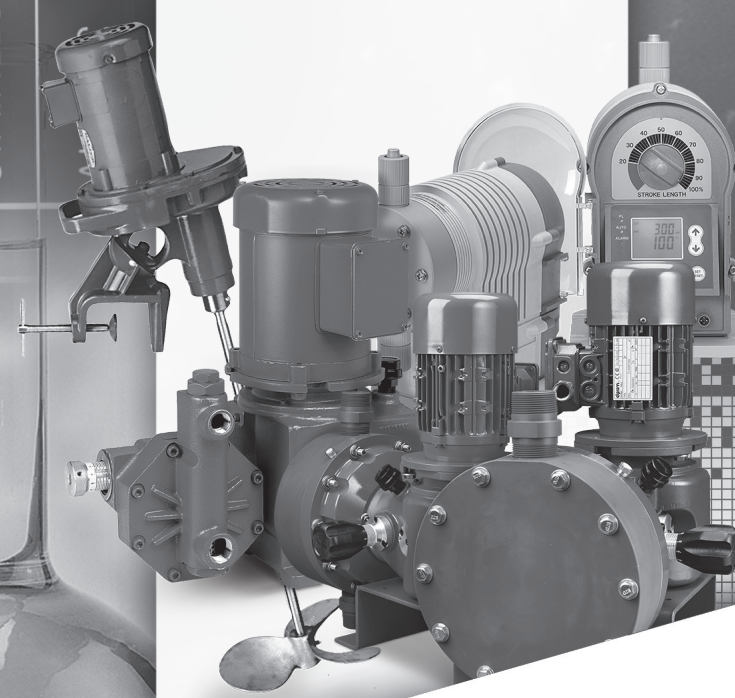




Corrosion Resistance Guide

Compatibility Listings



Where Innovation Flows

neptune1.com





CORROSION RESISTANCE GUIDE

CHEMICALS	METALS							PLASTICS							ELASTOMERS				
	CAST IRON	CAST STEEL	304 STAINLESS	316 STAINLESS	ALLOY 20	ALLOY B	ALLOY C	PVC	CPVC	POLYETHYLENE	POLYPROPYLENE	PVDF (KYNAR)	ACRYLIC	NYLON	PTFE	VITON	EPDM	HYPALON (CSM)	NEOPRENE
ACETALDEHYDE	A	A	A	A	A	-	A	C	C	B	A	C	C	A	A	B	C	C	C
ACETATE SOLVENTS	A	A	A	A	A	-	A	C	C	-	A	A	-	A	A	C	A	B	C
ACETIC ACID, ≥10%	C	C	B	A	A	-	A	A	B	A	A	A	-	C	A	C	A	A	A
ACETIC ACID, 80%	C	C	B	B	A	A	A	C	B	A	A	B	C	C	A	C	A	B	B
ACETIC ANHYDRIDE	C	C	B	A	A	A	A	C	C	-	C	B	-	A	A	C	C	A	A
ACETONE	A	A	A	A	A	A	A	C	C	B	C	C	C	A	A	C	A	B	B
ACETYLENE	A	A	A	A	A	A	A	-	B	B	A	A	-	A	A	A	A	B	B
ACRYLONITRILE	C	C	A	A	A	A	A	-	A	-	A	A	-	A	A	C	C	B	B
ALLYL CHLORIDE	C	-	-	A	-	-	-	C	-	C	A	A	-	-	A	B	C	C	C
ALCOHOL, ETHYL	B	B	A	A	A	-	-	C	C	-	A	A	-	A	A	A	A	A	A
ALCOHOL, ISOPROPYL	-	A	-	A	A	-	-	A	B	-	A	A	-	C	A	A	A	A	B
ALUMINUM CHLORIDE	C	C	C	B	A	A	B	A	A	A	A	A	-	B	A	A	A	B	A
ALUMINUM HYDROXIDE	B	C	B	A	A	B	-	A	A	A	A	A	-	A	A	A	A	A	A
ALUMINUM NITRATE	C	-	B	A	A	-	-	A	A	A	A	A	-	A	A	C	A	A	A
ALUMINUM SULFATE	C	C	B	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
ALUMS	C	C	C	B	A	B	A	A	A	A	A	A	-	A	A	C	A	-	B
AMINES	B	B	A	A	A	A	A	C	C	-	B	-	-	C	A	C	A	C	B
AMINES, FILMING	B	B	A	A	A	A	A	C	C	C	-	-	-	C	A	C	V	C	V
AMMONIA, ANHYDROUS	A	A	A	A	A	A	A	A	A	B	A	A	-	A	A	C	A	C	A
AMMONIA SOLUTIONS	-	A	A	A	A	-	A	A	A	B	A	A	-	B	A	C	A	C	A
AMMONIUM CARBONATE	-	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	-	A
