

Carbon Dioxide (wet)	D	A	A	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A
Carbon Disulphide	B	B	B	D	D	C	B	-	B	D	D	D	A	C	D	D	D	D
Chlorine gas (moist)	D	D	D	D	D	D	B	-	D	B	D	D	A	D	D	D	B	D
Condensate (steam)	A	A	A	C	B	A	A	A	A	D	D	D	A	-	D	D	D	B
Copper sulphate (0-100%)	D	B	B	D	D	D	B	-	A	A	A	A	A	A	A	A	A	A
Ethane	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	A	A	D
Ethers	B	A	A	A	A	A	B	A	A	-	-	-	A	C	C	D	C	D
Ethylene glycol	B	A	A	A	A	A	A	A	A	A	A	A	A	A	C	A	A	A
Fatty acids	C	B	B	B	B	A	A	-	A	A	A	-	A	A	-	B	B	D
Ferric Chloride (5%)	D	D	D	D	D	D	B	-	D	-	-	D	A	A	A	A	A	A
Ferrous sulphate	D	B	B	D	D	B	B	-	B	-	-	A	A	A	A	A	A	A
Foam (fire)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Formaldehyde (hot) (40%)	D	B	B	B	B	B	B	-	B	D	D	A	A	A	-	B	B	A
Formaldehyde (cold) (40%)	D	B	B	B	B	B	B	-	B	A	A	A	A	A	A	A	A	A
formic acid (0-50%)	D	D	C	C	C	C	A	-	B	A	A	A	A	D	D	A	D	A
Freon (dry)	B	A	A	A	A	A	A	A	A	-	B	-	A	A	D	A	A	C
Gas condensate	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	B	A	D
Gas, fuel	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	B	B	D
Gas, inert	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Gas, liquified petroleum	A	B	B	D	D	A	A	A	A	D	D	D	A	A	D	B	A	D
Gas, natural	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	A	A	D
Gas, produced	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	A	B	D
Gas, sour	A	A	A	D	D	A	A	A	B	D	D	D	A	A	D	A	B	D
Glycols	A	A	A	A	A	B	A	A	-	A	A	C	A	B	A	A	A	A
Halon	A	A	A	A	A	A	A	A	A	-	-	-	-	A	A	A	A	-
Helium	-	A	A	D	A	-	A	A	A	-	-	-	A	-	A	A	A	-
Hydrogen	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A
Hydrochloric acid (to 30%)	D	D	D	D	D	D	B	D	D	A	A	A	A	D	A	D	D	A

Hydrofluoric acid (conc.) D D D B D B B D D A A A A D D D D C

Key: **A:** Excellent resistance **B:** Fair to good resistance **C:** Poor resistance **D:** Not recommended

Chemical Resistance Chart

The list of chemicals is offered as a guide to the chemical resistance properties of the material shown. It should be used as a guide only, as the degree of resistance depends upon such variables as temperature, concentration, pressure conditions, velocity of flow, duration of exposure, aeration, stability of the fluids, etc.

(continued)

<i>Fluid</i>	<i>Material</i>																		
	Carbon steel	304 SS	316 SS	Alum. Bronze	Bronze	Monel	Hastelloy C	22% Cr Duplex	17-4 PH SS	UPVC	PP	ABS	PTFE	Nylon	Natural rubber	Neoprene	NBR (Nitrile)	EPDM	FKM (Viton)
Hydrogen peroxide (dilute)	D	B	B	C	D	B	A	-	B	A	A	A	A	D	B	D	B	A	A
Hydrogen peroxide (conc.)	D	B	B	D	D	B	B	-	B	-	D	D	A	-	B	D	D	B	B
Hydrogen sulphide	C	C	B	C	C	C	B	-	D	A	A	A	A	-	C	B	D	A	A
Kerosene	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	B	A	D	A
Methane	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	D	A	D	A
Methyl alcohol (0-100%)	B	B	A	B	B	A	A	-	A	A	A	A	A	A	A	A	A	A	C
Mud, drilling	A	A	A	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Nitrogen	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Oil, crude (sweet)	B	A	A	D	D	A	A	A	A	D	D	D	A	A	D	B	A	D	A

