

PERMA-TRENCH FLO-THRU DRAINAGE SYSTEMS

HDPE Chemical Resistance Data A-Z



Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C	Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C
Acetaldehyde		a	b	-	Ammonium Sulfate	Sat.	a	a	-
Acetamide	Sat.	a	-	37.78	Ammonium Sulfide	Sat.	a	a	-
Acetate Solvents	Crude	a	-	21.11	Ammonium Thiocyanate	Sat.	a	a	-
Acetate Solvents	Pure	a	-	21.11	n-Amyl Acetate	-	b	b	-
Acetic Acid	5%	a	a	-	Amyl Alcohol	100	b	b	-
Acetic Acid	50%	a	a	-	Amyl Chloride	-	b	b	-
Acetic Acid	60%	-	-	21.11	Aniline	-	b	b	-
Acetic Acid	97%	a	b	60.00	Anisole	100	b	b	-
Acetic Anhydride	-	b	b	-	Anti-Freeze	-	a	a	-
Acetone	all	b	b	60.00	Antimony Chloride-	a	a	-	-
Acetonitrile	-	a	a	-	Aromatic Hydrocarbons	-	b	b	-
Acetophenone	100	b	b	-	Arsenic Acid	-	a	a	-
Acriflavine	2	a	a	60.00	Aviation Fuel	100	b	c	-
Acrylic Emulsion	-	a	a	-	Aviation Turbine Fuel	100	b	c	-
Acrylonitrile	-	a	a	-	Aqua Regis	-	c	c	-
Adipic Acid	-	a	a	-					
Alcohol	all	a	a	60.00	B				
Alinine	-	a	a	-	Barium Carbonate	Sat.	a	a	-
Alcohols- Amyl	-	b	b	-	Barium Chloride	Sat.	a	a	-
Alcohols- Benzyl	-	b	b	-	Barium Hydroxide	-	a	a	-
Alcohols- Butyl	-	a	a	-	Barium Cyanide	-	a	a	-
Alcohols- Ethyl	-	a	a	-	Barium Hydroxide	-	a	a	-
Alcohols- Hexyl	-	b	b	-	Barium Nitrate	-	a	a	-
Alcohols- Isopropyl	-	a	a	-	Barium Sulfate	Sat.	a	a	-
Alcohols-Methyl	-	a	a	-	Barium Sulfide	Sat.	a	a	-
Alcohols- Octyl	-	b	b	-	Battery Acid	all	a	a	60.00