AMMONIUM CHLORIDE	B	B	A	A	A	A	A	A	A	A	A	A	-	B	A	A	A	A	B
AMMONIUM HYDROXIDE	A	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
AMMONIUM MONO PHOSPHATE	C	C	A	A	A	A	A	A	A	A	A	A	-	B	A	A	A	A	A
AMMONIUM DI-PHOSPHATE	B	B	A	A	A	A	A	A	A	A	A	A	-	B	A	A	A	A	A
AMMONIUM TRI-PHOSPHATE	A	A	A	A	A	A	A	A	A	A	A	A	-	B	A	A	A	A	A
AMMONIUM NITRATE	C	C	A	A	A	C	A	A	A	A	A	A	-	A	A	A	A	A	B
AMMONIUM SULFATE	C	C	B	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
AMMONIUM SULFITE	C	C	A	A	A	A	A	A	A	-	A	A	-	A	A	C	A	A	A
AMMONIUM THIOCYANATE	C	C	A	A	B	A	A	-	-	A	A	-	-	-	A	-	-	-	-
AMYL ACETATE	A	A	A	A	A	A	A	C	C	C	B	A	C	B	A	C	B	C	C
AMYL ALCOHOL	-	B	A	A	A	-	A	B	B	A	A	A	-	A	A	A	A	A	A
AMYL CHLORIDE	A	A	A	A	A	A	A	C	C	C	C	A	-	B	A	B	C	C	C
ANILINE	A	A	A	A	A	A	A	C	B	A	A	A	C	A	A	A	A	C	C
ANILINE DYES	C	C	A	A	A	A	A	C	-	A	A	A	-	-	A	B	A	-	-
ARSENIC ACID	C	C	B	B	A	B	B	A	A	A	A	A	-	C	A	A	A	A	A
BARIUM CARBONATE	B	B	B	B	B	A	A	A	A	A	A	A	-	A	A	A	A	-	-
BARIUM CHLORIDE	C	-	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
BARIUM CYANIDE	B	B	A	A	A	A	A	C	C	-	C	-	-	A	A	B	A	A	C
BARIUM HYDROXIDE	B	B	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
BARIUM SULFATE	-	C	B	A	A	A	A	A	B	A	A	A	A	A	A	A	A	A	A
BARIUM SULFIDE	-	B	A	B	A	-	-	A	A	A	A	A	A	A	A	A	A	A	A
BEER	C	C	A	A	A	A	A	A	-	A	A	A	A	A	A	A	A	A	A
BEET SUGAR LIQUIDS	A	B	A	A	A	-	A	A	A	-	A	A	A	A	A	A	A	A	A
BENZALDEHYDE	C	C	A	A	A	A	A	C	C	C	A	A	C	A	A	C	C	C	C
BENZENE	A	A	A	A	A	A	A	C	C	C	B	A	C	-	A	C	C	C	C
BENZOIC ACID	C	C	A	A	B	B	A	A	A	A	A	A	A	C	A	A	C	C	B
BLACK SULFATE LIQUOR	A	A	-	A	A	-	-	A	A	-	-	A	-	-	A	A	B	B	-
BLEACH SOLUTIONS	SEE SODIUM HYPOCHLORITE																		

