

	PE	PP				
REAGENT/CONCENTRATION	70°F 140°F	70°F 140°F	PVC	CPVC	Santoprene	316 SS
ACETONE	СС	СС	С	С	-	А
ACETALDEHYDE*/100%	ВС	A B	U	С	В	А
ACETIC ACID*/10%	A A	A A	А	А	В	А
ACETIC ACID*/60%	АВ	A A	А	А	В	А
ACETIC ANHYDRIDE*	СС		С	С	А	А
AIR	A A	A A	А	А	А	А
ALUMINUM CHLORIDE/ALL CONC.	A A	A A	А	А	А	С
ALUMINUM FLUORIDE/ALL CONC.	A A	A A	А	А	А	С
ALUMINUM SULPHATE/ALL CONC.	A A	A A	А	А	А	В
ALUMS/ALL TYPES	A A	A A	А	А	А	А
AMMONIA/100% DRY GAS	A A	A A	В	А	А	А
AMMONIUM CARBONATE	A A	A A	А	А	А	В
AMMONIUM CHLORIDE/SAT'D	A A	A A	А	А	А	С
AMMONIUM FLUORIDE/SAT'D	A A	A A	А	А	-	С
AMMONIUM HYDROXIDE/10%	A A	A A	А	А	А	А
AMMONIUM HYDROXIDE/28%	A A	A A	С	С	А	А
ammonium nitrate/sat'd	A A	A A	А	А	А	А
AMMONIUM PERSULPHATE/SAT'D	A A	A A	А	А	А	В
ammonium sulphate/sat'd	A A	A A	А	А	А	В
AMMONIUM METAPHOSHATE/SAT'D	A A	A A	А	А	-	В
AMMONIUM SULFIDE/SAT'D	A A	A A	А	А	-	В
AMYL ACETATE*#/100%	СС	ВС	С	С	В	А
AMYL ALCOHOL*#/100%	СС	АВ	А	А	В	А
AMYL CHLORIDE*#/100%	СС	СС	С	С	С	А
ANILINE*#/100%	СС	A A	С	С	В	В
AQUA REGIA+	СС	СС	С	С	С	С
ARSENIC ACID/ALL CONC.	A A	A A	А	А	А	А
AROMATIC HYDROCARBONS*#	СС		С	С	С	С
ASCORBIC ACID/10%	A A	A A	А	А	-	-
BARIUM CARBONATE/SAT'D	A A	A A	А	А	А	В
BARIUM CHLORIDE/SAT'D	A A	A A	А	А	-	А
BARIUM HYDROXIDE	A A	A A	А	А	А	В
BARIUM SULPHATE/SAT'D	A A	A A	В	В	А	В
BARIUM SULPHIDE/SAT'D	A A	A A	А	А	А	В
BEER	A A	A A	А	А	А	А
BENZENE*#	СС	ВС	С	С	С	В
BENZOIC ACID/ALL CONC.	A A	A A	А	А	-	В
bismuth carbonate/sat'd	A A	A A	А	А	-	А



	PE	PP				
REAGENT/CONCENTRATION	70°F 140°F	гг 70°F 140°F	PVC	CPVC	Santoprene	316 SS
BLEACHLYE/10%	A A	A A	A	A	-	A
BORAX/SAT'D	A A	АА	А	А	A	А
BORIC ACID/ALL CONC.	A A	A A	А	В	A	А
BORON TRIFLUORIDE	A A		А	А	-	-
BRINE	A A	A A	А	А	А	С
BROMINE+/LIQUID	СС	СС	С	С	С	С
BROMINE WATER#/SAT'D	СС	C -	С	С	В	С
BUTANEDIOL*/10%	A A	A A	_	_	_	-
BUTANEDIOL*/60%	A A	АА	_	_	_	-
BUTANEDIOL*/100%	A A	A A	-	-	-	-
BUTTER*	A A	АА	-	А	В	А
