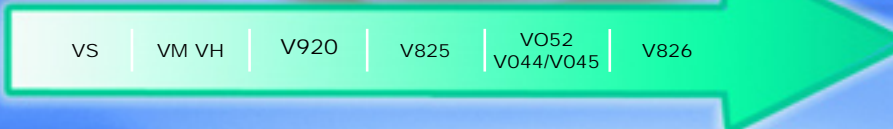


Chemical Resistance of Plexiglas® V-Series Acrylic Resins



Plexiglas® V-series acrylic resins have good resistance to a variety of common cleaners and application environments. The chemical resistance of Plexiglas V-series acrylic resins will vary with the stress level, temperature, reagent, duration of exposure and resin grade. Atoglas recommends that parts made from Plexiglas resins be tested with all reagents under appropriate conditions for the end-use application.

Increasing Chemical Resistance



Compound Class/Name	Qualitative Ranking*	Compound Class/Name	Qualitative Ranking*	Compound Class/Name	Qualitative Ranking*	Compound Class/Name	Qualitative Ranking*
ACIDS		Detergent Solution	G	Potassium Cyanide	E	Chlorinated Solvents	N
Acetic Acid, Glacial, 100%	N	Epoxy Adhesives	E	Potassium Dichromate, 10%	E	Cyclohexane	N
Acetic Acid, 5%	E	Fruit Juice	E	Potassium Permanganate	E	Cyclohexanone	N
Chromic Acid, 40%	F	Potassium Sulfite	E	Silver Nitrate	E	Cyclohexene	N
Citric Acid, 10%	E	Kerosene	E	Sodium Chloride, 10%	E	Dimethyl Formamide	N
Hydrochloric Acid, 38%	E	Lacquer Thinner	N	Sodium Cyanide	E	Dibutyl Sebecate	F
Lactic Acid	E	Milk	E	Sodium Fluoride	E	Diethyl Ether	F
n-butyric Acid, 100%	N	Mineral Oil	G	Sodium Nitrate	E	Diocetyl Sebacate	F
Nitric Acid, 70%	F	Motor Oil	E	Sodium Phosphate	F	Ethylene Dibromide	N
Nitric Acid, 40%	G	Olive Oil	E	Sodium Thiosulphate, 40%	E	Ethylene Glycol	E
Nitric Acid, 10%	E	Paint Removers	N	SOLVENTS & ORGANIC COMPOUNDS			
Oleic Acid	E	Paint Thinner	N	Acetaldehyde, 100%	N	Ethylene Oxide (Moist)	F
Oxalic Acid, 100%	E	Polishing Compounds	E	Acetates	N	2-Ethylhexyl Sebacate	E
Stearic Acid	E	Power Steering Fluid	E	Acetic Anhydride	N	Formaldehyde, Aqueous, 40%	E
Sulfuric Acid, 98%	N	Silicone Oil	E	Acetone	N	Glycerol	E
Sulfuric Acid, 30%	E	Soap Solution	G	Acetonitrile	N	Heptane	E
Tartaric Acid, 50%	E	Transformer Oil	G	Acetophenone	N	Hexane	E
Trichloroacetic Acid	N	Transmission Fluid	E	Alcohol, Allyl	N	Isooctane	G
BASES		Turpentine	N	Alcohol, Amyl	N	Metacresol	N
Ammonium Phosphate	E	Unleaded Gasoline	G	Alcohol, Benzyl	N	Methyl Benzoate	N
Ammonium Hydroxide, 28%	E	Wine	E	Alcohol, Ethyl, 50%	F	Methyl Cyclohexanol	N
Sodium Carbonate, 20%	G	INORGANIC COMPOUNDS		Alcohol, Methyl, 100%	N	Methyl Ethyl Ketone	N
Sodium Carbonate, 2%	G	Ammonium Nitrate	E	Alcohol, Isopropyl, 100%	F	Methyl Naphthalene	N
Sodium Hydroxide, 60%	E	Ammonium Phosphate	E	Alcohol, Methyl, 10%	G	Methyl Salicylate	N
COMMERCIAL PRODUCTS		Calcium Hypochlorite	E	Alcohol, Methyl, 50%	F	Methylamine	F
Ammonia Based Cleaners	E	Carbon Disulfide	N	Alcohol, Methyl, 100%	N	Methylene Dichloride	N
Anti-freeze	E	Chlorine, Aqueous, 2%	E	Alcohol, n-Butyl	N	n-Octane	F
Bathroom Cleaners, Most	G	Ferric Chloride, Aqueous, 10%	E	Aniline	N	Naphtha	N
Beer	E	Hydrogen Peroxide, 28%	F	Aviation Fuel (100 Octane)	F	Nitrobenzene	N
Brake Fluid	G	Hydrogen Peroxide, 3%	G	Benzaldehyde	N	Olefinic Carboxylic Acids	E
Car Wash Detergent	E	Iron Perchloride	F	Benzene	N	Paraffin, Medicinal	E
Chlorine Based Cleaners	E	Mercury Chloride	F	Benzoic Aldehyde	N	Petroleum Ether (100-200°C)	F
Coffee	E	Metal Carbonates	E	Butyl Acetyl Ricinoleate	F	Phenol, Aqueous, 5%	N
Cosmoline® Removers	G	Metal Chlorides	E	Butyl Stereate	F	Phthalates	F
Cottonseed Oil	E	Metal Sulfates	E	Butraldehyde	N	Pyridine	N
		Potassium Chlorate	E	Carbon Disulfide	N	Toluene	N
						Trichloroethane	N
						Trichloroethylene	N
						White Spirit	E