Ratings: A: Excellent - can and is being used successfully; B: Moderate Resistance - Proceed with Caution; C: Should not be used; V: Varies by chemical type or formulation; —: Insufficient information.

The information in this guide is offered as a general aid for selecting the appropriate pump materials of construction. It has been compiled from sources we believe to be reliable however no guarantee is made or implied. Corrosion rates vary widely depending upon concentration, temperature and the presence of trace elements in the process liquid. The pump user should be knowledgeable with the chemicals and operating conditions of the application and is responsible for the final material selection. Chart is based on pumped fluid temperature of 70°F maximum.



CORROSION RESISTANCE GUIDE

CHEMICALS	METALS							PLASTICS							ELASTOMERS				
	CAST IRON	CAST STEEL	304 STAINLESS	316 STAINLESS	ALLOY 20	ALLOY B	ALLOY C	PVC	CPVC	POLYETHYLENE	POLYPROPYLENE	PVDF (KYNAR)	ACRYLIC	NYLON	PTFE	VITON	EPDM	HYPALON (CSM)	NEOPRENE
BORAX (SODIUM BORATE)	A	-	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
BORIC ACID	C	C	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A	A	C
BROMIC ACID	C	C	C	C	C	-	-	A	-	-	-	A	-	-	A	-	-	-	-
BROMINE	C	C	C	C	C	-	-	C	C	C	C	A	C	C	A	A	C	C	C
BUTADIENE	A	A	A	A	A	A	A	A	A	-	-	A	-	C	A	B	A	B	B
BUTANE	A	A	A	A	A	A	A	B	B	C	A	A	-	A	A	B	C	B	A
BUTYL ACETATE	-	-	-	A	A	A	A	B	B	A	B	B	-	A	A	C	B	C	C
BUTYL ALCOHOL	-	B	A	A	A	-	-	B	A	A	A	A	-	B	A	A	B	A	A
BUTYL MERCAPTAN	C	C	B	B	B	-	A	-	-	-	-	A	-	-	A	B	-	C	-
BUTYRIC ACID	C	C	B	A	A	A	A	B	C	C	-	A	-	B	A	B	B	C	C
CALCIUM ACETATE	C	-	A	A	A	A	A	A	-	-	-	A	-	-	A	C	A	-	-
CALCIUM BISULFITE	C	C	B	A	A	-	A	A	A	-	-	A	A	A	A	C	A	-	A
CALCIUM CARBONATE	-	-	A	A	A	-	-	A	A	A	A	A	A	A	A	A	A	A	A
CALCIUM CHLORATE	C	C	A	A	B	-	A	A	A	A	-	A	A	-	A	A	A	B	-
CALCIUM CHLORIDE	C	C	-	B	-	-	-	A	A	A	A	A	A	A	A	A	A	A	A
CALCIUM FLUORIDE	C	C	C	-	A	-	A	A	-	-	-	A	-	-	A	A	-	-	-
CALCIUM HYDROXIDE	A	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
CALCIUM HYPOCHLORITE	C	C	B	B	B	C	A	A	A	A	A	A	-	C	A	A	A	-	C
CALCIUM NITRATE	B	A	B	A	A	A	A	A	A	A	A	A	-	A	A	A	-	A	A
CALCIUM SULFATE	A	A	A	A	A	A	A	A	-	A	A	A	-	C	A	A	A	A	B
CANE SUGAR LIQUORS	-	-	-	A	A	-	A	B	A	-	A	A	-	-	A	B	A	-	-
CARBOLIC ACID	SEE PHENOL																		
CARBON BISULFIDE	A	A	A	A	A	A	A	C	C	-	-	-	C	A	A	A	C	C	C
CARBON TETRACHLORIDE	A	A	A	A	A	B	A	C	C	C	C	A	C	C	A	A	C	C	C
CARBONIC ACID	C	C	A	A	A	A	A	A	-	A	A	A	-	-	A	A	A	-	-
CASTER OIL	-	-	A	A	A	A	A	A	-	A	-	A	A	-	A	A	B	A	-
CAUSTIC (CAUSTIC SODA)	SEE SODIUM HYDROXIDE																		
CELLOSOLVE	A	A	A	A	A	A	A	A	-	A	A	-	-	-	A	B	A	-	-
CHLORAL HYDRATE	-	-	-	-	A	-	-	A	A	-	-	A	-	-	A	-	-	-	-
CHLORACETIC ACID	C	C	C	C	A	B	A	A	C	B	B	A	-	C	A	C	A	-	C
CHLORINE, LIQUID	SEE SODIUM HYPOCHLORITE																		
CHLOROBENZENE (DRY)	B	B	B	A	A	A	-	C	C	C	A	A	C	C	A	A	C	C	C
CHLOROFORM	B	B	A	A	A	A	A	C	C	C	C	A	C	A	A	A	C	C	C
CHLOROSULFONIC ACID	C	C	C	B	C	-	-	C	C	C	C	C	-	C	A	C	C	C	C
CLOROX® (BLEACH)	SEE SODIUM HYPOCHLORITE																		
CHROMIC ACID, 10%	C	C	B	B	A	-	A	A	A	A	A	A	C	C	A	B	C	B	C
CHROMIC ACID, 50%	C	C	C	B	A	C	A	A	-	A	B	A	C	C	A	A	C	A	C
CITRIC ACID	C	C	B	A	A	A	A	A	A	A	A	A	-	A	A	A	A	B	A
COPPER ACETATE	-	C	A	A	A	A	A	A	-	-	-	A	-	-	A	C	A	-	-
COPPER CHLORIDE	C	C	C	C	C	C	A	A	A	A	A	A	-	C	A	A	A	B	A
COPPER CYANIDE	-	C	A	A	-	-	-	A	A	A	A	A	-	C	A	A	A	B	A
COPPER NITRATE	-	C	A	A	-	-	-	A	A	A	A	A	-	C	A	A	A	B	A
COPPER SULFATE	B	B	A	A	A	C	A	A	A	A	A	A	-	C	A	A	A	B	A
CORN OIL	SEE OILS, CORN																		
COTTONSEED OIL	SEE OILS, COTTONSEED																		
CRESOTE	-	-	A	A	A	-	-	C	C	-	-	C	C	-	A	A	C	C	C
CRESYLIC ACID, 50%	A	A	A	A	A	A	A	B	C	-	A	B	C	C	A	A	C	C	C
CYCLOHEXANE	B	B	A	A	A	A	A	C	-	C	B	A	C	A	A	A	C	C	C
DETERGENTS	-	A	A	A	-	-	B	A	A	A	A	A	-	A	A	A	A	B	B
DICHLOROETHANE	-	-	A	A	A	-	-	C	C	-	-	A	-	A	A	B	-	B	C

Ratings: A: Excellent - can and is being used successfully; B: Moderate Resistance - Proceed with Caution; C: Should not be used; V: Varies by chemical type or formulation; —: Insufficient information.

The information in this guide is offered as a general aid for selecting the appropriate pump materials of construction. It has been compiled from sources we believe to be reliable however no guarantee is made or implied. Corrosion rates vary widely depending upon concentration, temperature and the presence of trace elements in the process liquid. The pump user should be knowledgeable with the chemicals and operating conditions of the application and is responsible for the final material selection. Chart is based on pumped fluid temperature of 70°F maximum.