Alcohols- Propyl	-	a	a	-	Beer	all	a	a	60.00
Alkaline	-	a	-	-	Benzaldehyde	all	b	b	60.00
Allyl Alcohol	-	a	a	-	Benzene	-	c	c	-
Aluminum Chloride	all	a	a	60.00	Benzoic Acid	Sat.	a	a	-
Aluminum Flouride	-	a	a	-	Benzyl Acetate	-	a	a	-
Aluminum Hydroxide	-	a	a	-	Benzyl Alcohol	Sat.	b	c	-
Alum. Potassium Sulfate	-	a	a	-	Bismuth Carbonate	Sat.	a	a	-
Aluminum Salts	-	a	a	-	Bitumen	-	a	a	-
Aluminum Sulfate	-	a	a	-	Borax	all	a	a	60.00
Alums	-	a	a	-	Boric Acid	-	a	a	-
Amino Acids	-	a	a	-	Brake Fluid	all	a	a	60.00
Ammonia	all	a	c	20.00	Brine	Sat.	a	a	-
Ammonium Acetate	Sat.	a	a	-	Bromic Acid	10%	a	a	60.00
Ammonium Bifluoride	-	a	a	-	Bromine	-	c	c	-
Ammonium Carbonate	Sat.	a	a	-	Bromobenzene	-	b	c	-
Ammonium Chloride	Sat.	a	a	-	Bromoform	-	c	c	-
Ammonium Fluoride	20	a	a	-	Butadiene	-	b	c	-
Ammonium Glycolate	-	a	a	-	Butane	-	a	a	-
Ammonium Hydroxide	5%	a	a	-	Butanedoil	-	a	a	-
Ammonium Hydroxide	20%	a	a	-	Butanol	-	a	a	-
Amm. Metaphosphate	Sat.	a	a	-	Buttermilk	-	a	a	-
Ammonium Nitrate	Sat.	a	a	-	Butyl Acetate	100	c	c	-
Ammonium Persulfate	Sat.	a	a	-	Butyl Alcohol	100	a	a	-
Ammonium Oxalate	-	a	a	-	Butyl Chloride	-	c	c	-
Ammonium Persulfate	-	a	a	-	n-Butyl Acetate	-	a	a	-
Amm. Phosphate Dibasic	-	a	a	-	n-Butyl Alcohol	-	a	a	-
Amm Phosphate Monobasic	-	a	a	-	sec-Butyl Alcohol	-	a	a	-
Amm. Phosphate Tribasic	-	a	a	-	tert-Butyl Alcohol	-	a	a	-
Ammonium Salts	-	a	-	-	Butyric Acid	-	b	c	-

