

A: no effect
Should be acceptable for use in a pump

B: some effect
Use if no alternative is available or if short service is acceptable

C: severe effect
Do not use

?: no data available

Duty fluid	Molecular formula	Pump Hoses				Pump Components						
		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
ACETAL	C6H14O2	C	C	C	C	C	C	C	?	A	C	?
ACETIC ACID (ICE)	CH3COOH	C	C	B	B	C	A	A	?	A	B	A
ACETIC ACID 10%	CH3COOH	A	C	A	A	C	A	?	A	A	A	A
ACETIC ACID 20%,	CH3COOH	B	C	A	A	C	A	A	A	A	A	A
ACETIC ACID 30%	CH3COOH	B	C	A	A	C	A	A	A	A	C	A
ACETIC ACID 50%	CH3COOH	B	C	A	A	C	A	A	A	A	C	A
ACETIC ACID 99%	CH3COOH	C	C	A	B	C	A	A	A	A	C	A
ACETIC ACID ANHYDRIDE	C4H6O3	C	C	B	C	C	A	?	C	A	C	B
ACETONE	C3H6O	A	C	A	C	A	A	A	C	A	A	C
ACETONITRILE	C2H3N	C	C	C	C	C	A	A	?	A	A	A
ACETOPHENONE	C8H8O	C	C	C	C	C	C	C	?	A	C	?
ACETYLENE	C2H2	C	B	C	B	A	A	A	A	A	?	A
ACRYL ARYL SULPHONATE SLURRY		A	C	A	B	?	?	?	?	?	?	?
ACRYLATE (MONOMER)		C	C	C	C	?	?	?	?	?	?	?
ACRYLATE (POLYMER)		?	?	A	?	?	?	?	?	?	?	?
ACRYLIC ACID (323 K)	C3H4O2	C	C	C	C	?	?	?	?	?	?	?
ACRYLIC MONOMER		C	C	C	C	?	?	?	?	?	?	?
ACRYLONITRILE	C3H3N	C	C	C	C	A	A	A	?	A	A	?
AIR	78% N2 + 21% O2	A	A	A	A	A	A	A	A	A	A	A
ALCOHOL (ETHYL)	C2H5OH	A	A	A	A	A	?	?	?	?	B	A
ALKYLARYL BENZENE SULPHONATE		C	A	A	C	?	?	?	?	?	?	?
ALLYL ALCOHOL	C3H5OH	A	B	A	B	?	A	A	C	A	A	A
ALLYL CHLORIDE	C3H5Cl	C	C	C	C	?	A	C	?	A	A	A
ALUM	AlK(SO4)2.12H2O	A	A	A	A	C	C	?	A	A	A	A
ALUMINIUM CHLORIDE	AlCl3	A	A	A	A	C	C	C	A	A	A	A
ALUMINIUM FLUORIDE	AlF3	A	A	A	A	C	C	?	A	A	A	A
ALUMINIUM HYDROXIDE	Al(OH)3	A	A	A	A	C	C	?	A	A	A	A
ALUMINIUM SILICATE	Al2SiO5	A	A	A	A	?	?	?	?	?	?	?
ALUMINIUM SULPHATE	Al2(SO4)3	A	A	A	A	?	?	?	A	A	A	A
AMMONIA (AQUEOUS)	NH3 in H2O	A	A	A	A	?	A	A	?	A	?	?
AMMONIA (GAS)	NH3 (g)	A	A	A	A	?	A	?	A	A	A	A
AMMONIA ANHYDRIC		A	B	A	A	A	A	A	A	A	A	A
AMMONIUM BICARBONATE	NH4HCO3	A	A	A	A	?	?	A	?	A	?	?
AMMONIUM BISULPHATE 50%	NH4HSO4	A	C	A	A	?	?	?	?	A	?	?
AMMONIUM BROMIDE	NH4Br	B	C	A	A	?	?	?	?	A	?	?
AMMONIUM CARBONATE	(NH4)2CO3	A	A	A	A	C	C	A	A	A	A	A
AMMONIUM CHLORIDE	NH4Cl	A	A	A	A	C	C	C	A	A	A	A
AMMONIUM FORMATE	NH4CO2	A	A	A	A	?	?	?	?	?	?	?
AMMONIUM HYDROXIDE	NH4OH	A	A	A	A	?	?	?	?	A	A	A
AMMONIUM METAPHOSPHATE	NH4PO3	A	A	A	A	?	A	?	?	A	A	A

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
AMMONIUM NITRATE	NH4NO3	A	A	A	A	A	A	A	B	A	A	A
AMMONIUM NITRITE	NH4NO2	A	A	A	A	?	?	?	?	A	A	A
AMMONIUM PERSULPHATE	(NH4)2S2O8	B	B	A	A	C	C	B	A	A	A	?
AMMONIUM PHOSPHATE	(NH4)2HPO4	A	A	A	A	C	C	C	A	A	A	?
AMMONIUM PROPIONATE	NH4C3H5O2	A	C	A	B	?	?	?	?	?	?	?
AMMONIUM SULPHATE	(NH4)2SO4	A	A	A	A	C	C	C	A	A	A	A
AMMONIUM THIOCYANATE	NH4SCN	A	A	A	A	?	?	B	?	A	?	?
AMYL ACETATE	C7H14O2	B	B	B	C	?	A	A	C	?	A	A
AMYL ALCOHOL	C5H11OH	B	B	B	B	A	A	A	?	A	A	A
AMYL AMINE	C5H11NH2	C	C	C	C	?	?	?	?	A	?	?
AMYL BORATE	C5H11BO3	B	C	B	C	?	?	?	?	A	?	?
AMYL BROMIDE	C5H11Br	B	C	B	C	?	?	?	?	A	?	?
AMYL CHLORIDE	C5H11Cl	C	C	C	C	?	A	C	C	A	C	A
AMYL CHLORONAPHTHALENE	C15H17Cl	C	C	C	C	?	?	?	?	A	?	?
AMYL ETHER	C10H22O	C	C	C	C	?	?	?	?	A	?	?
AMYL IODIDE	C5H11I	C	C	C	C	?	?	?	?	A	?	?
AMYL NAPHTHALENE	C15H18	C	C	C	C	?	?	?	?	A	?	?
AMYL PHENOL	C10H17O	C	C	C	C	?	A	A	?	A	?	?
AMYLENE	C5H10	C	C	C	C	?	?	?	C	A	?	?
ANILINE	C6H5NH2	C	C	C	C	?	A	A	C	A	B	A
ANILINE PAINT		B	C	C	C	?	A	?	C	A	A	?
ANIMAL FAT		C	B	C	B	?	A	A	?	A	?	A
ANIMAL GLUE		A	A	A	A	?	?	?	?	A	?	?
ANTHRAQUINONE (55 °C)	C14H8O2	A	B	A	C	?	?	?	?	?	?	?
ANTI-FREEZE	C2H6O2	A	A	A	A	A	A	A	?	A	?	?
ANTIMONY CHLORIDE 50%	SbCl3	B	C	A	A	C	C	?	A	A	A	?
AQUA REGIA	conc. HNO3 + HCl (1	C	C	B	B	C	C	C	B	A	B	C
ARSENIC ACID	H3AsO4	C	C	B	A	C	C	A	A	A	A	?
ARSENIC TRIOXIDE	As2O3	A	A	A	A	?	?	?	?	?	?	?
ASCORBIC ACID	C6H8O6	A	A	A	A	?	A	A	?	A	?	?
ASPHALT		C	B	C	C	A	A	A	?	A	A	A
ASTOR OIL 1-2-3		C	C	C	C	A	A	A	?	A	?	?
AVIATION GASOLINE		C	B	C	C	A	A	A	?	A	?	?
BARIUM CARBONATE	BaCO3	A	A	A	A	A	A	C	A	A	A	A
BARIUM CHLORIDE	BaCl2	A	A	A	A	C	C	C	A	A	A	?
BARIUM FERRITE	BaO.6Fe2O3	A	A	A	A	?	?	?	?	?	?	?
BARIUM HYDROXIDE	Ba(OH)2.8H2O	A	A	A	A	A	?	C	A	A	A	A
BARIUM SULPHATE	BaSO4	A	A	A	A	C	C	A	A	A	A	A
BARIUM SULPHIDE	BaS	A	A	A	A	C	C	C	A	A	A	A
BEER		A	A	A	A	?	A	A	A	A	A	A