CORROSION RESISTANCE GUIDE

CHEMICALS	METALS							PLASTICS						ELASTOMERS					
	CAST IRON	CAST STEEL	304 STAINLESS	316 STAINLESS	ALLOY 20	ALLOY B	ALLOY C	PVC	CPVC	POLYETHYLENE	POLYPROPYLENE	PVDF (KYNAR)	ACRYLIC	NYLON	PTFE	VITON	EPDM	HYPALON (CSM)	NEOPRENE
DIETHYLAMINE	B	A	A	A	A	-	-	C	-	-	-	C	-	A	A	A	B	C	A
DIETHYLENE GLYCOL	-	A	A	A	A	-	-	B	A	A	A	A	-	A	A	A	A	B	A
DOWTHERM OIL	-	-	A	A	A	-	-	C	-	-	-	-	-	A	A	C	-	-	
DYES	-	-	-	A	-	-	-	B	-	-	-	-	-	A	A	-	-	B	
ETDA	-	-	A	A	A	-	-	-	-	-	-	-	-	A	-	-	-	-	
ETHERS (ETHYL)	A	A	A	A	A	A	A	C	C	B	B	C	A	A	B	C	C	C	
ETHYL ACETATE	A	B	A	A	A	-	A	C	C	B	A	C	C	A	A	C	A	C	
ETHYL ALCOHOL (ETHANOL)	-	-	A	A	A	-	-	A	-	A	A	C	A	A	A	A	B	A	
ETHYL BUTYRATE	-	-	A	A	A	-	-	C	-	C	C	-	C	-	A	-	C	C	
ETHYL CHLORIDE	A	A	A	A	A	A	A	C	C	C	C	A	C	A	A	B	C	B	
ETHYL MERCAPTAN	-	-	-	A	-	-	-	-	-	-	-	-	-	A	-	C	C	C	
ETHYLENE CHLORIDE	-	-	A	A	-	-	-	C	C	B	B	A	-	A	A	B	C	C	
ETHYLENE GLYCOL	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
ETHYLENE OXIDE	C	B	A	A	A	-	-	C	B	-	B	A	-	A	A	C	B	C	
FERROUS SULFATE	C	B	C	B	A	B	A	A	A	A	A	A	-	C	A	A	A	B	
FATTY ACIDS	C	C	A	A	A	A	-	A	A	A	A	A	-	A	A	A	C	B	
FERRIC CHLORIDE	C	C	C	C	C	C	C	A	A	A	A	A	-	A	A	A	A	B	
FERRIC NITRATE	-	-	A	A	A	C	B	A	A	A	A	A	-	A	A	A	A	A	
FERRIC SULFATE	C	C	B	A	A	C	A	A	A	A	A	A	-	A	A	A	A	A	
FERROUS CHLORIDE	C	C	C	C	C	A	A	A	A	A	A	A	-	C	A	A	A	A	
FILTER AID SURRIES	A	A	A	A	A	A	-	A	A	-	-	A	-	-	A	A	A	A	
FLUOSILICIC ACID	C	C	C	B	B	C	B	B	A	A	A	A	-	C	A	A	A	A	
FORMALDEHYDE	B	B	A	A	A	A	A	A	A	A	A	A	-	C	A	C	A	B	
FORMIC ACID	C	C	A	A	A	A	A	A	A	A	A	C	C	A	C	A	B	B	
FREONS	-	-	A	A	-	-	-	-	V	-	-	V	-	V	A	C	V	V	
FRUIT JUICE	C	C	B	A	A	-	-	A	A	A	A	A	-	A	A	A	A	B	
FUEL OIL	SEE OIL, FUEL																		
FURFURAL	A	A	A	A	A	A	A	C	C	B	C	B	-	B	A	C	A	B	
GALLIC ACID, 5%	-	C	A	A	A	-	-	A	B	A	A	A	-	A	A	A	B	C	
GASOLINE	-	A	A	A	A	-	-	A	-	B	B	A	-	A	A	A	C	V	
GLUCOSE	-	-	A	A	A	-	-	A	A	A	A	A	-	A	A	A	A	B	
GLYCEROL (GLYCERINE)	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
HEPTANE (HEXANE)	-	-	A	A	A	-	-	A	A	A	A	A	-	A	A	A	C	B	
HYDRAZINE	C	C	A	A	-	-	-	C	C	-	-	A	-	-	A	A	A	B	
HYDROBROMIC ACID, ≥20%	C	C	C	C	C	A	B	A	A	A	A	A	-	C	A	A	A	A	
HYDROCHLORIC ACID, 20%	C	C	C	C	C	A	B	A	A	A	A	A	B	C	A	A	A	V	
HYDROCHLORIC ACID, 100%	C	C	C	C	C	A	A	C	A	A	B	A	-	C	A	A	C	V	
HYDROCYANIC ACID	C	C	A	A	A	A	A	A	-	A	A	-	-	B	A	A	A	B	
HYDROFLUORIC ACID, 20%	C	C	C	C	C	-	B	B	C	-	-	A	C	C	A	A	C	B	
HYDROFLUORIC ACID, 50%	C	C	C	C	C	-	B	B	C	-	-	A	C	C	A	B	C	B	
HYDROFLUORIC ACID, 75%	C	C	C	C	C	-	B	C	C	-	-	A	C	C	A	B	C	B	
HYDROFLUOSILICIC ACID	C	C	C	C	C	C	B	A	-	-	A	A	-	C	A	A	A	C	
HYDROGEN PEROXIDE, 10%	C	C	A	A	-	-	-	-	A	A	A	A	C	C	A	A	A	C	
HYDROGEN PEROXIDE, 50%	C	C	B	A	-	-	-	A	A	B	A	A	C	C	A	A	B	C	
HYDROGEN SULFIDE	C	C	A	A	A	-	A	A	A	A	A	A	-	C	A	A	A	V	
IODINE SOLUTIONS	C	C	-	C	C	C	-	C	C	B	B	A	-	B	A	B	B	C	
KEROSENE	-	A	A	A	A	A	A	A	-	B	A	A	-	A	A	A	C	C	
LACTIC ACID (TO 60%)	C	C	B	A	A	A	A	A	A	A	A	A	-	B	A	A	B	A	
LACTIC ACID 60%	C	C	B	B	B	B	B	C	-	A	A	A	-	B	A	B	A	-	
LEAD ACETATE	-	C	A	A	A	-	-	A	A	A	A	A	-	A	A	C	A	A	

Ratings: A: Excellent - can and is being used successfully; B: Moderate Resistance - Proceed with Caution; C: Should not be used; V: Varies by chemical type or formulation; —: Insufficient information.

