Chemical Resistance Chart

	302 Stainless Steel	304 Stainless Steel	316 Stainless Steel	440 Stainless Steel	Aluminum	Titanium	Hastelloy C	Cast Bronze	Brass	Cast Iron	Carbon Steel	Kynar	PVC (Type 1)	Tygon (E-3606)	Teflon	Noryl	Polyacetal	Nylon	Cycolac (ABS)	Polyethylene	Polypropylene	Ryton	Carbon	Ceramic	Ceramagnet "A"	Viton	Buna N (Nitrile)	Silicon	Neoprene	Ethylene Propylene	Rubber (Natural)	Epoxy
Barium Carbonate	B	A	A	A	B	A	A	B	—	B	B	—	A	A	A	A	A	A	—	B	A	—	A	A	A	A	A	—	A	—	A	A
Barium Chloride	C	D	A	A	D	A	A	B	—	—	C	A	A	B	A	A	A	B	—	B	A	A	A	A	—	A	A	B	A	A	A	A
Barium Cyanide	—	—	A	—	—	—	—	C	—	—	A	—	—	—	—	—	B	—	—	B	—	—	A	—	—	A	C	—	A	A	—	A
Barium Hydroxide	B	C	A	A	D	B	B	B	—	C	C	A	A	—	A	A	D	A	—	B	A	A	A	A	A	A	A	C	A	A	A	A
Barium Nitrate	—	A	A	—	—	A	—	D	—	A	A	—	B	—	—	A	A	—	—	—	—	—	A	A	—	A	A	—	A	A	—	B
Barium Sulfate	B	A	A	A	D	A	A	C	—	C	C	A	A	—	A	A	A	A	—	B	A	A	A	B	—	A	A	D	A	A	—	B
Barium Sulfide	B	A	A	—	D	B	—	C	—	C	C	—	A	A	A	A	A	A	—	B	A	—	A	A	—	A	A	C	A	A	A	A
Beer[2]	A	A	A	—	A	A	A	A	B	D	D	A	A	—	A	A	B	D	B	B	D	—	A	A	—	A	D	C	A	A	A	A
Beet Sugar Liquids	A	A	A	—	A	—	—	A	B	A	—	—	A	—	A	A	B	A	B	—	A	—	A	A	—	A	A	—	B	A	A	A
Benzaldehyde[3]	A	A	A	—	B	A	A	A	—	B	A	C	D	D	A	D	A	C	D	D	D	A	A	A	—	D	D	B	D	A	D	A
Benzene[2]	B	A	A	A	B	A	B	B	A	B	C	B	D	C	A	D	A	A	D	D	D	A	A	A	A	A	D	—	D	D	D	A
Benzoic Acid[2]	B	A	A	A	B	A	A	B	—	D	—	A	A	B	A	A	B	D	—	B	D	—	A	B	—	A	D	—	D	D	D	A
Benzol	—	A	A	—	B	A	A	B	A	—	—	—	D	—	A	D	A	A	—	—	A	—	A	A	A	D	D	—	D	—	—	A
Borax (Sodium Borate)	—	A	A	A	C	B	A	A	B	A	C	A	A	A	A	A	A	A	—	B	A	A	A	A	A	A	B	C	A	A	C	A
Boric Acid	B	A	A	A	B	A	A	B	C	D	—	A	A	B	A	A	A	A	—	B	A	—	A	A	A	A	A	—	A	A	A	A
Brewery Slop	—	—	A	—	—	—	—	A	—	A	—	—	—	—	—	—	A	A	—	—	—	—	A	A	—	A	—	—	A	—	—	A
Bromine[2] (wet)	D	D	D	D	D	A	A	C	—	D	D	A	B	B	A	D	D	D	D	D	D	D	D	A	D	A	D	D	D	D	D	C
Butadiene	A	A	A	—	A	—	—	C	A	C	C	A	A	—	A	—	A	A	—	—	—	B	A	A	—	A	A	—	B	A	—	A
Butane[2] [1]	A	A	A	—	A	—	—	A	A	C	C	A	A	C	A	D	A	A	B	C	D	A	A	A	—	A	A	D	B	D	D	A
Butanol	—	A	A	—	A	—	A	A	—	—	—	—	—	A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Butter	—	B	A	—	A	—	—	D	—	D	—	—	—	B	—	B	A	—	B	—	—	—	A	A	—	A	A	—	B	A	D	A
Buttermilk	A	A	A	A	A	—	—	D	—	D	—	—	—	B	A	A	A	A	B	—	—	—	A	A	—	A	A	—	A	—	D	A