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
BEET ROOT SYRUP		A	A	A	A	?	A	A	?	A	A	A
BENZALDEHYDE	C7H6O	C	C	B	C	C	C	A	C	?	A	B
BENZENE (BENZOL)	C6H6	C	C	C	C	C	C	A	C	A	B	B
BENZENESULPHONIC ACID	C6H6SO3H	C	C	C	C	?	A	B	?	A	C	A
BENZOYL CHLORIDE	C7H5OCl	C	C	C	C	C	C	C	?	A	B	A
BENZYL ALCOHOL	C7H8O	C	C	C	C	A	A	A	?	A	A	A
BENZYL BENZOATE	C14H12O2	C	C	C	C	A	A	A	?	A	?	?
BICALCIUM PHOSPHATE	CaHPO4	A	?	A	A	?	?	?	?	?	?	?
BIRD LIME (GLUE)		A	A	A	A	A	A	A	?	A	?	?
BISMUTH CARBONATE	(BiO)2CO3	A	A	A	A	A	A	?	A	A	A	?
BLACK SULPHATE LIQUOR		A	A	A	A	?	A	B	?	A	?	?
BLAST FURNACE GAS		C	A	C	C	?	?	?	?	A	?	?
BOR(AC)IC ACID	H3BO3	A	A	A	A	?	?	A	?	A	A	A
BORAX	Na2B4O7.10H2O	A	A	A	A	A	A	A	A	A	A	A
BROMINE	Br2	C	C	C	B	C	C	A	C	?	C	?
BUTADIENE	C4H6	C	B	C	C	A	A	A	?	A	C	A
BUTANE	C4H10	C	C	C	C	A	A	A	?	A	C	A
BUTANE FLUID	C4H10	C	B	C	C	?	?	?	?	A	?	?
BUTTER		C	A	C	C	?	A	A	?	A	?	?
BUTTER ACID	C4H8O2	B	B	C	C	?	?	?	?	A	?	?
BUTYL ACETATE	C6H12O2	C	C	B	C	A	A	A	C	A	B	A
BUTYL ALCOHOL	C4H9OH	B	B	A	C	A	A	A	A	A	A	A
BUTYL ALDEHYDE	C4H8O	C	C	C	C	?	?	?	?	A	?	?
BUTYL CELLOSOLVE (=2-butoxyethanol)	C6H13O2	C	C	C	A	A	A	?	?	A	?	A
BUTYL CELLOSOLVE ADIPATE	C6H14O2	C	C	C	C	?	?	?	?	A	?	?
BUTYL ETHER	C8H18O	C	C	C	C	A	A	A	?	A	C	A
BUTYL GLYCOL	C6H14O2	A	A	A	A	?	?	?	A	A	?	?
BUTYL IODIDE	C4H9I	C	C	C	C	?	?	?	?	A	?	?
BUTYL STEARATE	C22H44O2	C	B	C	C	?	A	A	?	A	?	A
BUTYRONITRILE	C4H7N	C	C	C	C	?	?	?	?	A	?	?
CALCIUM ACETATE	Ca(C2H5O2)2	A	A	A	A	?	A	?	?	A	A	?
CALCIUM BISULPHATE	Ca(HSO4)2	A	A	A	A	?	A	?	?	?	A	?
CALCIUM BISULPHITE	Ca(HSO3)2	A	A	A	A	?	?	C	?	A	A	A
CALCIUM BROMIDE	CaBr2	?	?	A	?	?	?	?	?	?	?	?
CALCIUM CARBONATE	CaCO3	A	A	A	A	C	C	B	A	A	A	A
CALCIUM CHLORATE	Ca(ClO3)2.H2O	A	B	A	A	C	C	?	A	A	A	?
CALCIUM CHLORIDE	CaCl2	A	A	A	A	?	?	A	A	A	A	?
CALCIUM FLUORIDE	CaF2	A	A	A	A	?	?	?	?	?	?	?
CALCIUM HYDROXIDE	Ca(OH)2	A	A	A	A	C	C	?	A	A	A	?
CALCIUM HYPOCHLORITE	Ca(ClO)2	C	C	A	A	?	?	?	?	?	?	?

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
CALCIUM HYPOCHLORITE 30%	Ca(ClO)2	B	B	A	A	?	?	C	?	A	A	A
CALCIUM NITRATE	Ca(NO3)2	A	A	A	A	C	C	?	A	A	A	?
CALCIUM STEARATE	Ca(C18H35O2)2	B	B	C	C	?	?	?	?	?	?	?
CALCIUM SULPHATE	CaSO4	A	A	A	A	C	C	B	A	A	A	A
CALCIUM SULPHIDE	CaS	A	A	A	A	A	A	?	?	A	A	A
CALCIUM TETRAFLUORIDE	Ca2F4	C	C	B	A	?	A	?	A	A	A	?
CALIC LIQUOR		A	A	A	A	?	?	?	?	A	?	?
CANE SUGAR LIQUOR		A	A	A	A	A	A	A	?	A	A	A
CARBIDE LIME / CARBIDE SLUDGE		A	A	A	A	?	?	?	?	?	?	?
CARBITOL	C6H14O3	C	C	C	C	?	A	A	?	A	?	?
CARBOLIC ACID (= phenol)	C6H5OH	C	C	C	C	?	A	A	?	A	B	A
CARBON DIOXIDE (DRY)	CO2	A	A	A	A	A	A	A	A	A	A	A
CARBON DIOXIDE (MOIST)	CO2	A	A	A	A	A	A	A	A	A	A	A
CARBON DISULPHIDE	CS2	C	A	C	C	A	A	A	C	A	C	A
CARBON MONOXIDE (338 K)	CO	A	B	A	A	A	A	A	?	A	A	A
CARBON TETRACHLORIDE	CCl4	C	C	C	C	?	?	?	C	A	?	?
CARBONIC ACID	H2CO3 (CO2 in H2O)	A	A	A	A	?	C	A	C	A	A	A
CARBOXYMETHYL CELLULOSE 12%		A	A	A	A	?	?	?	?	?	?	?
CASTOR OIL		C	B	C	C	?	A	A	A	A	A	A
CAUSTIC SODA (max. 50%)	NaOH	B	B	A	A	?	B	?	A	?	A	A
CELLOSOLVE	C4H10O2	C	C	C	C	?	A	A	?	A	A	A
CELLOSOLVE ACETATE	C6H12O3	C	C	C	C	A	A	?	?	A	?	?
CELLULOSE ACETATE		?	B	C	C	?	A	A	?	A	?	?
CHINA WOOD OIL (TUNG OIL)		C	C	C	C	A	A	A	?	A	?	?
CHLORIC ACID	HClO3	C	C	A	A	C	C	C	A	?	?	?
CHLORIC ACID SULPHUROUS		C	C	B	A	?	?	?	C	A	?	?
CHLORINATED SOLVENTS		C	C	C	C	?	?	?	?	?	?	?
CHLORINE (DRY)	Cl2	C	C	B	C	C	C	C	A	A	C	A
CHLORINE (MOIST)	Cl2	C	C	A	A	?	A	A	?	A	C	A
CHLORINE AQUEOUS SOLUTION 3%	Cl2 in H2O	C	C	A	A	?	A	B	?	A	A	A
CHLORINE LYE		C	C	A	A	?	?	?	?	A	?	?
CHLORO NITROETHANE	C2H4NO2Cl	C	C	C	C	?	?	?	?	A	?	?
CHLOROACETONE	C3H5OCl	C	B	B	C	?	?	?	?	A	?	?
CHLOROACETONITRILE	C2H2NCl	C	C	C	C	?	?	?	?	A	?	?
CHLOROBENZENE	C6H5Cl	C	C	C	C	A	A	A	C	A	?	?
CHLOROBROMOMETHANE	CH2ClBr	C	C	C	C	?	A	?	C	A	?	?
CHLOROETHYL ACETATE	C4H7O2Cl	C	C	C	C	?	?	?	?	A	?	?
CHLOROFORM	CHCl3	C	C	C	C	A	A	C	C	A	B	A
CHLOROMETHYL	CH3Cl	C	C	C	C	?	?	?	?	A	?	?
CHLORONAPHTALENE	C10H7Cl	C	C	C	C	A	A	?	C	A	?	?