The information in this guide is offered as a general aid for selecting the appropriate pump materials of construction. It has been compiled from sources we believe to be reliable however no guarantee is made or implied. Corrosion rates vary widely depending upon concentration, temperature and the presence of trace elements in the process liquid. The pump user should be knowledgeable with the chemicals and operating conditions of the application and is responsible for the final material selection. Chart is based on pumped fluid temperature of 70°F maximum.



CORROSION RESISTANCE GUIDE

CHEMICALS	METALS							PLASTICS						ELASTOMERS					
	CAST IRON	CAST STEEL	304 STAINLESS	316 STAINLESS	ALLOY 20	ALLOY B	ALLOY C	PVC	CPVC	POLYETHYLENE	POLYPROPYLENE	PVDF (KYNAR)	ACRYLIC	NYLON	PTFE	VITON	EPDM	HYPALON (CSM)	NEOPRENE
LIME SLURRIES	A	A	A	A	A	-	-	A	A	-	-	A	-	A	A	A	B	-	A
LINSEED OIL	SEE OILS, LINSEED																		
MAGNESIUM CARBONATE	-	-	A	A	-	-	-	A	A	A	A	A	-	-	A	A	A	A	A
MAGNESIUM CHLORIDE	C	C	C	C	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
MAGNESIUM HYDROXIDE	-	A	A	A	A	A	A	A	A	A	A	A	-	B	A	A	A	A	A
MAGNESIUM NITRATE	-	-	A	A	A	-	A	A	A	A	A	A	-	A	A	A	A	A	A
MAGNESIUM SULFATE	-	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
MALEIC ACID	C	C	A	A	A	A	A	A	A	-	A	A	-	A	A	A	C	C	C
MALIC ACID	C	C	A	A	A	A	A	A	-	A	A	A	-	A	A	A	C	C	C
MELAMINE RESINS	C	C	A	A	A	A	A	A	-	-	-	-	-	A	A	A	A	-	C
MERCURIC CHLORIDE, DILUTE	C	C	C	C	A	C	A	A	-	A	A	A	-	C	A	A	A	A	-
MERCURIC CYANIDE	C	C	B	B	-	-	-	A	A	A	A	A	-	B	A	A	A	-	A
MERCURY	A	A	A	A	A	A	A	A	-	A	A	A	-	A	A	A	A	A	-
METHANOL (METHYL ALCOHOL)	A	A	A	A	A	A	A	A	A	A	A	A	-	B	A	B	A	A	A
METHYL ACETATE	-	-	A	A	A	-	-	C	C	C	C	A	-	A	A	C	A	C	B
METHYL ACETONE	-	A	A	A	A	-	-	C	C	-	-	C	-	A	A	C	A	-	C
METHYL BROMIDE	-	-	-	A	-	-	-	C	C	B	B	A	-	B	A	B	C	C	C
METHYL CELLOSOLVE	-	A	A	A	A	-	-	-	C	-	-	A	-	-	A	C	A	C	-
METHYL CHLORIDE	A	B	A	A	A	A	A	C	C	B	B	A	-	B	A	B	C	C	C
METHYL ETHYL KETONE (MEK)	A	A	A	A	A	-	-	C	C	C	B	C	C	B	A	C	A	C	C
METHYLENE CHLORIDE	-	A	A	A	-	-	-	C	-	B	B	B	-	C	A	B	C	C	C
MOLASSES	A	A	A	A	A	-	-	A	A	A	A	A	-	A	A	A	A	A	A
MONO CHLORACETIC ACID	C	C	C	C	B	A	A	A	-	-	A	-	-	-	A	B	-	A	-
MORPHOLINE	A	A	A	A	A	A	A	A	-	-	-	B	-	A	A	C	-	-	-
MURIATIC ACID	SEE HYDROCHLORIC ACID																		
NAPHTHA	-	A	A	A	A	A	A	A	-	B	A	A	-	A	A	A	C	C	-
NAPHTHALENE	A	A	A	A	A	-	A	C	-	A	A	A	-	A	A	A	C	C	-
NICKEL CHLORIDE	C	C	C	-	-	-	-	A	A	-	-	A	-	B	A	A	A	A	B
NICKEL NITRATE	-	C	A	A	-	-	-	A	-	A	A	A	-	A	A	A	A	C	-
NICKEL SULFATE	C	C	A	A	A	C	A	A	-	A	A	A	-	A	A	A	A	-	-
NICOTINIC ACID	C	A	A	A	A	-	-	A	-	A	A	-	-	-	A	A	-	-	-
NITRIC ACID (5-10% SOLUTION)	C	C	B	A	B	C	B	A	A	A	C	A	C	-	A	A	A	A	B
NITRIC ACID (70% SOLUTION)	C	C	A	B	B	C	B	A	-	B	C	B	C	-	A	B	C	C	C
NITROBENZENE	B	B	B	A	A	-	-	C	C	-	-	A	C	B	A	B	B	C	C
OILS, CORN	-	-	A	A	-	-	-	A	A	A	-	A	A	A	A	A	B	-	A
OILS, COTTONSEED	A	A	A	A	A	A	A	A	A	A	A	A	-	B	A	A	C	B	B
OILS, FUEL	A	A	A	A	A	-	A	A	-	-	B	A	-	A	A	B	C	C	C
OILS, LINSEED	-	A	A	A	-	-	-	A	-	B	A	A	-	A	A	A	C	B	A
OILS, MINERAL	A	A	A	A	A	A	A	-	-	B	A	A	A	-	A	A	C	A	B
OLEIC ACID	-	-	-	A	A	A	A	A	-	B	A	A	-	A	A	B	B	B	B
OLEUM	C	A	B	A	A	C	A	C	C	C	C	V	C	C	A	C	C	C	C
OXALIC ACID	C	C	B	B	A	A	A	A	A	A	A	A	A	B	A	A	A	B	C
PALMITIC ACID	-	-	A	A	-	-	-	A	-	A	A	A	-	A	A	A	-	C	-
PERCHLORIC ACID, 10%	C	C	C	C	C	-	-	B	-	A	A	A	C	C	A	A	B	-	-
PERCHLOROETHYLENE (DRY)	-	-	A	A	A	-	-	C	-	C	C	A	C	C	A	A	-	C	-
PHENOL (CARBOLIC ACID)	C	C	A	A	A	A	A	B	-	B	A	A	C	C	A	A	C	C	C
PHOSPHORIC ACID (TO 50% SOLUTION)	C	C	B	B	A	-	-	A	-	-	A	A	-	B	A	A	B	B	B
PHOSPHORIC ACID (TO 80% SOLUTION)	C	C	B	B	A	-	-	A	-	-	A	A	-	-	A	-	-	-	-
PHOSPHOROUS TRICHLORIDE	-	-	-	A	A	C	A	C	C	-	-	A	-	-	A	A	A	C	C
PICRIC ACID	C	C	A	A	A	A	A	C	C	A	A	A	-	B	A	A	B	B	A