N-BUTYL ACETATE*#/100%	A C	СС	С	В	A	В
N-BUTYL ALCOHOL/100%	СС	Α -	А	В	А	А
BUTYRIC ACID*/CONC.	СС		В	В	А	В
CALCIUM BISULPHIDE	A A	A A	А	А	-	В
CALCIUM CARBONATE/SAT'D	A A	A A	А	А	А	В
CALCIUM CHLORATE/SAT'D	A A	A A	A	Α	_	-
CALCIUM CHLORIDE/SAT'D	A A	A A	A	А	А	В
CALCIUM HYDROXIDE/CONC.	A A	A A	A	А	А	В
CALCIUM HYPOCHLORITE BLEACH/SOL.	A A	A B	В	В	А	С
CALCIUM NITRATE/50%	A A	A A	A	A	A	A
CALCIUM OXIDE/SAT'D	A A		A	A	-	A
CALCIUM SULPHATE	A A	A A	A	A	_	В
CAMPHOR OIL*#	СС	СС	-	-	-	A
CARBON DIOXIDE/ALL CONC.	A A	A A	А	А	А	А
CARBON DISULPHIDE	СС	ВС	С	С	C-A	В
CARBON MONOXIDE	A A	A A	А	А	С	А
CARBON TETRACHLORIDE#	СС	СС	В	С	А	В
CARBONIC ACID	A A	АА	А	А	В	А
CASTER OIL #/CONC.	A A	АА	-	А	С	А
CHLORINE+/100% DRY GAS	СС	СС	С	С	-	С
CHLORINELIQUID+	СС	СС	А	А	-	С
2% SAT'D SOLUTION	A A	A B	А	А	-	С
CHLOROBENZENE*#	СС	СС	С	С	С	А
CHLOROFOAM*#	ВС	СС	С	С	-	А
CHLOROSULPHONIC ACID/100%	СС	СС	С	С	А	В
CHROME ALUM/SAT'D	A A	A A	А	А	-	А
CHROMIC ACID/80%		C -	С	С	С	В
CHROMIC ACID/50%	СС	СС	В	В	С	В



	PE	PP				
reagents/concentration	70°F 140°F	70°F 140°F	PVC	CPVC	Santoprene	316 SS
CHROMIC ACID/10%	A C	A C	А	А	С	В
CIDER*	A A	A A	-	-	A	А
CITRIC ACID*/SAT'D	A A	A A	_	В	А	А
COCONUT OIL ALCOHOLS	A A	A A	А	А	-	А
COFFEE	A A	A A	А	А	А	Α
COLA CONCENTRATES	A A	A A	А	А	-	Α
COPPER CHLORIDE/SAT'D	A A	A A	А	А	A	С
COPPER CYANIDE/SAT'D	A A	A A	A	A	A	В
COPPER FLUORIDE/29%	A A	A A	A	A	A	A
COPPER NITRATE/SAT'D	A A	A A	A	A	-	В
COPPER SULPHATE/SAT'D	A A	A A	A	A	-	В
CORN OIL*	A A	A A	A	A	-	A
COTTONSEED OIL*	A A	A A	A	A	В	A
CUPROUS CHLORIDE/SAT'D	A A	A A	A	A	A	C
DETERGENTS, SYNTHETIC*	A A	A A	A	A	-	A
DEVELOPERS, PHOTOGRAPHIC	A A	A A	A	A	В	A
DEXTRIN/SAT'D	A A	A A	A	A	A	A
DEXTROSE/SAT'D	A A	A A	A	A	-	A
DIAZO SALTS	A A	A A	A	A	-	-
DIBUTYLPHTHALATE*#	ВВ	A B	C	C	-	А
DICHLOROBENZENE*#	СС		_	-	В	-
DIETHYL KETONE*#	ВВ		_	_	С	_
DIETHYLENE GLYCOL*	A A	A A	С	С	-	Α
DIGYLCOLIC ACID*	A A		A	A	А	A