KEY:

a - Unaffected

b - Slightly Attacked

c - Attacked

- Unknown

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Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C	Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C
Calcium Carbide	all	a	a	60.00	Cyclohexanone	-	b	c	-
Calcium Carbonate	Sat.	a	a	-	Cyclopentane	-	b	c	-
Calcium Chlorate	Sat.	a	a	-	D				
Calcium Chloride	all	a	a	60.00	DeCalin	-	a	a	-
Calcium Hydroxide	Conc.	a	a	-	n-Decane	-	b	c	-
Calcium Hydroxide	Sat.	a	a	-	Detergents	2	a	a	-
Calcium Hypochlorite	all	a	a	60.00	Developers	-	a	a	-
Cal. Hypochlorite Bleach	20	a	b	-	Diacetone Alcohol	-	a	a	-
Calcium Nitrate	-	a	-	-	Dibutyl Ether	-	-	-	-
Calcium Phosphate 50	a	-	-	-	Dibutyl Phthalate	100	b	b	-
Calcium Sulfate	-	a	a	-	o-Dichlorobenzene	-	b	b	-
Calcium Sulfite	-	a	a	-	p-Dichlorobenzene	-	a	b	-
Cane Juice	-	a	a	-	1,2-Dichloroethane -	c	c	-	-
Carbazole	-	a	a	-	Dichloroethylene	100	a	-	-
Carbon Bisulfide	-	c	c	-	2,4-Dichlorophenol -	c	c	-	-
Carbon Dioxide	-	a	a	-	Diesel Fuel	-	b	b	-
Carbon Disulfide	-	c	c	-	Diethanolamine	100	a	a	-
Carbon Monoxide	-	a	a	-	Diethyl Benzene	-	b	c	-
Carbon Tetrachloride	-	c	c	-	Diethyl Ether	-	b	c	-
Carbonated Water	-	a	a	-	Diethyl Ketone	-	a	a	-
Carbonic Acid	-	a	a	-	Diethyl Malonate	-	a	a	-
Caster Oil	-	a	-	-	Diethylamine	-	b	c	-
Cedarwood Oil	-	b	c	-	Diethylene Glycol	-	a	a	-
Cellosolve Acetate	-	a	a	-	Diethyl. Glycol Ethyl Ether	-	a	a	-
Cetyl Alcohol	100	a	-	-	Diisooctyl Phthalate	100	a	a	-
Chlorine Pool /Spa Water	-	a	-	40.56	Dimethyl Formamide	-	a	a	-
Chlorine	10% in Air	c	c	-	Dimethylsulfoxide	-	a	a	-
Chlorine	10% Moist	c	c	-	1,4-Dioxane	-	a	a	-
Chloroacetic Acid	-	b	b	-	Dipenyl Oxide	-	b	b	-
p-Chloroacetophenone	-	a	a	-	Dipropylene Glycol	-	a	a	-
Chlorobenzene	-	c	c	-	Dyes	-	a	a	-
Chloroform	-	c	c	-	E				
Chlorosulfonic Acid 100	c	c	-	-	Electrolyte	-	b	b	-
Chlorox (Bleach)	-	a	a	-	Emulsifiers	-	a	a	-
Chrome Alum	-	a	a	-	Epsom Salts	-	a	a	-
Chromic Acid	10%	a	a	-	Ethanol	96	a	a	60.00
Chromic Acid	50%	b	b	-	Ethanolamine	100	a	a	-
Chromic/Sulfuric Acid	-	c	c	-	Ether	-	c	c	-
Cider	-	a	a	-	Ethyl Acetate	-	b	b	-
Citric Acid	10%	a	a	-	Ethyl Alcohol	96	a	a	60.00
Cinnamon Oil	-	b	c	-	Ethyl Alcohol	40%	a	a	-
Citrus Juices	all	a	a	60.00	Ethyl Benzene	-	a	b	-
Coffee	-	a	a	-	Ethyl Benzoate	-	a	a	-
Copper Chloride	Sat.	a	a	-	Ethyl Butyrate	-	a	b	-
Copper Cyanide	Sat.	a	a	-	Ethyl Chloride	Liquid	b	b	-
Copper Fluoride	Sat.	a	a	-	Ethyl Cyanoacetate	-	a	a	-
Copper Nitrate	Sat.	a	a	-	Ethyl Ether	100	b	-	-
Copper Sulfate	-	a	a	-	Ethyl Lactate	-	a	a	-
Cottonseed Oil	-	a	a	-	Ethylene Chloride	-	b	b	-
Cream	-	a	a	-	Ethylene Diamine	-	a	a	-
Cresol	-	b	c	-	Ethylene Dichloride-	b	b	-	-
Cresylic Acid	-	a	a	-	Ethylene Glycol	-	a	a	-
Cuprous Chloride	Sat.	a	a	-	Ethy. Glycol Methyl Ether	-	a	a	-
Cyclohexane	-	b	c	-	Ethylene Oxide	-	c	c	-
Cyclohexanol	100	a	b	-					