Ratings: A: Excellent - can and is being used successfully; B: Moderate Resistance - Proceed with Caution; C: Should not be used; V: Varies by chemical type or formulation; —: Insufficient information.

The information in this guide is offered as a general aid for selecting the appropriate pump materials of construction. It has been compiled from sources we believe to be reliable however no guarantee is made or implied. Corrosion rates vary widely depending upon concentration, temperature and the presence of trace elements in the process liquid. The pump user should be knowledgeable with the chemicals and operating conditions of the application and is responsible for the final material selection. Chart is based on pumped fluid temperature of 70°F maximum.



CORROSION RESISTANCE GUIDE

CHEMICALS	METALS							PLASTICS							ELASTOMERS				
	CAST IRON	CAST STEEL	304 STAINLESS	316 STAINLESS	ALLOY 20	ALLOY B	ALLOY C	PVC	CPVC	POLYETHYLENE	POLYPROPYLENE	PVDF (KYNAR)	ACRYLIC	NYLON	PTFE	VITON	EPDM	HYPALON (CSM)	NEOPRENE
POLYMER	-	-	-	A	-	-	-	-	-	-	-	-	-	V	A	-	-	-	-
POTASSIUM BICARBONATE	-	-	A	A	-	-	-	A	A	A	A	B	-	A	A	A	A	-	A
POTASSIUM BROMATE	-	-	-	-	-	-	-	A	-	A	A	A	-	A	-	-	-	-	-
POTASSIUM BROMIDE	C	C	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	-	A
POTASSIUM CARBONATE	B	A	A	A	A	A	A	A	A	A	A	A	-	-	A	A	A	A	A
POTASSIUM CHLORATE	-	A	A	A	-	-	-	A	-	A	A	A	-	C	A	A	A	-	A
POTASSIUM CHLORIDE	C	C	C	A	A	A	A	A	-	A	A	A	A	A	A	A	A	A	A
POTASSIUM CHROMATE	B	A	A	A	A	A	A	A	-	A	A	B	-	B	A	A	A	-	A
POTASSIUM CYANIDE	A	A	A	A	A	A	A	A	-	A	A	A	-	A	A	A	-	A	-
POTASSIUM DICHROMATE	-	-	-	A	A	-	-	A	A	-	A	A	-	B	A	A	A	A	A
POTASSIUM FLUORIDE	-	A	A	A	A	-	-	B	-	A	A	A	-	-	A	-	-	-	-
POTASSIUM HYDROXIDE	B	B	B	A	A	A	A	A	A	A	A	A	-	C	A	B	A	A	A
POTASSIUM NITRATE	-	A	A	A	A	C	A	A	-	A	A	A	-	B	A	A	-	A	-
POTASSIUM PERMANGANATE	A	A	A	A	A	C	A	A	A	A	B	A	-	C	A	A	A	A	A
POTASSIUM MONO PHOSPHATE	C	C	A	A	A	A	A	A	-	-	-	A	-	-	A	A	-	-	-
POTASSIUM DI-PHOSPHATE	A	A	A	A	A	A	A	A	-	-	-	A	-	-	A	A	-	-	-
POTASSIUM SULFATE	A	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
POTASSIUM SULFIDE	-	-	A	A	A	-	-	A	A	A	A	A	-	A	A	A	A	B	A
POTASSIUM SULFITE	-	-	A	A	A	-	-	A	-	A	A	A	-	-	A	A	-	-	-
POTASSIUM TETRA BORATE	-	-	-	-	-	-	-	A	-	A	A	-	-	-	A	-	-	-	-
PROPANE (LIQUID)	-	-	A	A	A	-	-	A	A	B	A	A	-	-	A	A	C	B	C
PROPYL ALCOHOL	B	-	A	A	A	-	-	A	A	A	A	A	-	C	A	A	A	B	A
PROPYLENE GLYCOL	A	A	A	A	A	-	-	C	B	A	B	A	-	-	A	A	-	-	-