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CHLOROSULPHONIC ACID	HSO3Cl	C	C	?	C	?	?	?	?	A	?	?
CHLOROTOLUENE	C7H7Cl	C	C	C	C	A	A	A	?	A	?	?
CHROMIC ACID 10%	CrO3.H2O	C	C	?	A	C	C	A	A	A	C	A
CHROMIC ACID 25%	CrO3.H2O	C	C	?	A	C	C	C	A	A	C	A
CHROMIC ACID 50%	CrO3.H2O	C	C	?	A	C	C	C	B	A	C	A
CHROMIUM HYDROXIDE	Cr(OH)3	C	C	A	A	?	?	?	?	?	?	?
CHROMIUM SULPHATE	Cr2(SO4)3	C	C	A	?	?	?	?	?	?	?	?
CITRIC ACID	C6H8O7	A	B	A	A	?	?	A	A	A	A	?
CITRUS PULP		A	B	A	A	?	?	?	?	?	?	?
COCONUT OIL		C	B	C	C	A	A	A	A	A	A	A
COD LIVER OIL		C	B	C	C	?	A	A	?	A	?	?
COKES OVEN GAS		C	B	C	C	A	?	?	?	A	?	A
COMPRESSOR OIL		C	A	C	B	?	?	?	?	A	?	?
COPPER ARSENATE	Cu3(AsO4)2	B	B	A	A	A	A	?	?	A	?	?
COPPER CYANIDE	Cu(CN)2	B	A	A	A	?	?	C	A	?	A	A
COPPER NITRATE	Cu(NO3)2.3H2O	A	B	A	A	?	?	C	A	A	A	?
COPPER OXYCHLORIDE	CuCl2.Cu(OH)2	B	B	A	A	?	?	?	?	?	?	?
COPPER SULPHATE	CuSO4.5H2O	A	B	A	A	?	?	C	A	A	A	?
COPPER(I) CHLORIDE	CuCl	A	A	A	A	C	C	C	A	A	A	A
COPPER(II) CHLORIDE	CuCl2	A	A	A	A	C	C	C	A	A	A	A
COTTONSEED OIL		C	B	C	C	?	A	A	A	A	A	A
CREOSOTE COAL TAR		C	C	C	C	?	A	A	?	A	C	?
CREOSOTE OIL		C	C	C	C	C	C	?	C	A	B	?
CREOSOTE WOOD		C	C	C	C	A	A	?	?	A	C	?
CRESOL 90%, XYLOL 5%, DDT 5%		C	C	C	C	A	A	A	C	?	C	A
CRESOL 95%, XYLOL 5%		C	C	C	C	A	A	A	C	?	C	A
CRESYLIC ACID (= cresol)	CH3C6H4OH	C	C	C	C	?	A	A	?	A	C	A
CRUDE OIL		C	B	C	B	A	A	A	A	A	A	A
CRYOLITE 10%	Na3AlF6	B	B	B	A	?	A	?	?	A	?	?
CYANIDE	...CN	A	A	A	A	?	?	?	?	?	A	?
CYCLOHEXANE	C6H12	C	B	C	C	A	A	A	?	A	C	A
CYCLOHEXANOL	C6H12O	C	C	C	C	C	C	B	C	A	A	A
CYCLOHEXANONE	C6H10O	C	C	C	C	?	A	A	C	A	B	?
CYCLOPENTANE	C5H10	C	C	C	C	?	A	A	?	A	?	?
DDT2 KEROSEN		C	B	C	C	?	A	A	A	A	?	?
DECAHYDRONAPHTENE (= decaline)	C10H18	C	C	C	C	?	?	?	?	A	?	?
DECALIN	C10H18	C	C	C	C	?	?	?	?	A	C	?
DECANE	C10H18	C	C	C	C	?	?	?	?	A	A	A
DIACETONE ALCOHOL	C6H12O2	C	C	C	C	A	A	A	?	A	?	?
DIAMYL NAPHTENE	C20H29	C	C	C	C	?	?	?	?	A	?	?

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DIAMYL PHTALATE	C18H26O4	C	C	C	C	?	?	?	?	A	?	?
DIBENZYL ETHER	C14H14O	C	C	C	C	A	A	A	?	A	?	?
DIBUTYL AMINE	C8H19N	C	C	C	C	?	?	?	?	A	?	?
DIBUTYL ETHER	C8H18O	C	C	C	C	A	A	A	?	A	?	?
DIBUTYL PHTALATE	C16H22O4	C	C	C	C	A	A	A	?	A	?	?
DIBUTYL SEBACATE	C18H34O4	C	C	C	C	?	?	?	?	A	?	?
DICHLORINE ACID		C	C	C	C	?	?	?	?	A	?	?
DICHLOROBENZENE	C6H4Cl2	C	C	C	C	?	A	?	?	A	?	?
DICHLOROBUTENE	C4H6Cl2	C	C	C	C	?	?	?	?	A	?	?
DICHLORODIFLUOROMETHANE	CCl2F2	C	C	C	C	?	A	?	?	A	A	?
DICHLOROMETHANE	CH2Cl2	C	C	C	C	?	?	?	?	?	?	?
DICHLOROPHENOXY ACETIC ACID	C8H6Cl2O3	C	C	C	C	?	?	?	?	?	?	?
DICHLOROPROPENE	C3H5Cl2	C	C	C	C	?	?	?	C	A	?	?
DICHLOROTETRAFLUOROETHANE	C2Cl2F4	C	C	C	C	?	A	A	?	A	A	?
DICYCLOHEXYLAMINE	(C6H11)2NH	C	C	C	C	?	?	?	?	A	?	?
DI-DOWTHERM (A+E)		C	C	C	C	A	A	A	?	A	?	?
DIESEL OIL		C	C	C	C	A	A	A	?	A	B	A
DIETHYL AMINE	(C2H5)2NH	C	C	C	C	?	A	?	?	A	?	?
DIETHYL CARBONATE	(C2H5)2CO3	C	C	C	C	?	?	?	?	A	?	?
DIETHYL ETHER	C4H10O	C	C	C	C	A	A	A	?	A	?	?
DIETHYL FATTY ACID		?	C	C	C	?	?	?	?	A	?	?
DIETHYL GLYCOL	C6H14O2	A	A	A	A	A	A	A	A	A	A	?
DIETHYL KETONE	C5H10O3	B	C	B	C	?	?	?	?	A	?	?
DIETHYL OXALATE	C6H10O4	C	C	C	C	?	?	?	?	A	?	?
DIETHYL PHTALATE	C12H14O4	C	C	C	C	?	A	?	?	A	?	?
DIETHYL SEBACATE	C14H26O4	C	C	C	C	?	A	?	?	A	?	?
DIISOBUTENE		C	?	C	C	?	A	?	?	A	?	?
DIISOBUTYL KETONE	C9H18O	C	C	C	C	?	A	?	?	A	?	?
DIISOPROPYL ETHER	C6H14O2	C	C	C	C	?	?	?	?	A	?	?
DIISOPROPYL KETONE	C7H14O	C	C	C	C	?	A	?	?	A	?	?
DIMETHYL AMINE	(CH3)2NH	C	C	C	C	?	?	?	?	?	?	?
DIMETHYL ANILINE	C8H11N	C	C	C	C	?	?	?	?	A	?	?
DIMETHYL ETHER	C2H6O	C	C	C	C	A	A	A	?	A	?	?
DIMETHYL FORMAMIDE	C3H7NO	A	B	A	C	A	A	?	?	A	?	?
DIMETHYL PHOSPHITE	C2H7PO3	B	C	B	C	?	?	?	?	A	?	?
DIMETHYL PHTALATE	C10H10O4	C	C	C	C	?	?	?	?	A	?	?
DIMETHYL SULPHIDE	(CH3)2S	C	C	C	C	?	?	?	?	A	?	?
DIOCTYL ADIPATE	C20H38O4	C	C	C	C	?	?	?	?	A	?	?
DIOCTYL PHTALATE (DOP)	C24H38O4	C	C	C	C	?	?	?	C	A	?	?
DIOCTYL SEBACATE	C26H40O4	C	C	C	C	?	?	?	?	A	?	?

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Do not use

?: no data available

Duty fluid	Molecular formula	Pump Hoses				Pump Components						
		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
DIOXANE	C4H8O2	C	C	C	C	A	A	A	?	A	?	?
DIVINYL BENZENE	C10H10	C	C	C	C	?	?	?	?	A	?	?
DODECYL BENZENE	C18H30	C	C	C	C	?	A	A	?	A	C	C
DODECYL TOLUENE SULFONATE	C19H32O3S	C	C	C	C	?	?	?	?	A	?	?
EPICHLOROHYDRINE	C3H5ClO	C	C	C	C	A	A	C	?	A	A	C
ETHANOLAMINE	C2H7NO	C	C	C	C	A	A	A	?	A	C	B
ETHER	C4H10O	C	C	C	C	C	C	A	A	A	?	?
ETHYL ACETATE	C4H8O2	B	C	B	C	C	C	A	C	A	A	A
ETHYL ALCOHOL	C2H5OH	A	A	A	B	A	A	A	A	A	B	A
ETHYL AMINE	C2H7N	?	C	C	C	?	A	A	?	A	C	C
ETHYL BENZENE	C8H10	C	C	C	C	A	A	A	?	A	C	A
ETHYL BENZOATE	C9H10O2	C	C	C	C	?	A	A	?	A	A	?
ETHYL BROMIDE	C2H5Br	C	C	C	C	?	A	C	?	A	?	?
ETHYL BUTYRATE	C6H12O2	C	C	C	C	?	A	A	?	A	A	?
ETHYL CELLULOSE		A	B	A	B	A	A	A	?	A	B	?
ETHYL CHLORIDE	C2H5Cl	C	C	C	C	A	A	C	C	A	A	A
ETHYL CHLOROFORMATE	C3H5ClO2	C	C	C	C	?	?	?	?	?	?	?
ETHYL CYANOACETATE	C5H7NO2	?	C	?	C	?	?	?	?	A	?	?
ETHYL DICHLORIDE	C2H4Cl2	C	C	C	C	?	?	?	?	A	?	?
ETHYL ETHER	C4H10O	C	C	C	C	?	A	?	C	A	B	A
ETHYL FORMATE	C3H6O2	C	C	B	C	?	A	A	?	A	?	?
ETHYL HEXANOL	C8H17OH	C	C	C	C	?	?	?	?	A	?	?
ETHYL IODIDE	C2H5I	C	C	C	C	?	?	?	?	A	?	?
ETHYL ISOBUTYLETHER	C6H14O	C	C	C	C	?	?	?	?	A	?	?
ETHYL ISOBUTYRATE	C6H12O2	C	C	C	C	?	?	?	?	A	?	?
ETHYL MERCAPTAN	C2H5SH	C	C	C	C	?	?	?	?	A	?	?
ETHYL OXALATE	C4H6O4	?	C	C	C	?	?	?	?	A	?	?
ETHYL PENTACHLOROBENZENE	C8H5Cl5	C	C	C	C	?	?	?	?	A	?	?
ETHYL PROPIONATE	C5H10O2	C	C	C	C	?	?	?	?	A	?	?
ETHYL PROPYLETHER	C5H12O	C	C	C	C	?	?	?	?	A	?	?
ETHYL SILICATE	(C2H5)4SiO4	A	A	A	A	A	A	A	?	A	?	?
ETHYLAMYL KETONE	C8H16O	C	C	C	C	?	?	?	?	A	?	?
ETHYLENE DIAMINE	C2H4(NH2)2	C	C	C	C	?	?	?	?	A	?	?
ETHYLENE GLYCOL	C2H6O2	A	A	A	A	A	A	A	A	A	A	?
ETHYLENE OXYDE	C2H4O	C	C	C	C	?	A	A	C	A	?	A
ETHYLHEXYL DIPHENYL PHOSPHATE	C20H27PO4	C	C	C	C	?	?	?	?	A	?	?
ETHYLMETHYL KETONE	C4H8O	B	C	B	C	?	?	?	?	A	?	?
FAECES		A	A	A	A	?	A	?	A	A	A	A
FERRIC OXIDE	Fe2O3	A	A	A	A	?	?	?	?	?	?	?
FERRIFEROUS CHLORIDE (338 K)		A	A	A	A	?	A	?	A	A	?	?

