



# TX/TIX Series Applicable Fluid List

The following tables show chemical resistance of polyethylene resin.

The list below does not guarantee the performance of the tubing. When using the tube in a chemical environment, please make sure to test under application conditions in the same environment and confirm that no issues arise.

○: Resistant    △: Slight deterioration or absorbed into resin    ×: Not resistant    \*1: There is a concern about environmental stress crack resistance.

Chemical name	Concentration	Temperature		Chemical name	Concentration	Temperature		Chemical name	Concentration	Temperature	
		20°C	60°C			20°C	60°C			20°C	60°C
Acetaldehyde*1	100%	△	×	Benzenesulfonic acid	—	×	—	Cyclohexanone	—	×	—
Acetic acid	Less than 10%	○	○	Benzine alcohol	—	×	—	D-Glucose	—	○	○
	10 to 50%	○	△	Blue lead carbonate	Saturation	○	○	Dextrose	Saturation	○	○
	60% or more	△	×	Boric acid	—	○	○	Dibutyl phthalate*1	100%	△	×
Acetone*1	100%	△	×	Boron trifluoride	—	○	—	Diethyl ether*1	—	×	—
Alum	—	○	○	Brine	—	○	○	Diethyl phthalate	—	△	×
Aluminium chloride	—	○	△	Bromine	Dry gas	×	×	Diethyl phthalate*1	—	△	×
Aluminium sulfate	—	○	○	Butyl alcohol*1	100%	○	×	Disodium hydrogen phosphate	100%	○	○
Aluminum fluoride	—	○	○	Calcium carbonate	—	○	○	Emulsifier	—	○	○
Aluminum hydroxide	—	○	○	Calcium chlorate	Saturation	○	○	Ether	—	×	—
Ammonia	Dry gas	○	○	Calcium chloride	—	○	○	Ethyl acetate	—	△	×
Ammonia water	0.88 Specific gravity liquid	○	○	Calcium hydroxide	—	○	○	Ethyl alcohol	Less than 96%	○	○
Ammonium bicarbonate	—	○	○	Calcium hypochlorite	15%	○	○		100%	△	△
Ammonium carbonate	—	○	○	Calcium nitrate	High	○	○	Ethylene dichloride*1	100%	×	×
Ammonium chloride	Saturation	○	○	Calcium phosphate	—	○	○	Ethylene glycol	—	△	△
Ammonium cyanide	—	○	○	Calcium sulfate	—	○	○	Fluorine	—	△	×
Ammonium hydrogen sulfide	Saturation	○	○	Camphor oil*1	—	×	×	Fluorosilicic acid	—	○	—
Ammonium hydroxide	—	○	○	Carbon dioxide	100%	○	○	Formaldehyde	40%	○	○
Ammonium metaphosphate	Saturation	○	○	Carbon disulfide	100%	×	×	Formic acid	80% or less	○	○
Ammonium nitrate	Saturation	○	○	Carbon monoxide	—	○	○		100%	△	△
Ammonium persulfate	—	○	○	Carbon tetrachloride	100%	×	×	Furfuryl alcohol*1	—	×	—
Ammonium sulfate	Saturation	○	○	Castor oil*1	—	×	—	Glucose	—	○	○
Ammonium sulfide	Saturation	○	○	Cetyl alcohol*1	—	○	—	Glycerine	—	○	△
Ammonium thiocyanate	Saturation	○	○	Chlorine	Dry gas	△	×	Hydrobromic acid	50%	○	○
Amyl acetate*1	—	×	—		Liquid 100%	×	×		100%	○	○
Amyl alcohol*1	100%	○	×	Chlorine water	2%	○	○	Hydrochloric acid	10%	○	×
Aniline	100%	△	×	Saturation	○	△	△	Hydrofluoric acid	Less than 60%	○	○
Aniline hydrochloride	—	×	—	Chloroform*1	100%	△	×		75%	○	△
Aniline sulfate	—	×	×	Chlorosulfonic acid	—	×	×	Hydrogen	100%	○	○
Animal oil*1	—	△	×	Chrome alum	Saturation	○	○	Hydrogen peroxide	—	○	○
Antimony pentachloride	—	○	○	Chromic acid	Electrolysis liquid	○	○	Hydrogen sulfide	—	○	—
Antimony trichloride	—	○	○	Cider	—	○	—	Hydroquinone	—	○	○
Arsenic acid	100%	○	○	Citric acid	—	○	○	Iron chloride	Saturation	○	○
Barium carbonate	Saturation	○	○	Copper chloride	—	○	○	Iron sulfate	—	○	—
Barium chloride	Saturation	○	○	Copper cyanide	—	○	○	Lactic acid	—	○	○
Barium hydroxide	Saturation	○	○	Copper fluoride	—	○	○	Lead acetate	Saturation	○	○
Barium sulfate	Saturation	○	○	Copper nitrate	—	○	○	Lead arsenate	—	○	—
Barium sulfide	Saturation	○	○	Copper sulfate	Saturation	○	○	Linseed oil*1	100%	△	×
Beef tallow	—	○	—	Creosote*1	—	×	—	Magnesium carbonate	Saturation	○	○
Beer	—	○	○	Cresol*1	—	×	—	Magnesium chloride	Saturation	○	○
Benzaldehyde*1	—	×	—	Cresylic acid	50%	○	○	Magnesium hydroxide	High	○	○
Benzene*1	—	×	×	Cuprous potassium cyanide	—	○	○	Magnesium nitrate	Saturation	○	○
				Cyclohexanol	—	△	△	Magnesium sulfate	Saturation	○	○

# TX/TIX Series

## Applicable Fluid List

○: Resistant    △: Slight deterioration or absorbed into resin    ×: Not resistant    \*1: There is a concern about environmental stress crack resistance.

