

Chemical Resistance Guide

This table is based on immersion test <our test data> in chemicals for each item (by using pressed sheet), documents, and other company data (rubber hose anufacturers'). Therefore, this is based on the data under static conditions and a phenomenon (material change) might be different from that under the circumstances of actual use. Please consult us after confirming detailed use conditions. When using a hose, regardless of whether it has superior or inferior chemical resistance, conduct maintenance and inspection based on "Hose handling" on page 4.

A	Tiflex Hose / F-3, WT, Antistatic W, E, SF, Hinet Hose Tiflex Hose / GL, N, GL-2, GL-ST, GL-E Tiflex Hose / WS, FC, FC20, WR(Φ75 or less), WR-S(Φ75 or less)
B	Tiflex Hose / WA, Tiflex Hose / Abrasion Resistant GL
C	Tiflex Hose / WR(Φ100 or more), WR-S(Φ100 or more)
D	Tiflex Hose / Abrasion Resistant E
E	Tiflex Hose / Abrasion Resistant E, Tiflex Hose / WSU

Resistant properties against each fluid (chemical) are as follows:

- = Hardly affected
- △ = Considerably affected (might be used according to conditions)
- × = Unsuitable

Unless otherwise noted, concentration of water solution is saturate and it is at normal temperature.

Large Classification	Small Classification	Oil, Solvent, Chemicals {Concentration Weight %}	A	B	C	D	E
Acid		Sulfurous Acid	○	○	○	×	○
		Hydrochloric Acid (10%)	○	○	△	○	○
		Hydrochloric Acid (20%)	○	○	△	△	○
		Hydrochloric Acid (Conc.)	×	△	×	△	○
		Hydrogen Peroxide (3%)	○	△	×	○	○
		Hydrogen Peroxide (30%)	△	×	×	△	○
		Hydrogen Peroxide (80% or more)	×	×	×	×	×
		Chromic Acid Plating Solution (25%)	○	×	×	×	○
		Acetic Acid (10%)	○	○	○	×	○
		Oxalic Acid	○	○	○	○	○
		Nitric Acid (5%)	○	△	×	×	○
		Nitric Acid (50%)	△	△	×	×	×
		Nitric Acid (70%)	×	×	×	×	×
		Nitric Acid (95%)	×	×	×	×	×
		Carbonic Acid	○	○	×	△	○
		Sulfuric Acid (10%)	○	△	×	○	○
		Phosphoric Acid (10%)	○	○	×	△	○
Alkali		Ammonia Aqueous (Ammonium Hydroxide)	△	○	×	○	○
		Ammonia (Gas)	×	○	○	○	△
		Ammonia (Liquid)	×	○	○	○	△
		Calcium Hypochlorite (Conc)	○	○	×	×	○
		Calcium Hypochlorite (15% in chlorine)	○	○	×	○	○
		Aluminum Hydroxide	○	○	○	○	○
		Potassium Hydroxide (10%)	○	○	△	○	○
		Potassium Hydroxide (Conc)	×	○	△	○	○
		Sodium Hydroxide (10%)	○	○	○	○	○
		Sodium Hydroxide (Conc)	×	○	○	○	○
		Barium Hydroxide	○	○	○	○	○
		Magnesium Hydroxide	○	○	△	○	○

Large Classification	Small Classification	Oil, Solvent, Chemicals {Concentration Weight %}	A	B	C	D	E
Other Inorganic Chemicals		Carbon Monoxide	○	○	△	○	○
		Zinc Chloride	○	○	○	○	○
		Aluminum Chloride	○	○	○	○	○
		Ammonium Chloride	○	○	○	○	○
		Potassium Chloride	○	○	○	○	○
		Calcium Chloride (Conc.)	○	○	○	○	○
		Ferrous Chloride	○	○	○	○	○
		Copper Chloride	○	○	○	○	○
		Sodium Chloride	○	○	○	○	○
		Barium Chloride	○	○	○	○	○
		Magnesium Chloride	○	○	○	○	○
		Chlorine (Gas)	△	×	×	×	△
		Ozone	△	○	×	○	○
		Potassium Permanganate	○	○	△	×	○
		Citric Acid	○	○	○	○	○
		Aluminum Acetate	○	○	△	△	△
		Ammonium Acetate (Conc.)	○	○	○	○	○
		Potassium Cyanide	○	○	○	○	○
		Potassium Bromide	○	○	○	○	○
		Potassium Dichromate	○	○	×	○	○
		Bromine	×	×	×	△	×
		Ammonium Bicarbonate	○	○	○	○	○
		Sodium Bicarbonate	○	○	○	○	○
		Ammonium Nitrate	○	○	○	○	○
		Copper Nitrate	○	○	○	○	○
		Hydrogen	○	○	△	○	○
		Carbon Dioxide	○	○	○	○	○
		Calcium Carbonate	○	○	○	○	○
		Magnesium Carbonate	○	○	○	○	○
		Carbon Dioxide	×	×	×	×	△
		Potassium Fluoride	×	○	○	○	○
		Fluorine	×	×	×	△	×
		Iodine	×	×	×	△	×
		Hydrogen Sulfide	×	○	×	△	○
		Aluminum Sulfate	○	○	△	○	○
		Ferric Sulfate	○	○	○	○	○
		Copper Sulfate	○	○	△	○	○
		Magnesium Sulfate	○	○	△	○	○
		Potassium Phosphate	○	○	○	○	○
		Emulsions	○	○	○	○	○
Photographic Developers	○	△	△	○	○		
Salt Water	○	○	○	○	○		

Large Classification	Small Classification	Oil, Solvent, Chemicals {Concentration Weight %}	A	B	C	D	E
Organic Chemicals	Ketone, Ether, etc.	Acetone	x	○	△	x	x
		Diethyl Ether	x	x	x	x	x
		Methyl Ethyl Ketone	x	○	x	x	x
	Chlorinated Solvent	Ethylene Chloride	x	x	x	x	x
		Methylene Chloride	x	x	x	x	x
		Chloroform	x	x	x	x	x
		Carbon Tetrachloride	x	x	x	x	x
		Dichloroethylene	x	x	x	x	x
		Dichlorobenzene	x	x	x	x	x
		Perchloroethylene	x	x	x	x	x
		Monochlorobenzene	x	x	x	x	x
		Other Organic Chemicals	Aniline	x	△	x	x
	Isopropyl Alcohol		△	○	△	x	○
	Ethyl Alcohol (6%)		△	○	○	△	○
	Ethyl Alcohol (100%)		x	○	△	x	○
	Ethylene Glycol		○	○	○	○	○
	Oleic Acid		△	△	x	△	○
	Glycerin		○	○	○	○	○
	Creosote Oil		x	x	x	△	x
	Ethyl Acetate		x	△	x	x	x
	Stearic Acid		○	△	△	△	○
	Cetyl Alcohol		○	△	△	△	○
	Dextrin		○	○	○	○	○
	Tetrahydrofuran		x	x	x	x	x
	Toluene		x	x	x	x	x
	Paraffin		△	x	x	○	○
	Phenol		x	△	x	△	△
	Butyl Alcohol		x	△	○	x	△
	Glucose		○	○	○	○	○
	Propylene Glycol		x	○	△	△	○
	Benzyl Alcohol		x	△	x	x	△
	Benzene		x	x	x	x	x
	Formaldehyde (40%)	△	△	x	x	△	
Methyl Alcohol (6%)	○	○	○	x	○		
Methyl Alcohol (100%)	x	○	○	x	○		
Aniline Sulfate	○	x	x	○	○		
Mineral Oil	x	x	x	○	x		
Transformer Oil	x	x	x	○	x		