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Duty fluid	Molecular formula	Pump Hoses				Pump Components						
		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
FERRO HYDROXIDE	Fe(OH)3	C	C	A	A	?	?	?	?	?	?	?
FERROUS SULPHATE	FeSO4.7H2O	A	A	A	A	?	A	?	A	A	A	?
FLEXOL 300 (dioctyl phtalate - DOP)	C24H38O4	C	C	C	C	?	?	?	?	A	?	?
FLUOBORIC		A	B	A	A	?	A	?	?	A	A	?
FLUOBORIC ACID 65%	HBF4	C	C	C	A	?	A	?	A	A	?	?
FLUORIC ACID	HF	C	C	B	A	C	C	C	A	A	A	A
FLUOROBENZENE	C6H5F	C	C	C	C	?	?	?	?	A	?	?
FLUROSILICIC ACID	H2SiF6	?	C	?	A	?	?	A	?	A	?	?
FLUROSILICIC ACID 50%	H2SiF6	?	C	?	A	?	?	A	A	A	?	?
FORMALDEHYDE 37%	CH2O	A	B	A	B	?	A	A	A	A	A	A
FORMALDEHYDE 40% (343 K)	CH2O	C	C	A	C	?	A	A	?	A	A	A
FORMAMIDE (FORMYLAMINE)	CH3NO	A	B	A	A	?	A	A	?	A	?	?
FORMIC ACID	HCOOH	C	C	B	C	A	B	C	A	A	A	A
FREON 11	CCl3F	C	C	C	C	A	A	A	A	A	A	A
FREON 112	C2Cl4F2	C	C	C	C	A	A	A	?	A	A	?
FREON 113	C2Cl3F3	C	C	C	C	?	A	?	?	A	A	?
FREON 114	C2Cl2F4	C	C	C	C	?	A	A	?	A	A	A
FREON 115	C2ClF5	C	C	C	C	A	A	A	?	A	A	?
FREON 12 (LIQUID)	CCl2F2	C	C	C	C	A	A	A	A	A	A	A
FREON 13	CClF3	C	C	C	C	A	A	A	?	A	A	?
FREON 14	CF4	C	C	C	C	A	A	?	?	A	A	?
FREON 21	CHCl2F	C	C	C	C	A	A	A	B	A	B	A
FREON 22	CHClF2	C	C	C	C	A	A	A	?	A	?	A
FREON 31	CH2ClF	C	C	C	C	A	A	A	?	A	A	?
FREON C 316	C4Cl2F6	C	C	C	C	A	A	A	?	A	A	?
FREON C 318	C4F8	C	C	C	C	A	A	A	?	A	A	?
FUEL OIL		C	B	C	C	A	A	A	A	A	A	A
FURAN	C4H4O	C	C	C	C	A	A	A	?	A	A	C
FURFURAL	C4H3OCHO	C	C	C	C	?	A	A	A	A	A	A
GALLNUTOIL		B	C	B	A	A	A	A	A	A	?	?
GARLIC		A	A	?	?	A	A	A	A	A	A	A
GASOLINE OCTANE 100		C	C	C	C	A	A	A	?	A	B	A
GASOLINE OCTANE 65		C	C	C	C	A	A	A	?	A	B	A
GELATIN (GLUE)		A	A	A	A	?	A	A	A	A	A	A
GLUCOSE	C6H12O6	A	A	A	A	A	A	A	?	A	A	A
GLUE		B	A	A	A	A	A	A	?	A	A	?
GLYCERINE	C3H8O3	A	A	A	A	A	A	A	A	A	A	A
GLYCEROL	C3H8O3	A	A	A	A	A	A	A	A	A	A	A
GLYCOL	C2H6O2	A	A	A	A	?	?	?	?	A	A	?
GRAINSEED OIL		C	B	C	C	A	A	A	?	A	A	?

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
GREEN SULPHATE LIQUOR		A	B	A	A	?	A	A	?	A	A	?
HEPTANE	C7H16	C	C	C	C	A	A	A	A	A	A	A
HEXALDEHYDE	C6H14O	C	C	C	C	A	A	A	?	A	?	?
HEXANE	C6H14	C	C	C	C	A	A	A	A	A	C	A
HEXENE	C6H12	C	B	C	C	A	?	?	?	A	?	?
HEXYL ALCOHOL	C6H13OH	B	B	C	C	A	A	A	A	A	A	A
HOG FAT		C	B	C	B	?	A	?	A	A	A	?
HYDRAULIC OIL ESTER BASE		B	C	C	C	A	A	A	?	A	A	?
HYDRAULIC OIL MINERAL BASE		C	B	C	C	A	A	A	?	A	A	?
HYDRAULIC OIL PYDRAUL BASE		C	C	C	C	A	A	A	?	A	A	?
HYDRAULIC OIL SKYDROL BASE		C	C	C	C	A	A	A	?	A	A	?
HYDROBROMIC ACID	HBr	B	B	A	A	?	?	A	?	A	A	A
HYDROBROMIC ACID 40%	HBr	C	C	B	A	C	C	C	A	A	A	A
HYDROCHLORIC ACID (338 K)	HCl	C	C	A	A	?	?	?	?	A	A	?
HYDROCHLORIC ACID 15%	HCl	A	A	A	A	C	C	B	A	A	A	A
HYDROCHLORIC ACID 30%	HCl	B	C	A	A	C	C	C	?	A	A	A
HYDROCHLORIC ACID 33% (323 K)	HCl	C	C	B	A	?	?	?	?	?	?	?
HYDROCHLORIC ACID CONC. 38%	HCl	C	C	A	A	C	C	C	A	A	A	A
HYDROCYANIC ACID	HCN	B	C	A	A	?	A	?	?	A	A	A
HYDROFLUORIC ACID	HF	C	C	B	A	C	C	C	A	A	A	A
HYDROFLUOSILICIC ACID	H2SiF6	A	B	A	C	?	C	?	B	A	A	?
HYDROGEN FLUORIDE (COLD)	HF	C	C	B	A	?	C	?	?	A	C	A
HYDROGEN FLUORIDE (HOT)	HF	C	C	C	C	C	C	?	?	A	C	?
HYDROGEN GAS (338 K)	H2	A	A	A	A	A	A	?	A	A	A	A
HYDROGEN GAS (COLD)	H2	A	A	A	A	A	A	?	A	A	A	A
HYDROGEN PEROXIDE 10%	H2O2	C	C	A	A	?	A	A	A	A	A	A
HYDROGEN PEROXIDE 30%	H2O2	C	C	C	A	?	A	A	C	A	A	A
HYDROGEN PEROXIDE 88%	H2O2	C	C	C	A	A	A	A	A	A	A	?
HYDROGEN SULPHIDE	H2S	A	B	A	A	C	C	?	A	A	A	A
HYDROGEN SULPHIDE (DRY, COLD)	H2S	A	C	A	A	?	A	?	?	A	A	?
HYDROGEN SULPHIDE (DRY, WARM)	H2S	A	C	A	A	?	A	?	?	A	A	?
HYDROGEN SULPHIDE (MOIST, COLD)	H2S	A	C	A	A	?	A	?	?	A	A	?
HYDROGEN SULPHIDE (MOIST, WARM)	H2S	A	C	A	A	?	A	?	?	A	A	?
HYDROGEN SUPEROXIDE 35%	HO2	?	?	A	A	?	?	?	?	?	?	?
INK OIL		C	B	C	A	A	A	B	?	A	?	?
IODINE	I2	C	C	B	A	C	C	A	?	A	A	A
IRON and ZINC PHOSPHATE SOLUTION	FePO4 & Zn3(PO4)2	A	A	A	A	?	?	?	?	?	?	?
IRON CHLORIDE	FeCl3	A	A	A	A	C	C	?	A	A	A	?
IRON CHLORIDE SULPHATE	FeClSO4	B	?	A	A	?	?	?	?	?	?	?
IRON HYDROXIDE	Fe(OH)3	C	C	A	A	?	?	?	?	?	?	?

