F
Aluminum Salts	E	E
Amino Acids	E	G
Ammonia	G	F
Ammonium Acetate, saturated	E	E
Ammonium Glycolate	E	E
Ammonium Hydroxide, 50%	E	G
Ammonium Hydroxide, 5%	E	E
Ammonium Oxalate	E	G
Ammonium Salts	E	E
n-Amyl Acetate	N	N

Amyl Chloride	E	E
Aniline	N	N
Aqua Regia	F	N
Benzaldehyde	F	N
Benzene	N	N
Benzoic Acid, saturated	E	G
Benzyl Acetate	N	N
Benzyl Alcohol	N	N
Bromine	N	N
Bromobenzene	N	N
Bromoform	N	N
Butadiene	G	G
n-Butyl Acetate	N	N
n-Butyl Alcohol	F	N
i-Butyl Alcohol	F	N
t-Butyl Alcohol	F	N
Butyric Acid	N	N
Butyl Chloride	N	N
Calcium Hydroxide, conc.	G	G
Calcium Hypochlorite, saturated	G	F
Cellosolve Acetate	G	F
Carbazole	N	N
Carbon Disulfide	F	N
Carbon Tetrachloride	N	N
Cedarwood Oil	F	N
Chlorine, 10%, in Air	E	E
Chlorine, 10%, moist	E	G
Chloroacetic Acid	N	N
p-Chloroacetophenone	N	N
Chlorobenzene	N	N
Chloroform	N	N
Chromic Acid, 10%	E	E
Chromic Acid, 50%	F	N

Cinnamon Oil	N	N
Citric Acid, 10%	E	E
Cresol	N	N
Cyclohexane	N	N
Cyclohexanone	N	N
Cyclopentane	G	F
Decalin	F	N
n-Decane	F	N
o-Dichlorobenzene	N	N
p-Dichlorobenzene	N	N
Diethyl Benzene	N	N
Diethyl Ether	F	N
Diethyl Ketone	N	N
Malonate	F	F
Diethylene Glycol	E	E
Diethylene Glycol Ethyl Ether	E	G
Dimethyl Formamide	N	N
Sulfoxide	N	N
1, 4-Dioxane	N	N
Dipropylene Glycol	E	E
Diethylamine	G	G
Diacetone Alcohol	N	N
1, 2-Dichloroethane	N	N
2, 4-Dichlorophenol	N	N
Dimethyl Acetamide	E	E
Dioxane	N	N
Dibutyl Phthalate	F	N
Dioctyl Phthalate	F	N
Ethanol	F	N
Ether	F	N
Ethyl Acetate	N	N
Ethyl Alcohol (Absolute)	G	F
Ethyl Alcohol, 40%	E	E

Ethyl Benzene	N	N
Ethyl Benzoate	N	N
Ethyl Butyrate	N	N
Ethyl Chloride, liquid	N	N
Ethyl Cyanoacetate	N	N
Ethyl Lactate	F	N
Ethylene Chloride	N	N
Ethylene Glycol	E	E
Ethylene Glycol Methyl Ether	E	G
Ethylene Oxide	E	G
Fatty Acids	E	E
Fluorides	N	N
Fluorine	N	N
Formaldehyde, 10%	E	E
Formaldehyde, 40%	E	G
Formic Acid, 35%	E	E
Formic Acid, 50%	G	G
Formic Acid, 98%-100%	N	N
Freon, TF	G	F
Fuel Oil	G	F
Gasoline	G	F
Acetic Acid, glacial	N	N
Glycerine	E	E
Gluteraldehyde	G	F
n-Heptane	E	E
Hexane	E	E
Hydrochloric Acid, 15%	E	E
Hydrochloric Acid, 20%	E	E
Hydrochloric Acid, 35%	E	G
Hydrochloric Acid, 45%	F	F
Hydrochloric Acid, 48%	N	N
Hydrogen Peroxide, 3%	E	E
Hydrogen Peroxide, 30%	E	E

Hydrogen Peroxide, 90%	N	N
Hydrazine	N	N
Iodine Crystals	N	N
Isobutyl Alcohol	F	F
Isopropyl Acetate	N	N
Isopropyl Alcohol	F	N
Isopropyl Benzene	N	N
Isopropyl Ether	F	N
Jet Fuel	G	F
Kerosene	G	G
Lactic Acid, 35%	E	E
Lactic Acid, 85%	E	E
Lacquer Thinner	N	N
Mercury	E	E
Methoxyethyl Oleate	E	E
Methyl Alcohol	F	N
Methyl Ethyl Ketone	N	N
Methyl Isobutyl Ketone	N	N
Methyl Propyl Ketone	N	N
Methylene Chloride	N	N
Mineral Oil	E	E
2-Methoxyethanol	F	N
Methyl-t-Butyl Ether	G	F
Methyl Acetate	N	N
Mineral Spirits	F	N
Nitric Acid, 1-10%	E	E
Nitric Acid, 50%	G	F
Nitric Acid, 70%	F	N
Nitrobenzene	N	N
Nitromethane	N	N
n-Octane	E	E
Orange Oil	E	E
Oxalic Acid	E	E

Ozone	E	E
Perchloric Acid	N	N
Perchloroethylene	F	N
Phenol, crystals	N	N
Phenol, liquid	N	N
Phosphoric Acid, 85%	F	N
Phosphoric Acid, 1-5%	E	E
Picric Acid	N	N
Pine Oil	E	G
Potassium Hydroxide, 1%	E	E
Potassium Hydroxide, conc.	E	G
Propane Gas	E	E
Propionic Acid	N	N
Propylene Glycol	E	E
Propylene Oxide	N	N
Resorcinol, saturated	N	N
Resorcinol, 5%	G	F
Salicylaldehyde	G	F
Salicylic Acid, powder	F	F
Salicylic Acid, saturated	F	F
Salt Solutions, metallic	E	E
Silicone Oil	E	E
Silver Acetate	E	E
Silver Nitrate	E	E
Sodium Acetate, saturated	E	E
Sodium Chloride	E	E
Sodium Hydroxide, 1%	E	E
Sodium Hydroxide, 50% to saturated	E	E
Sodium Hypochlorite, 15%	E	E
Stearic Acid, crystals	E	E
Sulfur Dioxide, wet or dry	N	N
Sulfur Salts	G	G
Sulfuric Acid, 1-6%	E	E

Sulfuric Acid, 20%	E	E
Sulfuric Acid, 60%	G	G
Sulfuric Acid, 98%	N	N
Tartaric Acid	E	E
Tetrahydrofuran	N	N
Thionyl Chloride	N	N
Toluene	N	N
Tributyl Citrate	F	N
Trichloroethane	N	N
Trichloroethylene	N	N
Triethylene Glycol	E	E
Tripropylene Glycol	E	E
Trichloroacetic Acid	N	N
1, 2, 4 Trichlorobenzene	N	N
2, 2, 4 Trimethylpentane	G	F
Tris Buffer	E	E
Turpentine	F	N
Undecyl Alcohol	N	N
Urea	E	E
Vinylidene Chloride	N	N
Xylene	N	N
Zinc Stearate	E	E