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HDPE Chemical Resistance Data A-Z



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Fatty Acids	-	b	b	-	Isobutyl Alcohol	-	a	a	-
Ferric Chloride	Sat.	a	a	-	Isopropyl Acetate	-	b	b	-
Ferric Nitrate	Sat.	a	a	-	Isopropyl Benzene	-	a	a	-
Ferric Sulfate	Sat.	a	a	-	Isopropyl Ether	-	c	c	-
Ferrous Chloride	Sat.	b	b	-	Isotane	-	c	c	-
Ferrous Sulfate	Sat.	b	b	-	J				
Fluoboric Acid	-	a	a	-	Jet Fuel	-	b	c	-
Fluorosilicic Acid	-	a	a	-	K				
Flourides	-	a	a	-	Kerosene	all	b	b	20.00
Flourine	-	a	c	-	Ketones	-	c	c	-
Formaldehyde	10%	a	a	60.00	L				
Formic Acid	3%	a	a	-	Lacquer Thinner	-	b	c	-
Formic Acid	50%	a	a	-	Lactic Acid	3%	a	a	-
Formic Acid	100%	a	a	-	Lactic Acid	85%	a	a	-
Freon TF	-	a	a	-	Lanolin	100%	a	a	-
Fructose	all	a	a	60.00	Lead Acetate	Sat.	a	a	-
Fruit Juices	-	a	a	-	Lime	-	a	a	-
Fuel Oil	all	b	b	60.00	Linseed Oil	100%	a	a	-
Furfural	100	c	c	-	Lubricating Oil	100%	b	b	-
G					M				
Gas Liquor	-	c	-	-	Machine Oil	all	a	-	20.00
Gasoline	-	b	b	-	Magenta Dye	2	a	a	Some Staining
Gearbox Oil	100	a	b	-	Magnesium Carbonate	Sat.	a	a	-
Gelatin	-	a	a	-	Magnesium Chloride	Sat.	a	a	-
Glacial Acetic Acid	-	a	a	-	Magnesium Hydroxide	-	a	a	-
Glucose	20	a	a	-	Magnesium Nitrate	Sat.	a	a	-
Glutaraldehyde	-	a	a	-	Magnesium Sulfate	Sat.	a	a	-
Glycerine	-	a	a	-	Magnesium Sulfite	Sat.	a	a	-
Glycol	-	a	a	-	Maleic Acid	-	a	a	-
Glycolic Acid	-	a	a	-	Meat Juices	-	a	a	-
Grape Juice	-	a	a	-	Mercuric Chloride	40	a	a	-
H					Mercuric Cyanide	Sat.	a	a	-
n-Heptane	-	a	b	-	Mercurous Nitrate	Sat.	a	a	-
Heptane	-	b	b	-	Mercury	-	a	a	-
Hexane	-	b	b	-	Methanol	all	a	-	20.00
Hydraulic Fluid	all	a	-	20.00	2-Methoxyrthanol	-	a	a	-
Hydrazine	-	c	c	-	Methoxyethyl Oleate	-	a	a	-
Hydrobromic Acid	50	a	a	-	Methyl Acetate	-	b	b	-
Hydrochloric Acid	5%	a	a	-	Methyl Alcohol	all	a	-	20.00
Hydrochloric Acid	35%	a	a	60.00	Methyl Bromide	-	b	b	-
Hydrocyanic Acid	-	a	a	-	Methyl Chloride	-	c	c	-
Hydrofluoric Acid	4%	a	a	-	Methyl Ethyl Ketone	-	b	b	-
Hydrofluoric Acid	48%	a	a	-	Methyl Isopropyl Ketone	-	b	b	-
Hydrofluosilicic Acid	-	a	a	-	Methyl-y-butyl Ether	-	b	c	-
Hydrogen Chloride Gas	100%	a	a	-	Methylene Chloride	-	a	b	-
Hydrogen Peroxide	3%	a	a	-	Milk	all	a	a	60.00
Hydrogen Peroxide	30%	a	a	-	Mineral Oil	-	a	a	-
Hydrogen Peroxide	90%	a	a	-	Mineral Spirits	-	b	c	-
Hydrogen Sulfide	-	a	a	-	Molasses	-	a	a	-
Hydroquinone	-	a	a	-	Motor Oil	100	a	b	-
I					N				
Inks	-	a	a	-	Naphtha	-	b	b	-
Iodine	Crystals	c	c	-	Naphthalene	100	a	a	-
Iodine Tincture	-	a	-	-	Nickle Chloride	Sat.	b	a	-
Isooctane	100%	c	c	-	Nickle Nitrate	Sat.	a	a	-

KEY:

a - Unaffected

b - Slightly Attacked

c - Attacked

- Unknown

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HDPE Chemical Resistance Data A-Z



Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C	Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C
Nickle Sulfate	Sat.	a	a	-	Plating Solutions, Indium	-	a	a	-
Nitric Acid	1-10%	a	a	-	Plating Solutions, Iron	-	a	a	-
Nitric Acid	50%	a	c	-	Plating Solutions, Lead	-	a	a	-
Nitric Acid	70%	a	c	-	Plating Solutions, Nickel	-	a	a	-
Nitrobenzene	-	b	c	-	Plating Solutions, Rhodium	-	a	a	-
Nitromethane	-	b	c	-	Plating Solutions, Silver	-	a	a	-
Nutric Acid	10	a	a	-	Plating Solutions, Tin	-	a	a	-
Nitrobenzene	100	a	a	-	Plating Solutions, Zinc	-	a	a	-
O					Potassium Bicarbonate	Sat.	a	a	-
n-Octane	-	a	a	-	Potash	-	a	a	-
Oil- Bone	-	a	a	-	Potassium Bicarbonate	-	a	a	-
Oil- Castor	-	b	b	-	Potassium Borate	1	a	a	-
Oil- Clove	-	b	b	-	Potassium Bromate 10	a	a	-	-
Oil- Coconut	-	b	b	-	Potassium Bromide Sat.	a	a	-	-
Oil- Corn	-	a	a	-	Potassium Carbonate	Sat.	a	a	-
Oil- Cotton Seed	-	a	a	-	Potassium Chlorate Sat.	a	a	-	-
Oil- Diesel Fuel	-	a	a	-	Potassium Chloride Sat.	a	a	-	-
Oil- Engine	-	a	a	-	Potassium Chromate	40	a	a	-
Oil- Linseed	-	a	a	-	Potassium Cyanide Sat.	a	a	-	-
Oil- Mineral	-	b	b	-	Potassium Dichromate	40	a	a	-
Oil- Palm	-	a	a	-	Pot. Ferri-/Ferrocyanide	-	a	a	-
Oil- Peanut	-	b	b	-	Potassium Flouride	-	a	a	-
Oil- Pine	-	b	b	-	Potassium Hydroxide	1%	a	a	-
Oil- Soybean	-	a	a	-	Potassium Hydroxide	Conc.	a	a	-
Oil- Sperm	-	a	a	-	Potassium Nitrate	Sat.	a	a	-
Oil- Transformer	-	b	b	-	Potassium Perborate	Sat.	a	a	-
Oleic Acid	-	a	b	-	Potassium Perchlorate	10	a	a	-
Oleum	-	c	c	-	Potassium Permanganate	20	a	a	-
Olive Oil	100	a	a	-	Potassium Sulfate	-	a	a	-
Orange Oil	-	a	b	-	Potassium Sulfide	-	a	a	-
Oxalic Acid	50	a	b	-	Potassium Sulfite	-	a	a	-
Ozone	-	a	a	-	Propane Gas	-	b	c	-
P					Propionic Acid	-	a	a	-
Paraffin	100	b	b	-	Propyl Alcohol	100	a	a	-
Paraffin Wax	100		a	-	Propylene Glycol	-	a	a	-
Perchloric Acid	-	a	c	-	Propylene Oxide	-	a	a	-
Perchlorethylene	-	c	c	-	Pyridine	-	b	b	-
Petroleum Ether	100	c	c	-	Q				
Petrol	100	b	c	-	R				
Petrolatum	-	b	b	-	Resorcinal	Sat.	a	a	-
Petroleum Ether	100	c	c	-	Resorcinal	5%	a	a	-
Phenol	Crystals	a	b	-	Rust Inhibitors	-	a	a	-
Phenol	Liquid	c	c	-	S				
Phosphoric Acid	1-5%	a	a	-	Sallcyladehyde	-	a	a	-
Phosphoric Acid	85%	a	a	-	Sallcyclic Acid	Powder	a	a	-
Phosphoric Acid	90%	a	a	60.00	Sallcyclic Acid	Sat.	a	a	-
Photographic Developer	-	a	a	-	Salt Solutions	Metallic	a	a	-
Picric Acid	-	c	c	-	Sea Water	-	a	a	-
Pine Oil	-	a	a	-	Silicone Oil	-	a	a	-
Plating Solutions, Brass	-	a	a	-	Silicone	-	a	a	-
Plating Solutions, Cadmium	-	a	a	-	Silver Acetate	-	a	a	-
Plating Solutions, Chrome	-	b	b	-	Silver Nitrate	-	a	a	-
Plating Solutions, Chromium	-	a	a	-	Skydrol LD4	-	a	a	-
Plating solutions, Copper	-	a	a	-	Soap Solution (Conc.)	-	a	a	-
Plating Solutions, Gold	-	a	a	-	Soda Ash	-	a	a	-