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IRON NITRATE (338 K)	Fe(NO3)3	A	A	A	A	?	A	?	?	A	A	?
IRON SULPHATE	FeSO4.7H2O	A	A	A	A	?	A	?	A	A	A	?
IRON(II) ACETATE SOLUTION	Fe(C2H3O2)2	A	A	A	A	?	?	?	?	?	?	?
ISOAMYLACETATE	C7H14O2	C	C	C	C	?	A	A	?	A	?	?
ISOAMYLALCOHOL	C5H12O	C	C	C	C	?	?	?	?	A	?	?
ISOAMYLFORMATE	C5H12O	C	C	C	C	?	?	?	?	A	?	?
ISOBUTENE	C4H8	C	C	C	C	C	A	?	?	A	A	?
ISOBUTYL ACETATE	C6H12O2	C	C	C	C	C	A	A	?	A	?	?
ISOBUTYL ALCOHOL	C4H10O	B	C	B	C	A	?	A	?	A	A	A
ISOBUTYL FORMATE	C5H10O2	C	C	C	C	?	?	?	?	A	?	?
ISOBUTYLALDEHYDE	C4H8O	C	C	C	C	?	?	?	?	A	?	?
ISOCYANATE	...NCO	C	C	C	C	?	?	?	?	?	?	?
ISODECANE	C10H22	C	C	C	C	?	?	?	?	A	?	?
ISODODECANE	C12H26	C	C	C	C	?	?	?	?	A	?	?
ISOOCTANE	C8H18	C	B	C	C	A	A	?	?	A	A	?
ISOPROPYL ACETATE	C5H10O2	B	C	B	B	?	A	A	?	A	A	?
ISOPROPYL ALCOHOL	C3H8O	A	B	A	C	A	A	?	A	A	A	A
ISOPROPYL CHLORIDE	C3H7Cl	C	C	C	A	C	A	C	?	A	C	?
ISOPROPYL ETHER	C6H14O	C	C	C	C	A	A	A	?	A	C	A
JET FUELS (JP1 TILL JP5)		C	B	C	C	C	A	A	A	A	A	A
KEROSENE		C	B	C	C	A	A	A	A	A	A	A
LACQUER SOLVENTS		C	?	C	C	?	A	C	?	A	B	C
LACQUERS		C	?	C	C	?	A	C	?	A	?	?
LACTIC ACID	C4H10O4	B	?	B	A	?	?	A	A	A	A	?
LACTOL	C13H12O2	C	B	C	C	A	A	A	?	A	?	?
LARD		C	B	C	B	?	A	A	A	A	B	A
LAURYL ETHER SULPHATE	[C12H25(OCH2CH2)]	B	C	A	B	?	?	?	?	?	?	?
LEAD ACETATE	Pb(C2H3O2)2.3H2O	A	A	A	A	?	A	C	A	A	A	?
LEAD ARSENATE	PbHAsO4	A	B	A	A	A	A	?	?	A	A	?
LEAD NITRATE	Pb(NO3)2	A	A	A	A	C	C	C	A	A	A	A
LEAD SULPHAMATE	Pb[(NH)2SO3]2	A	A	A	A	?	?	?	?	A	A	?
LIME SULPHUR		A	A	A	A	?	A	C	?	A	A	?
LIME WATER	CaH2O2	A	A	A	A	A	A	A	A	A	?	?
LINSEED OIL		C	C	C	B	?	A	A	A	A	A	A
LIQUID MANURE		A	A	A	A	A	A	A	?	A	A	?
LITHIUM HYDROXIDE	LiOH	A	A	A	A	?	A	?	?	A	A	A
LUBRICATING OIL		C	B	C	B	A	A	A	?	A	?	A
LYE (CAUSTIC)		A	A	A	A	?	A	?	A	A	A	A
MAGNESIUM CARBONATE	MgCO3	A	A	A	A	A	A	A	A	A	A	?
MAGNESIUM CHLORIDE	MgCl2	A	A	A	A	C	C	?	A	A	A	?

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Duty fluid	Molecular formula	Pump Hoses				Pump Components						
		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
MAGNESIUM HYDROXIDE	Mg(OH)2	A	A	A	A	A	A	?	A	A	A	A
MAGNESIUM NITRATE	Mg(NO3)2.6H2O	A	A	A	A	?	A	?	A	A	A	?
MAGNESIUM SULPHATE	MgSO4	A	A	A	A	?	A	?	A	A	A	?
MAGNESIUM SULPHIDE	MgS	?	?	A	A	?	?	?	?	?	?	?
MAGNESIUM SULPHITE	MgSO3	?	?	A	A	?	?	?	?	?	?	?
MANGANESE SULPHATE	MnSO4.H2O	A	A	A	A	?	?	?	A	A	?	?
MARGARINE OIL		C	A	C	C	?	?	?	?	?	?	?
MERCURY	Hg	A	A	A	A	A	A	C	A	A	A	A
MERCURY CYANIDE	Hg(CN)2	A	B	A	A	?	A	C	?	A	A	A
MERCURY(I) CHLORIDE	Hg2Cl2	A	B	A	A	C	C	C	A	A	A	?
MERCURY(II) CHLORIDE	HgCl2	A	B	A	A	C	C	C	A	A	A	?
METHANOL (methyl alcohol)	CH3OH	A	A	A	A	A	A	A	A	A	A	A
METHYL ACETATE	C3H6O2	B	C	B	C	A	A	A	C	A	B	A
METHYL ACETOACETATE	C5H8O3	C	C	C	C	?	A	?	?	A	?	?
METHYL ACETONE	C4H8O	B	C	B	C	?	A	A	C	A	?	C
METHYL AMINE	CH3NH2	C	C	C	C	A	A	A	?	A	C	B
METHYL AMYLACETATE	C8H17O2	C	C	C	C	?	A	A	?	A	?	?
METHYL ANILINE	C7H10N	C	C	C	C	?	?	?	?	A	?	?
METHYL BROMIDE	CH3Br	C	C	C	C	A	A	?	?	A	C	A
METHYL BUTYL KETONE	C6H12O	B	B	B	C	A	A	?	A	?	C	C
METHYL BUTYRATE	C5H10O2	C	C	C	C	?	?	?	?	A	?	?
METHYL ETHYL KETONE (MEK)	C4H8O	C	C	C	C	A	A	A	C	A	C	C
METHYL ISOPROPYL KETONE	C4H10O	C	C	C	C	A	A	?	?	A	B	A
METHYL METHACRYLATE	C5H8O2	C	C	C	C	?	A	A	?	A	?	A
METHYL OLEATE	C19H40O2	C	C	C	C	?	?	?	?	A	?	?
METHYL PROPIONATE	C4H8O2	C	C	C	C	?	?	?	?	A	?	?
METHYL SALICYLATE	C8H8O3	C	C	C	C	A	?	A	?	A	?	?
METHYLAMYL CARBINOL	C7H16O	C	C	C	C	A	A	A	?	A	?	?
METHYLCELLOSOLVE (=2-methoxyethanol)	C3H8O2	C	C	C	C	?	A	A	A	A	A	A
METHYLCHLORIDE	CH3Cl	C	C	C	C	?	A	C	C	A	B	A
METHYLENE CHLORIDE	CH2Cl2	C	C	C	C	?	A	C	C	A	C	B
METHYLFORMATE	C2H4O2	C	C	C	C	A	?	?	?	A	?	?
METHYL IODIDE	CH3I	C	C	C	C	?	A	C	?	A	?	?
METHYLISOBUTYL KETONE	C6H12O	B	B	C	C	A	A	?	A	A	A	B
METHYLISOBUTYL CARBINOL	C6H14O	C	C	C	C	?	?	?	?	A	?	?
METHYLISOBUTYRATE	C5H10O2	C	C	C	C	?	?	?	?	A	?	?
MILK		B	A	B	A	?	A	A	?	A	A	A
MINERAL OIL		C	A	C	A	A	A	A	A	A	A	A
MOLASSES		A	A	A	A	A	A	A	A	A	A	A
MONOBROMOBENZENE	C6H5Br	C	C	C	C	?	?	?	?	A	?	?