RESINS & ROSINS	-	C	A	A	-	A	A	C	C	-	-	-	-	-	A	A	C	C	C
SALICYLIC ACID	-	-	-	-	A	-	-	A	-	-	-	A	-	-	A	-	-	-	-
SEA WATER	SEE WATER, SALT																		
SILVER NITRATE	C	C	A	A	A	-	-	A	-	A	A	A	-	-	A	A	A	A	A
SOAP SOLUTIONS	-	-	-	A	-	-	-	-	-	A	A	A	-	A	A	A	A	A	B
SODIUM ACETATE	A	A	B	A	A	A	A	A	A	A	A	A	-	B	A	A	A	-	B
SODIUM ALUMINATE	B	B	A	A	A	A	A	B	-	-	-	-	-	A	A	A	A	A	A
SODIUM BICARBONATE	A	A	A	A	A	A	A	A	A	A	-	A	-	A	A	A	A	A	A
SODIUM BISULFATE (TO 100F)	C	C	B	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
SODIUM BISULFITE	C	C	A	A	A	A	A	A	A	A	A	A	-	C	A	A	A	A	A
SODIUM BORATE	SEE BORAX																		
SODIUM BROMIDE	C	C	C	C	B	-	-	B	A	A	-	A	-	B	A	A	A	B	A
SODIUM CARBONATE (SODA ASH)	A	A	A	A	A	A	A	A	A	A	A	A	-	B	A	A	A	A	A
SODIUM CHLORATE	-	-	A	A	-	C	A	A	A	A	A	A	-	C	A	A	A	A	A
SODIUM CHLORIDE	C	C	B	B	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A
SODIUM CHLORITE ≥20%	C	C	C	C	C	-	A	C	-	-	-	A	-	-	A	-	-	-	-
SODIUM CHROMATE	A	A	A	A	A	A	A	A	-	A	A	A	-	C	A	A	-	B	A
SODIUM CYANIDE	A	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	-
SODIUM FLUORIDE	C	C	C	B	B	-	-	A	B	A	A	A	-	B	A	A	A	B	-
SODIUM HYDROXIDE, 25%	B	B	A	A	A	A	A	A	A	A	A	A	-	A	A	C	A	A	B
SODIUM HYDROXIDE, 50%	B	A	A	A	A	A	A	A	A	A	A	A	-	A	A	C	A	A	B
SODIUM HYPOCHLORITE	C	C	C	C	C	B	A	A	A	A	C	A	A	C	A	A	B	-	-
SODIUM METAPHOSPHATE	C	C	A	A	A	-	-	A	A	-	-	A	A	A	A	A	A	B	B
SODIUM NITRATE	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B
SODIUM PERBORATE	A	-	A	A	A	A	A	A	-	-	-	A	-	-	A	-	-	-	-
SODIUM PEROXIDE	A	A	A	A	A	A	A	B	A	-	-	A	-	A	A	A	A	B	B
SODIUM MONO PHOSPHATE	C	C	B	A	A	A	A	A	-	A	A	A	-	A	A	A	A	-	-

Ratings: A: Excellent - can and is being used successfully; B: Moderate Resistance - Proceed with Caution; C: Should not be used; V: Varies by chemical type or formulation; —: Insufficient information.

The information in this guide is offered as a general aid for selecting the appropriate pump materials of construction. It has been compiled from sources we believe to be reliable however no guarantee is made or implied. Corrosion rates vary widely depending upon concentration, temperature and the presence of trace elements in the process liquid. The pump user should be knowledgeable with the chemicals and operating conditions of the application and is responsible for the final material selection. Chart is based on pumped fluid temperature of 70°F maximum.