Butylene	A	B	A	—	A	—	—	A	A	A	A	—	B	—	A	—	A	—	—	—	—	A	A	A	—	A	B	—	—	D	D	A
Butyl Acetate[1]	—	—	C	—	A	—	A	A	—	—	A	C	D	D	A	D	A	—	—	C	D	A	A	A	—	D	B	D	D	B	D	A
Butyric Acid[1]	B	B	A	A	B	A	A	C	—	D	—	A	B	—	A	A	C	D	D	—	A	—	A	D	—	D	D	—	D	B	—	A
Calcium Bisulfate	C	D	A	—	D	—	—	D	D	D	—	—	A	A	A	—	—	A	—	—	—	—	—	—	—	A	A	C	C	—	A	A
Calcium Bisulfide	—	—	B	—	C	A	A	C	—	—	—	—	A	—	A	A	D	A	—	B	A	—	A	A	—	A	A	—	A	D	—	A
Calcium Bisulfite	—	B	A	—	C	A	A	C	—	—	—	A	A	—	A	A	—	A	—	—	A	—	—	A	—	A	A	—	A	—	A	—
Calcium Carbonate	B	A	A	A	C	A	A	C	—	D	—	—	A	A	A	A	A	A	—	B	A	—	A	A	—	A	A	—	A	—	A	A
Calcium Chlorate	—	B	A	—	—	B	B	C	—	—	—	—	A	A	A	—	—	A	—	A	—	—	A	—	—	A	—	—	A	—	A	A
Calcium Chloride	C	A	D	C	C	A	A	B	—	C	—	A	A	A	A	A	D	A	B	B	A	A	A	A	B	A	A	B	D	A	A	A
Calcium Hydroxide	B	A	A	—	C	A	A	B	—	—	—	A	A	A	A	A	B	A	—	B	A	—	A	A	A	A	A	C	A	A	A	A
Calcium Hypochlorite	D	D	C	C	C	A	B	D	—	D	—	A	D	—	A	A	D	D	—	B	A	—	A	A	—	A	B	C	D	A	C	A
Calcium Sulfate	B	A	A	A	B	A	B	B	—	—	—	A	A	A	A	A	A	A	C	B	A	A	A	A	—	A	A	—	D	—	C	A
Calgon	—	A	A	—	—	—	—	C	—	D	—	—	—	—	—	A	B	—	—	—	A	—	A	A	—	A	A	—	A	—	—	A
Cane Juice[2]	—	A	A	—	B	—	—	B	C	A	—	—	A	—	—	—	A	A	—	—	D	—	A	A	—	—	A	—	A	—	A	A
Carbolic Acid (See Phenol)																																
Carbon Bisulfide[2]	B	A	A	A	A	—	—	C	—	B	—	—	D	D	—	—	A	A	—	—	D	—	A	A	A	A	D	—	D	D	D	A
Carbon Dioxide (wet)	—	A	A	—	C	—	A	C	C	C	—	—	—	—	A	—	—	—	—	—	—	—	A	A	—	—	—	—	—	—	—	—
Carbon Disulfide[2]	—	B	A	—	C	—	—	C	C	B	C	—	D	C	A	D	A	A	—	D	D	A	A	B	—	A	D	—	D	D	D	A
Carbon Monoxide	—	A	A	—	A	—	—	—	—	—	—	—	A	—	—	B	A	A	—	B	A	—	A	A	—	A	A	B	B	A	C	A
Carbon Tetrachloride[2] [1]	B	B	B	A	C	A	A	C	A	C	D	A	C	C	A	D	A	A	D	D	D	C	A	A	A	A	C	C	D	—	D	C
Carbonated Water	B	A	A	A	A	—	—	B	—	D	—	—	A	—	—	A	A	A	—	—	A	—	A	A	—	A	A	—	A	A	—	A
Carbonic Acid	B	A	B	A	A	—	A	B	—	D	—	A	A	—	A	A	A	A	—	B	A	—	A	A	—	A	B	B	A	A	A	A
Catsup	—	A	A	A	D	—	—	C	—	D	—	—	A	—	—	A	B	A	B	—	A	—	A	A	—	A	A	—	C	—	—	A
Chloracetic Acid[2]	D	D	D	D	C	A	A	D	—	D	—	D	A	D	A	—	D	D	—	D	D	—	A	A	—	D	D	—	D	B	D	B
Chloric Acid	—	D	D	—	—	—	—	—	—	—	—	—	D	—	A	—	—	—	—	—	—	—	—	—	—	—	D	—	D	—	—	D
Chlorinated Glue	—	A	A	—	D	—	—	C	—	D	—	—	—	—	—	C	—	C	D	—	—	—	—	A	—	A	C	—	D	B	D	A