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?: no data available

Duty fluid	Molecular formula	Pump Hoses				Pump Components						
		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
MONOCHLOROANILINE	C6H4NH2Cl	C	C	C	C	?	?	?	?	A	?	?
MONOCHLOROBENZENE	C6H5Cl	C	C	C	C	A	A	?	C	A	?	?
MONOCHLORODIFLUOROMETHANE	CHClF2	C	C	C	C	?	A	?	?	A	A	?
MONOCHLOROTRIFLUOROMETHANE	CClF3	C	C	C	C	?	?	?	?	A	?	?
MONOETHANOLAMINE	C2H4NH2OH	C	C	C	C	A	A	A	?	A	A	B
MONOSODIUM GLUTAMATE	Na[C5H8NO4]	C	A	A	B	?	?	?	?	?	?	?
MOTOR OIL		C	B	C	B	A	A	A	?	A	?	?
MURIATIC ACID (= hydrochloric acid)	HCl	B	C	A	A	?	?	?	?	A	?	?
NAPHTA		C	?	C	C	A	A	A	A	A	A	?
NAPHTALENE	C10H8	C	C	C	C	A	A	A	C	A	C	A
NAPHTHENE	C10H8	C	C	C	C	A	A	A	?	A	?	?
NATURAL GAS	CH4	B	A	B	B	A	A	A	?	A	A	?
NATURAL GAS (DRY)	CH4	B	A	B	A	A	A	?	A	A	A	?
NATURAL GAS (WET)	CH4	B	A	B	A	A	A	?	A	A	A	?
NICKEL CHLORIDE	NiCl2	A	A	A	A	C	C	C	A	A	A	?
NICKEL HYDROXIDE	Ni(OH)2	B	?	A	A	?	?	?	?	?	?	?
NICKEL NITRATE	Ni(NO3)2	A	A	A	A	C	C	C	A	A	A	?
NICKEL SULPHATE	NiSO4	A	A	A	A	?	A	C	A	A	A	?
NICOTINE BENTONITE		C	B	C	C	?	?	?	?	A	?	?
NICOTINE SULPHATE	C10H14N2O.5H2SO4	A	A	A	A	?	?	?	?	A	?	?
NITRIC ACID (FUMING)	HNO3	C	C	C	C	C	C	A	?	?	C	?
NITRIC ACID 10%	HNO3	C	C	A	A	?	A	A	A	A	A	A
NITRIC ACID 2%	HNO3	C	C	A	A	?	A	C	A	A	A	A
NITRIC ACID 25%	HNO3	C	C	B	A	?	?	C	A	A	A	A
NITRIC ACID 40%	HNO3	C	C	B	B	?	A	C	A	A	A	A
NITRIC ACID 50%	HNO3	C	C	C	C	?	A	C	B	A	C	A
NITRIC ACID 60%	HNO3	C	C	C	C	?	A	C	B	A	C	A
NITRIC ACID 70%	HNO3	C	C	C	C	?	A	C	B	A	C	C
NITRO-BENZENE	C6H5NO2	C	C	C	C	A	A	A	?	A	A	A
NITROETHANE	C2H5NO2	C	C	C	C	?	A	A	?	A	B	A
NITROGLYCERINE	C3H5N3O9	C	C	C	C	?	?	?	?	A	?	?
NITROMETHANE	CH3NO2	C	C	C	C	A	A	A	?	A	B	A
NITRO-OCTANE	C8H17NO2	C	C	C	C	?	?	?	?	A	?	?
NITROPROPANE	C3H7NO2	C	C	C	C	?	A	?	?	A	?	?
NITROSYL CHLORIDE	ClNO	C	C	C	C	?	A	?	?	A	?	?
NITROUS ACID	HNO2	C	C	A	A	?	A	?	?	A	A	?
OCTANE	C8H18	C	B	C	C	A	?	?	?	A	C	A
OCTYL ALCOHOL	C8H18O	C	C	C	C	A	A	A	?	?	?	?
OCTYL ALDEHYDE	C8H16O	C	C	C	C	?	?	?	?	A	?	?
OLEIC ACID	C18H34O2	C	C	C	C	?	?	?	B	A	?	?

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
OLEINIC ACID	C18H34O2	C	C	C	C	?	A	A	?	A	?	?
OLEUM (fuming sulfuric acid)	H2SO4 + SO3	C	C	B	B	?	?	?	C	A	A	?
OLIVE OIL		C	B	C	C	?	A	A	A	A	A	A
OXALIC ACID	C2H2O4	A	B	A	A	?	C	A	A	A	A	A
OXYGEN	O2	B	B	A	A	A	A	A	A	A	A	A
OZONE	O3	C	C	A	A	A	A	?	B	A	C	A
PALM OIL		C	B	C	C	A	A	?	?	A	?	?
PALMITIC ACID	C16H32O2	C	B	C	C	A	A	A	?	A	A	A
PARAFFIN OIL 50%	C12H26 - C18H38	C	C	C	C	A	A	A	A	A	A	A
PARAFORMALDEHYDE	HO(CH2O)nH	C	B	C	C	?	A	?	?	A	?	?
p-CYMENE	C10H14	C	C	C	C	?	?	?	?	A	?	?
PENTACHLOROPHENOL	C6Cl5OH	C	C	C	C	A	?	?	?	A	?	?
PENTANE	C5H12	C	B	C	C	?	?	?	?	A	?	?
PERACETIC ACID 15% (peroxyacetic acid)	CH3COO2H	C	C	A	A	?	?	?	?	A	A	?
PERCHLORIC ACID	HClO4	C	C	C	B	?	A	?	B	A	?	?
PERCHLORO ETHENE	C2Cl4	C	C	C	C	A	A	?	?	A	?	?
PETROLEUM (to 363 K)		C	C	C	C	A	A	A	?	A	C	A
PHENOL	C6H5OH	C	C	C	C	?	?	A	A	?	A	A
PHENYL ETHYL ETHER	C8H10O	C	C	C	C	?	?	?	?	A	?	?
PHOSPHOR TRIBUTYRATE	(C4H9)3PO4	?	C	C	C	?	?	?	?	A	?	?
PHOSPHORIC ACID 50%	H3PO4	A	B	A	A	?	A	C	A	A	?	A
PHOSPHORIC ACID 7% (50 °C)	H3PO4	A	A	A	A	?	?	?	?	?	?	?
PHOSPHORIC ACID 7% (70 °C)	H3PO4	B	B	A	A	?	?	?	?	?	?	?
PHOSPHORIC ACID 75%	H3PO4	A	B	A	A	?	?	C	A	A	A	A
PHOSPHORIC ACID 8% (80 °C)	H3PO4	C	C	A	A	?	?	?	?	?	?	?
PHOSPHORIC ACID 85%	H3PO4	A	B	A	A	?	?	C	A	A	A	A
PHOSPHOROUS OXYCHLORIDE	POCl3	C	C	C	C	?	?	?	?	?	?	?
PICKLE SOL. (20% NITR. ACID, 4% HF)	HNO3 + HF	C	C	B	A	?	?	?	?	A	?	?
PICRIC ACID	C6H3N3O7	B	C	A	A	?	A	A	A	?	A	C
PINE OIL		C	B	C	C	?	A	A	?	A	?	?
PINE TREE OIL		C	B	C	C	?	?	?	?	A	?	?
POLYACRYLIC ACID	C3H4O2	C	C	C	C	?	?	?	?	?	?	?
POLYALKYLENE GLYCOL		C	B	C	B	?	?	?	?	A	?	?
POLYALUMINIUM CHLORIDE	[Al2(OH)xCl6-x]n	B	A	B	?	?	?	?	?	?	?	?
POLYVINYL ACETATE	C4H6O2	A	?	A	?	?	?	?	?	?	?	?
POLYVINYL ALCOHOL (CONCENTRATED)	C2H4O	C	C	C	?	?	?	?	?	?	?	?
POLYVINYL ALCOHOL (SOLUTION)	C2H4O	A	C	A	?	?	?	?	?	?	?	?
POTASSIUM BICHROMATE	K2Cr2O7	B	B	A	A	?	?	?	?	?	?	?
POTASSIUM BORATE	KB2O3	A	A	A	A	?	A	?	?	A	A	A
POTASSIUM BROMIDE	KBr	A	A	A	A	C	C	A	A	A	A	A

