

Madden Manufacturing, Inc. Chemical Resistance Chart

Ratings, chemical effect A. no effect, excellent B. minor effect, good C. moderate effect, fair D. extreme effect, not recommended

CHEMICAL	PVC	Poly-propylene	PTFE	Viton	Buna	Neo-prene	Hypalon	Cast Iron	316 SS	Alloy 20	Hastelloy C	Ceramic	Double Diaphragm
Acetic acid-<20%	D	A	A	B	B	A	A	C	A	A	A	A	YES
Alcohol, methyl	A	A	A	B	A	A	A	A	A	A	A	A	-
Alums	A	A	A	A	A	A	-	-	A	A	B	-	YES
Aluminum sulfate	A	A	A	A	A	A	A	D	B	B	B	A	-
Amines	D	-	A	D	D	B	D	D	A	B	C	A	-
Ammonium hydroxide	A	A	A	B	D	A	A	A	A	A	B	A	YES
Boiler chemicals-phosphate	A	A	A	A	A	A	B	A	A	A	A	A	-
Boiler chemicals-sulfite	A	A	A	A	A	A	B	A	A	A	A	A	-
Benzene	C	C	A	A	D	D	D	A	B	A	B	A	-
Caustic soda (NaOH) See sodium hydroxide													
Chlorinated water	A	C	A	A	D	D	C	-	C	B	A	-	YES
Chlorine, liquid	C	B	A	A	D	D	C	C	C	C	B	D	YES
Citric acid	B	A	A	A	A	A	A	D	A	A	A	A	YES
Cyanide (sodium cyanide solution)	A	A	A	A	A	A	A	A	A	A	A	A	-
Deionized water	A	A	A	A	A	A	A	D	A	A	A	A	-
Diatomaceous earth	D	D	D	C	B	A	A	B	A	A	A	B	-
Ethylene dichloride	D	C	A	A	D	D	D	A	A	A	B	C	-
Ethylene glycol	A	A	A	A	A	A	A	A	A	A	B	A	-
Ethylene oxide	C	C	A	D	D	D	D	D	C	A	-	A	YES
Fabric dye solution	B	B	A	A	-	C	-	-	A	A	A	-	-
Ferric chloride	A	B	A	A	A	B	B	D	C	D	B	A	YES
Ferric sulfate	A	B	A	A	A	A	A	D	A	A	A	A	-
Ferrous chloride	A	A	A	A	A	A	A	D	C	C	B	A	YES
Ferrous sulfate	A	A	A	-	A	-	-	D	B	B	B	A	-
Fertilizer-nitrogen	-	-	A	-	-	A	-	-	A	-	-	-	-
Formaldehyde-40%	A	A	A	A	B	B	-	B	A	A	B	A	-
Hydrazine	-	C	C	A	B	B	B	C	A	-	-	A	YES
Hydrochloric acid-HCL-20%	A	B	A	A	-	-	-	D	D	D	A	A	YES

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CHEMICAL	PVC	Poly-propylene	PTFE	Viton	Buna	Neo-prene	Hypalon	Cast Iron	316 SS	Alloy 20	Hastelloy C	Ceramic	Double Diaphragm
HCl-37%	B	C	A	A	B	B	A	D	D	D	-	A	YES
HCl-100%	B	B	A	A	D	D	D	D	D	D	B	A	YES
Hydrogen peroxide-50%	A	B	A	A	-	-	-	-	A	B	A	-	YES
Lime slurry-10%	A	-	A	A	A	A	-	A	A	-	-	-	-
Potassium permanganate	A	A	A	A	C	A	-	A	B	B	A	A	-
Nitric acid- 10%	A	A	A	A	D	B	B	D	A	A	A	C	YES
Nitric acid-20%	A	A	A	A	D	D	D	D	A	A	A	D	YES
Nitric acid-50%	B	D	A	A	D	D	D	D	A	A	A	D	YES
Nitric acid-concentrated	D	D	A	A	D	D	D	D	A	A	B	D	YES
Phosphoric acid <40%	B	A	A	A	D	B	B	D	B	B	A	B	YES
Phosphoric acid >40%	B	B	A	A	D	D	C	D	B	B	A	B	YES
Polymers	A	A	A	-	-	A	A	-	A	A	-	-	-
Potassium hydroxide	A	A	A	B	B	B	A	C	B	B	B	D	-
Salt brine-NaCl	A	A	A	A	A	A	A	D	A	B	A	A	-
Sodium bisulfite	A	A	A	A	A	A	A	D	B	B	B	A	YES
Sodium carbonate (soda ash)	A	A	A	A	A	A	A	A	A	A	A	A	-
Sodium hydroxide <25%	A	A	A	B	B	B	A	A	A	A	B	D	YES
Sodium hydroxide- 50%	A	A	A	B	B	B	A	C	B	B	B	D	YES
Sodium hydroxide-80%	A	A	A	B	B	B	A	C	C	B	A	D	YES
Sodium hydrosulfite	C	A	A	A	-	A	-	-	-	-	A	A	YES
Sodium hypochlorite <20%	A	B	A	A	B	B	B	D	C	C	A	A	YES
Sodium hypochlorite-100%	C	B	A	A	B	B	B	D	C	C	B	D	YES
Sulfuric acid <10%	A	A	A	A	D	B	C	D	B	B	B	A	YES
Sulfuric acid 10-75%	A	A	A	A	D	C	C	D	D	B	B	D	YES
Sulfuric acid 75-100%	D	C	A	A	D	D	B	D	D	B	B	A	YES
Xylene	D	C	A	A	D	D	D	A	A	A	A	A	-

NOTES:

- Liquids at ambient temperatures
- Double diaphragm recommended for corrosive or dangerous liquids
- Ceramic valve balls not recommended for pumps over 36 GPH