Oil, crude (sour)	C	A	A	D	D	A	A	A	B	D	D	D	A	-	D	B	A	D	A
Oil, diesel fuel	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	B	A	D	A
Oil, hydraulic	A	A	A	B	B	A	A	A	A	D	D	D	A	A	D	A	A	C	A
Oil, lubricating	A	A	A	B	B	A	A	A	A	D	D	D	A	A	D	A	A	D	A
Oil, petroleum (refined)	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	B	A	D	A
Oil, petroleum (sour)	A	A	A	D	D	A	A	A	B	D	D	D	A	-	D	B	A	D	A
Oleic acid	C	B	B	C	C	A	A	-	B	A	A	A	A	A	B	D	D	D	A
Oxygen	A	A	A	D	D	A	A	A	A	D	D	D	A	-	D	A	D	A	A
Potassium carb. (aqueous)	B	B	B	B	B	B	B	-	B	A	A	A	A	A	-	A	A	A	C
Potassium chlor. (0-10%)	D	C	B	C	C	A	A	-	C	A	A	A	A	A	-	A	A	A	A
Propane	A	A	A	D	D	A	A	A	A	D	D	D	A	A	D	A	A	D	A
Sewage	C	B	B	B	C	C	B	B	B	-	-	C	A	-	A	A	A	-	A
Sodium bisulphite (<100%)	D	B	B	B	C	B	B	-	C	A	A	-	A	A	A	A	B	A	B
Sodium chloride	C	B	B	A	A	A	A	-	B	A	A	A	A	A	A	A	A	A	A
Sodium chromate (0-10%)	A	A	A	C	C	A	A	-	A	A	A	A	A	A	A	A	A	A	A
Sodium Hydroxide (<40%)	A	B	A	B	D	A	A	-	A	A	A	A	A	C	C	A	A	A	B
Sodium Hypochlorite (7%)	D	D	C	C	D	C	A	-	C	A	B	A	A	C	C	D	D	B	A
Sodium Sulphite (25%)	B	B	B	D	D	B	B	-	B	A	A	A	A	A	-	A	A	A	A
Steam	B	A	A	C	B	A	A	A	A	D	D	D	A	-	D	D	D	B	D
Sulphur dioxide (wet)	D	C	B	B	B	C	B	-	B	A	A	D	A	-	D	D	D	A	A
Toluene	A	A	A	A	A	A	A	A	A	D	A	D	A	A	D	D	D	D	A
Tributyl phosphate	A	A	A	B	B	A	A	A	-	D	A	-	A	-	B	D	B	A	D
Water, chlorinated	D	D	C	D	D	D	B	-	-	B	B	A	B	-	A	B	D	B	B
Water, demin.	D	A	A	A	A	A	A	A	-	A	A	A	A	A	A	A	A	A	A
Water, potable	B	A	A	A	A	A	A	A	A	A	A	A	A	-	A	A	A	A	A
Water, produced	B	B	B	D	B	A	A	A	A	A	A	A	A	A	B	B	D	B	A
Water, sea (chlorinated)	D	D	C	D	D	D	B	B	D	B	B	A	B	-	A	B	D	B	B
Water, sea (deaerated)	B	B	B	A	A	A	A	B	B	A	A	A	A	A	A	B	A	A	A

Water, sea (raw)	B	C	B	A	A	A	A	B	D	A	A	A	A	A	B	B	A	A	A
Water, sea (polluted)	B	C	B	D	B	A	A	B	D	A	A	A	A	A	A	-	A	-	-
Zinc bromide	D	D	C	D	D	C	A	-	-	A	A	-	A	-	-	A	A	A	A

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For more detailed information we find web sites such as: www.coleparmer.com useful.