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Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C	Chemical	Concentration	At 20 °C	At 50 °C	Max.Temp °C
Sodium Acetate	Sat.	a	a	-	Tetrachlorethane	-	c	c	-
Sodium Aluminate	-	a	a	-	Tetrahydrofuran	-	c	c	-
Sodium Bicarbonate	Sat.	a	a	-	Tetralilin	100	c	c	-
Sodium Bisulfate	Sat.	a	a	-	Thionyl Chloride	-	a	a	-
Sodium Bisulfite	Sat.	a	a	-	Toluene	-	c	c	-
Sodium Borate	-	a	a	-	Transformer Oil	100	a	c	-
Sodium Bronide Oil Solution	-	a	a	-	Tributyl Citrate	-	a	a	-
Sodium Carbonate	all	a	a	60.00	Trichloroacetic Acid	-	b	b	-
Sodium Chlorate	Sat.	a	a	-	1,2,4-Trichlorobenzene	-	c	c	-
Sodium Chloride	Sat.	a	a	-	Trichloroethane	-	c	c	-
Sodium Chlorite	2	a	a	60.00	Trichloroethylene	-	c	c	-
Sodium Chlorite	5	a	a	60.00	Triethylene Glycol	-	a	a	-
Sodium Chlorite	10	a	a	60.00	2,2,4-Trimethylpentane	-	b	c	-
Sodium Chlorite	20	a	a	60.00	Tripropylene Glycol	-	a	a	-
Sodium Cyanide	Sat.	a	a	-	Tris Buffer	Solution	a	a	-
Sodium Dichromate	Sat.	a	a	-	Turpentine	-	b	b	-
Sodium Ferricyanide	Sat.	a	a	-	U				
Sodium Ferrocyanide	Sat.	a	a	-	Undecyl Alcohol	-	a	a	-
Sodium Ferrocyanicle	Sat.	a	a	-	Urea	-	a	a	-
Sodium Fluoride	Sat.	a	a	-	Urine	all	a	a	60.00
Sodium Hydroxide	1%	a	a	-	V				
Sodium Hydroxide	100%	a	a	60.00	Vegetable Juice	-	a	a	-
Sodium Hypochlorite	100%	a	a	-	Vinegar	all	a	a	60.00
Sodium Metaphosphate	-	a	a	-	Vinylidene Chloride	-	a	b	-
Sodium Nitrate	50%	a	a	60.00	W				
Sodium Nitrite	-	a	a	-	Water, Distilled	all	a	a	60.00
Sodium Perborate	-	a	a	-	Water, Fresh	-	a	a	-
Sodium Peroxide	-	a	a	-	Water, Salt	-	a	a	-
Sodium Polyphosphate	-	a	a	-	Wet Chlorine Gas	-	a	-	-
Sodium Silicate	-	a	a	-	Whiskey	-	a	a	-
Sodium Sulfate	Sat.	a	a	-	White Acid	75%	a	a	-
Sodium Sulfide	25%	a	a	-	White Liquid	-	b	b	-
Sodium Sulfite	Sat.	a	a	-	White Paraffin	100	a	b	-
Sodium Thiosulfate	Hypo	a	a	-	White Spirit	100	b	c	-
Stannic Chloride	Sat.	a	a	-	Wines	-	a	a	-
Stannous Chloride	Sat.	a	a	-	X				
Starch	-	a	a	-	Xylene	-	c	c	-
Stearic Acid	Crystals	a	a	-	Y				
Sugars and Syrups	-	a	a	-	Yeast	-	a	a	-
Sulfamic Acid	-	a	a	-	Z				
Sulfates of Calc. & Magn.	Sat.	a	a	-	Zinc Chloride	Sat.	a	a	-
Sulfates of Potas. & Sodium	Sat.	a	a	-	Zinc Oxide	all	a	a	60.00
Sulfur	-	a	a	-	Zinc Stearate	-	a	a	-
Sulfur Dioxide	Liquid	b	c	-	Zinc Sulfate	all	a	a	60.00
Sulfur Dioxide	Wet/Dry	a	a	-					
Sulfur Salts	-	a	b	-					
Sulfur Trioxide	-	a	a	-					
Sulfuric Acid	98	c	-	-					
Sulfuric Acid	60	a	b	-					
Sulfuric Acid	50	a	b	-					
Sulfuric Acid	10	b	a	-					
T									
Tallow	-	a	a	-					
Tannic Acid	10	a	a	-					
Tartaric Acid	-	a	a	-					