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
POTASSIUM CARBONATE	K2CO3	A	A	A	A	?	A	C	A	A	A	A
POTASSIUM CHLORATE	KClO3	B	B	A	A	?	A	C	A	A	A	?
POTASSIUM CHLORIDE	NaCl	A	A	A	A	?	A	C	A	A	A	?
POTASSIUM CYANIDE	KCN	A	A	A	A	A	A	B	A	A	A	?
POTASSIUM DICHROMATE	K2Cr2O7	B	B	A	A	A	A	A	A	A	A	?
POTASSIUM HYDROXIDE	KOH	A	B	A	A	?	A	C	?	?	?	?
POTASSIUM NITRATE	KNO3	A	A	A	A	?	A	?	A	A	A	?
POTASSIUM PERMANGANATE	KMnO4	B	B	A	A	?	A	?	A	?	A	?
POTASSIUM SULPHATE	K2SO4	A	A	A	A	?	?	A	A	A	A	A
POTASSIUM SULPHITE	K2SO3	A	A	A	A	?	A	A	A	A	?	?
PRODUCER GAS (WOOD GAS)		B	A	B	A	A	A	A	A	A	A	?
PROPANE GAS	C3H8	C	A	C	B	A	A	A	?	A	C	A
PROPANE LIQUID	C3H8	C	A	C	B	A	A	A	A	A	A	A
PROPENE BROMIDE	C3H5Br	C	C	C	C	?	?	?	B	A	?	?
PROPIONIC ACID	C3H6O2	C	C	C	C	?	A	A	?	A	A	?
PROPIONITRILE	C3H5N	C	C	C	C	A	A	?	?	A	A	?
PROPYL ACETATE	C5H10O2	B	C	B	C	?	A	A	?	A	B	A
PROPYL ALCOHOL	C3H7OH	A	C	A	C	?	A	A	?	A	A	A
PROPYL DICHLORIDE	C3H6Cl2	C	C	C	C	?	?	?	?	A	?	?
PROPYL FORMATE	C4H8O2	C	C	C	C	?	?	?	?	A	?	?
PROPYL PROPIONATE	C6H12O2	C	C	C	C	?	?	?	?	A	?	?
PROPYLBENZENE	C9H12	C	C	C	C	?	?	?	?	A	?	?
PROPYLENE CARBONATE	C4H6O3	A	C	A	C	?	?	?	?	A	?	?
PROPYLENE CHLORIDE	C3H7Cl	C	C	C	C	?	?	?	?	A	?	?
PROPYLENE CHLOROHYDRINE	C3H7ClO	C	C	C	C	?	?	?	?	A	?	?
PROPYLENE DIAMINE	C3H6(NH2)2	C	C	C	C	?	?	?	?	A	?	?
PROPYLENE DICHLORIDE	C3H6Cl2	C	C	C	C	A	A	A	?	A	?	?
PROPYLENE GLYCOL	C3H6(OH)2	A	A	A	A	A	A	A	A	A	A	?
PROPYLENE OXIDE	C3H6O	C	C	?	C	?	?	?	?	A	?	?
PROPYLENE TRICHLORIDE	C3H6Cl3	C	C	C	C	?	?	?	?	A	?	?
PRUSSIC ACID 20%	HCN	A	B	A	A	?	?	?	?	?	?	?
PRUSSIC ACID 98% CONCENTRATED	HCN	B	B	A	A	?	?	?	?	?	?	?
PYRANOL 1467/76		C	C	C	C	?	?	?	?	A	?	?
PYRIDINE	C5H5N	C	C	C	C	?	A	A	A	A	?	B
QUICKSILVER NITRATE	Hg(NO3)2	A	A	A	A	A	A	?	?	A	?	?
RAPESEED OIL		C	B	C	C	?	A	?	?	A	?	?
RESIN (ROSIN)		C	B	C	C	?	A	A	B	?	A	?
ROTENONE IN WATER	C23H22O6 in H2O	A	A	A	A	?	A	?	?	A	?	?
SEA WATER		A	A	A	A	?	A	A	?	A	A	A
SEWAGE WATER (no hydrocarbons)		A	A	A	A	A	A	A	?	A	A	A

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
SHELL DD		C	B	C	A	?	?	?	?	A	?	?
SILICON CARBIDE (SLURRY)	SiC	A	A	A	A	?	?	?	?	?	?	?
SILICON FLUORIDE	SiF4	A	C	A	A	?	?	?	?	A	?	?
SILICON TETRACHLORIDE	SiCl4	?	?	?	?	?	?	?	?	?	?	?
SILICONE OIL		A	A	A	A	A	A	A	A	A	A	A
SILVER CYANIDE (74 g/l)	AgCN	A	B	A	A	?	?	C	A	A	A	A
SILVER NITRATE	AgNO3	A	A	A	A	C	C	C	A	A	A	?
SOAP OIL		C	B	C	A	?	A	?	?	A	A	?
SOAP SOLUTIONS		A	B	A	A	?	A	B	?	A	A	A
SODA	Na2CO3	A	A	A	A	A	A	?	?	A	A	?
SODA LYE 1.25%	NaOH	B	B	A	A	?	A	A	A	A	A	A
SODA LYE 2.5%	NaOH	B	B	A	A	?	A	A	A	A	A	A
SODA LYE 50% (338 K)	NaOH	C	C	B	B	?	A	?	A	A	A	?
SODIUM ACETATE	NaC2H3O2	A	A	A	A	A	A	A	A	A	A	A
SODIUM ALUMINATE 3%	NaAlO2	A	B	A	A	?	?	?	?	A	?	?
SODIUM ALUMINIUM SILICATE	Al12Na12Si12O48.2	A	A	A	A	?	?	?	?	?	?	?
SODIUM BICARBONATE	NaHCO3	A	A	A	A	?	?	A	?	A	A	A
SODIUM BISULPHATE	NaHSO4	A	A	A	A	?	?	?	?	A	A	A
SODIUM BROMIDE	NaBr	A	C	A	A	C	C	B	A	A	A	A
SODIUM CARBONATE	Na2CO3	A	A	A	A	A	?	C	A	A	A	A
SODIUM CHLORATE	NaClO3	C	C	A	A	C	C	?	A	A	A	?
SODIUM CHLORIDE	NaCl	A	A	A	A	C	C	A	A	A	A	?
SODIUM CHLORIDE 25%	NaCl	A	A	A	A	?	?	A	?	?	?	?
SODIUM CYANIDE	NaCN	A	A	A	A	A	A	C	A	A	A	?
SODIUM DICHROMATE	Na2Cr2O7.2H2O	B	B	A	A	A	?	?	A	A	A	A
SODIUM FLUOALUMINATE	Na3AlF6	A	A	A	A	?	?	?	A	A	?	?
SODIUM FLUORIDE	NaF	A	A	A	A	C	C	?	A	A	A	?
SODIUM HYDROSULPHIDE	NaHS	A	A	A	A	?	?	?	?	?	?	?
SODIUM HYDROXIDE <5% (90 °C)	NaOH	B	B	A	A	?	?	?	?	?	?	?
SODIUM HYDROXIDE 50% MAX.	NaOH	B	B	A	A	?	A	C	A	A	A	A
SODIUM HYPOCHLORITE	NaClO	C	C	A	A	?	?	?	?	A	?	?
SODIUM HYPOCHLORITE 20%	NaClO	C	C	A	A	C	C	C	A	?	B	A
SODIUM IODIDE	NaI	B	C	A	A	?	?	?	?	?	?	?
SODIUM METABISULPHATE <2%	Na2S2O7	C	C	B	C	?	?	?	?	?	?	?
SODIUM METABISULPHATE >2%	Na2S2O7	C	C	C	C	C	C	C	C	C	C	C
SODIUM METABISULPHITE <2%	Na2S2O5	C	C	B	C	?	?	?	?	?	?	?
SODIUM METABISULPHITE >2%	Na2S2O5	C	C	C	C	C	C	C	C	C	C	C
SODIUM METABORATE 18% (333 K)	NaBO2.2H2O	A	A	A	A	?	?	?	?	?	?	?
SODIUM METAPHOSPHATE	NaPO3	A	A	A	A	?	A	C	?	A	C	?
SODIUM NITRATE	NaNO3	A	A	A	A	A	?	?	A	A	A	A