Chemical name	Concentration	Temperature		Chemical name	Concentration	Temperature		Chemical name	Concentration	Temperature	
		20°C	60°C			20°C	60°C			20°C	60°C
Maleic acid	—	○	○	Potassium chloride	Saturation	○	○	Sodium thiosulfate	Saturation	○	○
Manganese sulfate	—	○	○	Potassium chromate	Saturation	○	○	Soft soap*1	—	○	○
Mercury	—	○	○	Potassium cyanide	Saturation	○	○	Starch	Saturation	○	○
Mercury chloride	Saturation	○	○	Potassium dichromate	—	○	○	Stearic acid	100%	○	×
Mercury cyanide	Saturation	○	○	Potassium disulfite	—	○	○	Strontium nitrate	—	○	○
Metal soap*1	—	○	—	Potassium fluoride	—	○	○	Sucrose	—	○	○
Methyl acetate	—	×	×	Potassium hydroxide	Less than 50%	○	○	Sulfur	—	○	△
Methyl alcohol	Less than 50%	○	○		High*1	○	○	Sulfur dioxide	Dry gas	○	○
	100%	△	△	Potassium nitrate	Saturation	○	○		Wet gas	○	△
Methyl bromide	—	×	×	Potassium permanganate	—	○	○	Sulfuric acid	10 to 60%	○	△
Methyl chloride	—	×	×	Potassium persulfate	—	○	○		70%	○	×
Methyl ethyl ketone*1	100%	△	×	Potassium phosphate	—	○	○		80%	△	×
Milk	—	○	○	Potassium sulfate	High	○	○		98%	×	×
Mineral oil*1	—	△	×	Potassium sulfide	High	○	○	Surfactant*1	—	○	○
Monochlorobenzene	—	×	×	Potassium thiosulfate	—	○	○	Tannic acid	10%	○	○
Nickel chloride	Saturation	○	○	Salicylic acid	—	○	○	Tartaric acid	10%	○	○
Nickel nitrate	High	○	○	Sea water	—	○	○		Saturation	○	△
Nickel sulfate	Saturation	○	○	Silicone liquid*1	—	△	×	Tetraethyl lead	—	○	—
Niethyl ether*1	—	△	△	Silver cyanide	—	○	○	Tin chloride	Saturation	○	○
Nitric acid	5 to 25%	○	△	Silver nitrate	—	○	○	Transformer oil*1	—	△	×
	50%	△	×	Soap solution	—	○	○	Trichloroethylene*1	100%	×	×
	70 to 98%	×	×	Sodium acetate	—	○	○	Tricresyl phosphate	—	×	×
Nitrobenzene*1	—	△	×	Sodium aluminate	—	○	○	Triethanolamine*1	100%	○	×
Oxalic acid	Saturation	○	○	Sodium benzoate	Saturation	○	○	Turpentine oil*1	100%	×	×
Oxygen	100%	○	×	Sodium bicarbonate	Saturation	○	○	Vegetable oil*1	—	△	×
Paraffin	—	△	×	Sodium bisulfate	Saturation	○	○	Water	—	○	○
Petroleum	—	×	×	Sodium bisulfite	Saturation	○	○	Xylene*1	100%	×	×
Petroleum ether	—	×	×	Sodium borate	—	○	○	Yeast	—	○	—
Phenol*1	—	×	—	Sodium carbonate	High	○	○	Zinc oxide	—	○	○
Phosphoric acid	Less than 90%	○	×	Sodium chloride	Saturation	○	○	Zinc sulfate	Saturation	○	○
	95%	△	×	Sodium cyanide	Saturation	○	○				
Phosphorus oxychloride	—	×	×	Sodium ferricyanide	Saturation	○	○				
Phosphorus pentoxide	100%	○	○	Sodium ferrocyanide	Saturation	○	○				
Phosphorus trichloride	100%	○	—	Sodium fluoride	Saturation	○	○				
Photographic developer	—	○	○	Sodium hydroxide	Less than 40%	○	○				
Photographic emulsion	—	○	—		High*1	○	○				
Picric acid	1%	○	○	Sodium hypochlorite	15%	○	○				
	Alcohol 10%	○	○	Sodium hyposulfite	—	○	○				
Potassium bicarbonate	Saturation	○	○	Sodium metaphosphate	—	○	○				
Potassium bichromate	Saturation	○	○	Sodium nitrite	—	○	○				
Potassium bisulfate	—	○	○	Sodium peroxide	—	○	○				
Potassium borate	—	○	○	Sodium phosphate	—	○	○				
Potassium bromate	—	○	○	Sodium silicate	—	○	○				
Potassium bromide	Saturation	○	○	Sodium sulfate	Saturation	○	○				
Potassium carbonate	—	○	○	Sodium sulfide	25%	○	○				
Potassium chlorate	Saturation	○	○		Saturation	○	○				
				Sodium sulfite	—	○	○				