Chlorine, Anhydrous Liquid	—	D	D	D	D	D	A	D	—	C	—	—	D	B	A	A	D	D	—	D	D	C	A	D	—	A	D	—	D	B	D	B
Chlorine (dry)	B	A	A	—	D	D	A	A	B	A	—	—	—	—	A	—	—	—	—	—	—	C	A	A	—	D	—	—	D	—	D	D
Chlorine Water	D	—	D	—	D	A	B	D	D	D	—	A	A	—	A	C	—	D	—	—	D	C	C	A	—	A	D	C	D	—	—	—
Chlorobenzene (Mono)	A	A	A	—	B	—	A	B	—	B	C	A	D	D	A	D	A	A	D	D	D	A	A	A	—	A	D	—	D	D	D	A
Chloroform	A	A	A	A	D	A	A	B	—	D	C	C	D	C	A	D	A	C	D	D	D	C	A	A	A	A	D	D	D	D	D	A
Chlorosulfonic Acid[1]	D	D	—	D	D	A	B	D	—	—	D	D	C	C	A	D	D	D	—	D	D	D	—	C	—	D	D	D	D	—	D	C
Chlorox (Bleach)	—	A	A	—	C	—	A	A	—	D	C	—	A	B	A	A	D	D	B	—	D	C	A	A	—	A	C	—	B	B	D	A
Chocolate Syrup	—	A	A	—	A	—	—	—	—	D	—	—	—	—	—	A	A	A	—	—	A	—	—	A	—	A	A	—	A	—	D	A
Chromic Acid 5%	—	A	A	B	C	A	A	D	D	D	—	—	A	B	—	C	D	D	B	B	A	A	D	C	—	A	D	C	D	A	B	B
Chromic Acid 10%	—	B	—	—	—	A	A	—	D	—	—	A	A	—	A	A	—	D	—	—	A	—	—	A	—	A	D	—	D	—	—	C
Chromic Acid 30%	—	B	—	—	—	A	A	—	D	—	—	B	A	—	A	D	—	D	—	—	A	—	—	A	—	A	D	—	D	—	—	D
Chromic Acid 50%	C	B	B	—	C	A	A	D	D	D	—	C	B	B	A	D	D	D	C	C	B	B	D	A	—	A	D	—	D	A	D	C
Cider	—	A	A	A	B	—	—	A	—	D	—	—	A	—	—	A	B	—	—	B	—	—	A	A	—	A	A	—	A	—	—	A
Citric Acid	—	A	A	A	C	A	A	D	C	D	—	A	A	—	A	A	B	C	C	B	B	—	A	A	B	A	D	C	A	A	A	A
Citric Oils	—	A	A	—	C	—	—	B	—	—	—	—	—	—	—	A	B	—	—	—	A	—	A	A	—	A	A	C	D	—	—	A
Coffee	A	A	A	A	A	—	—	B	—	C	—	—	—	—	A	A	A	A	—	—	A	—	A	A	—	A	A	—	A	—	A	A
Copper Chloride	C	D	D	B	D	A	A	D	—	D	—	A	A	B	A	A	B	D	—	B	A	A	—	A	—	A	A	—	A	A	A	A
Copper Cyanide	—	A	A	A	D	A	A	C	—	D	—	A	A	—	A	A	B	A	—	B	A	A	A	A	—	B	B	—	A	A	A	C
Copper Fluoborate	—	D	D	—	D	—	B	D	—	D	—	—	A	—	A	—	B	—	—	A	—	—	A	—	—	A	B	—	A	—	A	A
Copper Nitrate	B	A	A	B	D	A	A	D	—	—	—	A	A	—	A	A	B	D	—	B	A	—	A	A	—	A	A	—	A	—	—	A
Copper Sulfate (5% Solution)	—	A	A	A	D	A	A	D	D	D	—	—	A	—	A	A	B	D	—	B	A	A	A	A	—	A	A	C	A	—	C	A
Copper Sulfate	B	B	—	—	—	A	A	C	D	—	—	A	A	—	A	A	—	C	—	—	A	—	—	A	—	B	B	—	A	A	—	A
Cream	—	A	A	—	A	—	—	C	—	D	—	—	—	—	—	A	A	A	—	—	A	—	A	A	—	A	A	—	C	—	—	A
Cresols[2]	—	A	A	—	B	—	—	D	C	—	—	—	D	D	—	—	D	—	D	D	C	A	A	A	—	D	D	D	D	D	D	A

(A = No effect, Excellent) (B = Minor effect, Good) (C = Moderate effect, Fair) (D = Severe effect, Not recommended) (— = No test data available)
1. PVC: Satisfactory to 72°F 2. Polypropylene: Satisfactory to 72°F 3. Polypropylene: Satisfactory to 120°F