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
SODIUM NITRITE	NaNO2	A	A	A	A	?	?	A	A	A	A	?
SODIUM OLEATE	Na(C18H32O2)	C	C	C	C	?	?	?	?	?	?	?
SODIUM PERBORATE	NaBO3	B	C	A	A	C	C	C	?	A	A	?
SODIUM PEROXIDE	Na2O2	C	C	A	A	A	A	?	A	A	A	?
SODIUM PHOSPHATE	Na3PO4	A	A	A	A	?	A	C	?	A	A	A
SODIUM PHOSPHATE (DI-BASIC)	Na2HPO4.12H2O	A	A	A	A	A	A	?	A	A	A	?
SODIUM PHOSPHATE (MONO-BASIC)	NaH2PO4	A	A	A	A	A	A	?	?	A	A	?
SODIUM PHOSPHATE (TRI-BASIC)	Na3PO4	A	A	A	A	A	A	?	?	A	A	?
SODIUM SALT	Na	A	A	A	A	A	A	?	?	A	A	?
SODIUM SILICATE	Na2SiO3 (Na2O.SiO	A	A	A	A	?	A	A	A	A	A	A
SODIUM SILICOALUMINATE		A	A	A	A	?	?	?	?	?	?	?
SODIUM SULPHATE	Na2SO4	A	A	A	A	?	A	?	A	A	A	?
SODIUM SULPHIDE	Na2S.9H2O	A	A	A	A	A	A	?	A	A	A	A
SODIUM SULPHITE	Na2SO3	A	A	A	A	?	A	?	A	A	A	A
SODIUM THIOSULPHATE	Na2S2O3.5H2O	A	A	A	A	?	A	A	A	A	A	?
SOYA OIL		C	A	C	B	?	A	?	A	A	A	?
SPENT SULPHITE LIQUOR		?	?	A	A	?	?	?	?	?	?	?
SPIRIT (85% ETHYL ALCOHOL)	C2H5OH	A	A	A	A	A	A	A	?	A	A	?
STANNIC CHLORIDE	SnCl4	A	B	B	A	?	?	C	?	A	A	A
STEARIC ACID	C18H36O2	C	B	C	C	?	A	B	A	A	A	A
STRONTIUM FERRITE	IS A SOLID	A	?	?	?	?	?	?	?	?	?	?
STYRENE	C8H8	C	C	C	C	A	A	A	?	A	C	A
SUCCINIC ACID / AMBER ACID	HOOC(CH2)COOH	A	?	A	?	?	?	?	?	?	?	?
SULPHAMINIC ACID 2%	H3NSO3	A	B	A	A	?	?	?	?	?	?	?
SULPHONIC ACID	H2SO2	C	C	C	B	?	?	?	?	?	?	?
SULPHUR (363 K)	S8	C	C	C	C	?	?	A	?	A	A	?
SULPHUR CHLORIDE	S2Cl2	B	C	A	A	?	A	A	?	A	B	A
SULPHUR DIOXIDE 1.5%	SO2	?	?	C	?	?	?	?	?	?	?	?
SULPHUR DIOXIDE 5% IN WATER	SO2 in H2O	A	B	A	A	?	?	?	?	?	?	?
SULPHUR DIOXIDE GAS	SO2	C	C	A	A	?	?	A	?	?	?	?
SULPHUR SMOKE		A	B	A	A	?	?	?	C	A	?	?
SULPHUR TRIOXIDE	SO3	C	C	B	A	?	?	?	?	A	?	?
SULPHURIC ACID (338 K)	H2SO4	?	?	?	A	?	?	?	?	A	?	?
SULPHURIC ACID 10% (348 K)	H2SO4	?	?	A	A	?	?	?	?	?	?	?
SULPHURIC ACID 10% (COLD)	H2SO4	A	A	A	A	?	A	C	?	A	A	A
SULPHURIC ACID 20%	H2SO4	A	B	A	A	?	A	C	?	A	A	A
SULPHURIC ACID 30%	H2SO4	A	B	A	A	?	A	C	?	A	A	A
SULPHURIC ACID 5% (358 K)	H2SO4	?	?	?	A	?	?	?	?	?	?	?
SULPHURIC ACID 50%	H2SO4	B	B	A	A	C	C	C	A	A	A	A
SULPHURIC ACID 75% (COLD)	H2SO4	C	C	A	A	C	C	C	A	A	A	A

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C: severe effect
Do not use

?: no data available

Duty fluid	Molecular formula	Pump Hoses				Pump Components						
		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
SULPHURIC ACID 95% (COLD)	H2SO4	C	C	B	A	A	A	C	B	A	C	A
SULPHURIC ACID 97%	H2SO4	C	C	C	A	?	?	C	?	?	C	?
SULPHURIC ACID 98%	H2SO4	C	C	C	B	?	?	C	?	?	C	?
SULPHUROUS ACID 10%	H2SO3	A	B	A	A	?	?	A	?	?	?	?
SULPHUROUS ACID 75%	H2SO3	B	C	A	A	?	?	A	?	?	?	?
SUNFLOWER OIL		C	A	C	C	?	?	?	?	?	?	?
TALC	Mg3Si4O11.H2O	A	A	A	A	?	?	?	?	?	?	?
TALLOW (BEEF)		C	B	C	B	?	A	A	?	A	A	?
TANNIC ACID	C76H52O46	A	A	A	A	?	A	A	A	A	A	A
TAR		C	C	C	C	A	A	A	?	A	A	A
TARTARIC ACID	C4H6O6	A	B	A	A	?	A	?	A	A	A	A
TETRABROMOETHANE	C2H2Br4	C	C	C	C	?	?	C	?	A	C	?
TETRABUTYLTITANATE	(C4H9)4TiO4	C	C	C	C	?	?	?	?	A	?	?
TETRACHLOROCARBON	CCl4	C	C	C	C	?	?	?	C	A	?	?
TETRACHLORODIFLUOROETHANE	C2F2Cl4	C	C	C	C	?	?	?	?	A	?	?
TETRACHLOROETHANE	C2H2Cl4	C	C	C	C	?	B	C	?	A	C	A
TETRACHLORONAFTALENE	C10H4Cl4	C	C	C	C	?	?	?	?	A	?	?
TETRAFLUOROCARBON	CF4	C	C	C	C	?	?	?	?	?	?	?
TETRAHYDROFURAN (THF)	C4H8O	C	C	C	C	?	A	?	C	A	B	A
THORIUM SLURRY		A	B	A	A	?	?	?	?	?	?	?
TITANIUM DIOXIDE (30%)	TiO2	A	B	A	A	?	?	?	?	?	?	?
TITANIUM SULPHATE (1%)	Ti(SO4)2	A	B	A	A	?	?	?	?	?	?	?
TOLUENE	C7H8	C	C	C	C	A	A	A	C	A	C	A
TRIBUTOXYPHOSPHATE	(C4H8OH)3PO4	C	C	C	C	?	?	?	?	?	?	?
TRIBUTYLPHOSPHATE	(C4H9)3PO4	C	C	C	C	A	A	A	?	A	A	A
TRICHLOROBENZENE	C6H3Cl3	C	C	C	C	?	A	C	?	A	?	?
TRICHLOROETHYLENE	C2HCl3	C	C	C	C	?	A	?	C	A	?	?
TRICHLOROFLUOROMETHANE	CFCI3	C	C	C	C	?	A	?	?	A	A	?
TRICHLOROTRIFLUOROETHANE	C2Cl3F3	C	C	C	C	?	A	?	?	A	A	?
TRICRESYL PHOSPHATE	(C7H7)3PO4	C	C	C	C	A	?	?	?	A	?	?
TRIETHANOLAMINE	(C2H5OH)3N	C	C	C	C	?	A	A	C	?	C	C
TRIPHENYL PHOSPHATE	(C6H5)3PO4	A	A	A	A	?	?	?	?	A	?	?
TRISODIUM PHOSPHATE (TSP)	Na3PO4	A	A	A	A	?	A	?	A	A	A	?
TUNG OIL (China wood oil)		C	C	C	C	A	A	A	?	A	A	?
TURPENTINE (mainly pinene)	C10H16	C	C	C	C	A	A	A	?	A	B	?
URANIUM	U	A	A	A	A	?	?	?	?	A	?	?
UREA	CH4N2O	A	B	A	A	?	A	A	A	A	A	A
URINE		A	B	A	A	?	A	A	?	A	A	A
VEGETABLE OIL		C	B	C	B	A	A	A	A	A	A	?
VINEGAR	C3H5COOH	B	C	A	A	?	A	B	A	A	A	A

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		NR	Nitrile	EPDM	Hypalon	Mild steel	SS316	Aluminium	PVC	PTFE	Polypropylene	PVDF
VINEGAR ANHYDRIDE 50%	C4H6O3	C	C	B	B	?	A	A	C	A	A	?
VINYLCHELORIDE	C2H3Cl	C	C	C	C	?	A	C	?	A	C	A
WATER	H2O	A	A	A	A	A	A	A	A	A	C	?
WATER, CONDENSATION	H2O	A	A	A	A	A	A	A	A	A	A	?
WATER, DISTILLED	H2O	A	A	A	A	A	A	A	A	A	A	A
WATER, DRINK	H2O	A	A	A	A	A	A	A	A	A	A	?
WATER, MIN. WITH OXYD.SALTS		B	C	A	A	?	?	?	?	?	?	?
WATER, MIN. WITHOUT OXYD.SALTS		A	A	A	A	?	?	?	?	?	?	?
WHISKY AND WINE		A	A	A	A	?	A	A	A	A	A	A
WHITE OIL 10%		C	A	C	C	?	A	?	?	A	?	?
WHITE SPIRIT		C	B	C	C	?	?	?	?	A	?	?
WOOD OIL		C	C	C	C	?	?	?	?	A	?	?
WOOLFAT		C	C	C	?	?	?	?	?	?	?	?
XYLENE	C8H10	C	C	C	C	A	A	A	C	A	C	A
ZEOLITE		B	B	A	A	?	A	?	?	A	?	?
ZINC AMMONIUM CHLORIDE	ZnNH4Cl3	A	C	A	A	?	?	?	?	?	?	?
ZINC BORATE	ZnBO3	A	A	A	A	?	?	?	?	?	?	?
ZINC CHLORIDE	ZnCl2	A	A	A	A	?	C	?	A	A	A	?
ZINC HYDROXIDE	Zn(OH)2	A	B	A	A	?	?	?	?	?	?	?
ZINC OXIDE (300 K)	ZnO	A	A	A	A	?	?	?	?	?	?	?
ZINC SULPHATE	ZnSO4	A	A	A	A	?	?	?	A	A	A	?