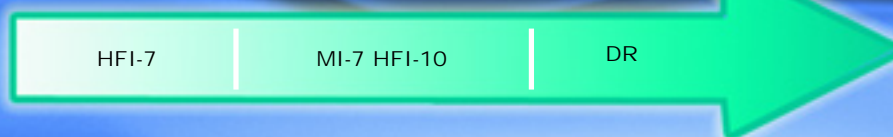
*Qualitative rating is based on visual appearance at ambient temperature.

LEGEND:
E=Excellent
G=Good
F=Fair
N=Not Recommended

Chemical Resistance of Plexiglas Impact Resins

Plexiglas® impact-modified acrylic resins have good resistance to a variety of common cleaners and application environments. The chemical resistance of Plexiglas impact-modified acrylic resins will vary with the stress level, temperature, reagent, duration of exposure and resin grade. Atoglas recommends that parts made from Plexiglas resins be tested with all reagents under appropriate conditions for the end-use application.

Increasing Chemical Resistance



In general the following chemicals may be safely used with parts made from Plexiglas impact-modified acrylic resins under moderate stress at ambient temperature conditions:

Calgon® Bath Oil	Freon TF Cleaner	Mr. Clean® Cleaner	Soft Scrub® Cleanser
Clorox® Bleach	Glass Plus® Cleaner	Propylene Glycol	Spic & Span® Powder
Fantastic® Cleaner	Liquid Comet® Cleaner	Sodium Hydroxide	Soap and Water
Formula 409® Cleaner	Mineral Oil	Sodium Hypochlorite	

The following chemicals may be used with caution in low-stress and/or short-duration exposure at ambient conditions

Ammonia	Ethyl Alcohol (≤40%)	Isopropyl Alcohol (≤50%)	Pinesol® Cleaner
Brake Fluid	Gasoline	Lestoil® Cleaner	VM&P Naphtha
Chlorine (10%)	Dow Disinfectant	Kerosene	Lysol® Basin, Tub
	Bathroom Cleaner & Tile Cleaner		

The following chemicals may cause crazing, cracking, discoloration, or dissolving of acrylic articles and are generally not recommended.

Acetic Acid	Butyl Alcohol	Sulfuric Acid	Turpentine
Acetone	Chlorinated Solvents	Toluene	White Cap® Cleaner
Aromatic Solvents	Lacquer Thinner	Lysol® Spray	Xylene
Benzene		Disinfectant	

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See MSDS for Health & Safety Considerations

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Plexiglas acrylic plastic is a combustible thermoplastic. Observe fire precautions appropriate for comparable forms of wood and paper. For building uses, check code approvals. Impact resistance is a factor of thickness. Avoid exposure to heat or aromatic solvents. Clean with soap and water. Avoid abrasives.



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