CORROSION RESISTANCE GUIDE

CHEMICALS	METALS							PLASTICS							ELASTOMERS					
	CAST IRON	CAST STEEL	304 STAINLESS	316 STAINLESS	ALLOY 20	ALLOY B	ALLOY C	PVC	CPVC	POLYETHYLENE	POLYPROPYLENE	PVDF (KYNAR)	ACRYLIC	NYLON	PTFE	VITON	EPDM	HYPALON (CSM)	NEOPRENE	
SODIUM DI OR TRI-PHOSPHATE	A	A	A	A	A	A	A	A	-	A	A	A	-	A	A	A	A	-	-	
SODIUM POLYPHOSPHATE	C	C	A	A	A	A	A	A	A	-	-	A	-	A	A	A	A	B	B	
SODIUM SILICATE	B	B	A	A	A	A	A	B	A	-	A	A	A	A	A	A	A	A	A	
SODIUM SULFATE	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
SODIUM SULFIDE	C	C	B	A	A	A	A	B	A	A	A	A	-	A	A	A	A	A	A	
SODIUM SULFITE	A	A	A	A	A	C	A	A	-	A	A	A	-	C	A	A	A	-	-	
SODIUM THIOSULFATE ("HYPO")	B	-	-	A	-	-	-	-	-	-	A	A	-	-	A	A	A	-	-	
STARCH	B	B	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A	A	
STEARIC ACID	-	-	B	A	A	A	A	A	-	A	A	A	-	A	A	A	A	C	B	
SUGAR (LIQUIDS)	A	A	A	A	A	A	A	A	-	-	-	A	-	A	A	A	A	A	A	
SULFITE LIQUORS	-	-	-	B	-	-	-	-	-	-	-	A	-	A	A	-	-	-	-	
SULFUR, MOLTEN	A	A	A	A	A	A	A	A	-	A	B	A	C	-	A	A	C	-	-	
SULFUR CHLORIDE	-	-	-	B	-	-	-	B	B	-	A	A	-	A	A	A	C	-	C	
SULFUR DIOXIDE (LIQUID)	A	A	A	A	A	A	A	A	A	A	A	A	-	C	A	C	A	C	B	
SULFURIC ACID, 0-40%	C	C	C	C	A	A	A	A	A	A	A	A	C	C	A	A	A	A	A	
SULFURIC ACID, 40-95%	C	C	C	C	A	A	A	B	B	C	C	A	C	C	A	A	B	A	B	
SULFURIC ACID, 95-100%	C	C	C	C	A	A	A	C	B	C	C	A	C	C	A	A	C	C	C	
SULFUROUS ACID	C	C	B	B	A	-	A	A	A	A	A	A	C	C	A	A	B	A	B	
TANNIC ACID	A	B	A	A	A	A	A	A	A	A	A	B	-	C	A	A	A	A	A	
TARTARIC ACID	B	B	B	A	A	A	A	A	A	A	A	A	-	B	A	A	B	A	A	
TETRACHLOROETHANE	A	-	-	A	-	-	-	C	C	-	-	A	-	C	A	A	C	C	C	
TITANIUM DIOXIDE	A	A	A	A	A	A	A	B	-	-	-	A	-	-	A	A	A	A	-	
TOLUOL & TOLUENE	A	A	A	A	A	A	A	C	C	B	B	C	-	A	A	A	C	C	C	
TRICHLOROETHYLENE	A	A	A	A	A	A	A	C	C	C	C	B	-	B	A	A	C	C	C	
TRI-SODIUM PHOSPHATE	SEE SODIUM DI OR TRI-PHOSPHATE																			
TURPENTINE	A	A	A	A	-	-	-	A	A	C	B	A	-	-	B	A	A	A	C	C
UREA FORMALDEHYDE	-	A	A	A	A	-	-	-	-	A	A	A	-	-	A	-	-	-	-	
VARNISH	-	B	A	A	A	-	-	C	C	-	-	-	-	A	A	A	C	C	C	
VINEGAR	-	-	A	A	A	-	-	B	A	A	A	B	A	A	A	A	A	A	B	
VINYL ACETATE	-	A	-	A	-	-	-	-	-	-	-	A	-	-	A	A	B	A	C	
WATER, DEIONIZED	C	C	A	A	A	-	-	A	A	A	A	A	A	A	A	A	A	A	A	
WATER, DISTILLED	B	-	A	A	-	-	-	A	A	A	A	A	A	A	A	A	A	-	A	
WATER, SALT	C	C	C	B	A	-	-	-	-	A	A	A	A	A	A	A	A	-	A	
WHISKEY & WINES	-	-	A	A	A	-	-	A	A	A	A	A	-	A	A	A	A	A	B	
XYLENE	-	-	A	A	A	-	-	C	C	C	C	A	C	A	A	-	C	C	C	
ZINC CHLORIDE	C	C	C	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
ZINC HYDROSULFITE	C	C	B	B	A	A	A	A	-	-	-	-	-	A	A	A	A	-	A	
ZINC NITRATE	C	C	-	A	A	-	-	A	A	-	-	A	-	-	A	A	A	A	-	
ZINC SULFATE	C	C	A	A	A	-	-	A	A	A	A	A	A	A	A	A	A	A	A	

Ratings: A: Excellent - can and is being used successfully; B: Moderate Resistance - Proceed with Caution; C: Should not be used; V: Varies by chemical type or formulation; —: Insufficient information.

The information in this guide is offered as a general aid for selecting the appropriate pump materials of construction. It has been compiled from sources we believe to be reliable however no guarantee is made or implied. Corrosion rates vary widely depending upon concentration, temperature and the presence of trace elements in the process liquid. The pump user should be knowledgeable with the chemicals and operating conditions of the application and is responsible for the final material selection. Chart is based on pumped fluid temperature of 70°F maximum.

Where Innovation Flows



PSG
22069 Van Buren Street
Grand Terrace, CA 92313-5651 USA
P: +1 (909) 422-1700 • F: +1 (909) 783-3440
psgdover.com/neptune

PSG reserves the right to modify the information and illustrations contained in this document without prior notice. This is a non-contractual document. 12-2023

Authorized PSG Representative:

Copyright ©2023, PSG, a Dover company