DIMETHYLAMINE	СС		C	C	В	A
DISODIUM PHOSPHATE	A A	A A	A	A	-	A
EMULSIONS, PHOTOGRAPHIC*	A A	A A	A	A	-	A
ETHYL ACETATE*#/100%	ВС	ВВ	С	С	С	A
ETHYL ALCOHOL*/100%	СС	A A	A	A	-	Α
ETHYL ALCOHOL*/35%	СС	A A	А	А	-	Α
ETHYL BENZENE*#	СС	СС	-	-	С	Α
ETHYL CHLORIDE#	СС	СС	С	С	С	А
ETHYL ETHER#	СС	ВС	С	С	-	А
ETHYLENE CHLORIDE*#	СС	СС	С	С	С	Α
ETHYLENE GLYCOL*	A A	АА	А	А	А	А
FATTY ACIDS*	A A	A A	В	В	В	А
FERRIC CHLORIDE/SAT'D	A A	A A	А	А	А	С
FERRIC NITRATE/SAT'D	A A	A A	A	A	A	A
FERROUS CHLORIDE/SAT'D	A A	A A	A	A	A	С
FERROUS SULPHATE	A A	A A	A	A	A	A
FISH SOLUBLES*	A A	A A	A	A	-	A
FLUOBORIC ACID	A A	A A	A	A	А	C
FLUOSILLIC ACID/CONC.	A B	A B	A	A	A	В
FLUOSILLIC ACID/32%	A A	A A	A	A	A	В
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	PE	PP				
REAGENT/CONCENTRATION	70°F 140°F	70°F 140°F	PVC	CPVC	Santoprene	316 SS
FORMIC ACID/ALL CONC.	АА	АА	А	А	А	С
FRUCTOSE/SAT'D	АА	АА	А	А	-	А
FRUIT PULP*	АА	A A	А	А	-	А
FURTURAL#/100%	ВС	СС	С	С	-	В
FURFURYL ALCOHOL*#	ВС	СС	-	-	-	A
GALLIC ACID*/SAT'D	A B	A A	A	В	В	В
GASOLINE*#	ВС	ВС	C	С	С	A
GLUCOSE	A A	A A	A	A	A	A
GLYCERINE*	AA	AA	A	A	A	A
GLYCOL*	<del></del>	AA				<del></del>
	A A		A	A	A	A
GLYCOLIC ACID*/30%	A A	A A	A	A	A	A
GRAPE SUGAR/SAT'D AG.	A A	A A	A	Α	-	A
N-HEPTANE*#	ВВ		С	А	С	A
HEXACHLOROBENZENE	Α -		-	-	-	-
HEXANOL, TERTIARY*	A A		-	-	-	A
HYDROBROMIC ACID/50%	A A	A A	Α	Α	В	С
HYDROCHLORIC ACID/37%	A A	A A	Α	Α	-	С
HYDROCYANIC ACID/SAT'D	A A		Α	А	В	С
HYDROFLUORIC ACID*/60%	A A	A A	Α	Α	С	С
HYDROGEN/100%	АА	АА	Α	Α	-	А
HYDROGEN CHLORIDE/DRY GAS	АА	АА	-	-	-	-
HYDROGEN PEROXIDE/30%	ВВ	Α -	А	А	-	В
HYDROGEN PEROXIDE/10%	АА	АВ	А	А	-	В
HYDROGEN SULPHIDE	АА	A A	А	А	А	В
HYDROQUINONE	A A	A A	А	А	A	-
HYPOCHLOROUS ACID/CONC.	A A	A A	A	A	A	_
INKS#	A A	A A	A	A	С	С
IODINE+/INK1 SOL'N	В -		С	С	A	С
ISOPROPYL ALCOHOL/100%	СС	АА	А	Α	-	А
LEAD ACETATE/SAT'D	A A	АА	Α	Α	А	Α
LEAD NITRATE	АА		А	Α	-	А
LACTIC ACID*/20%	АА	АА	Α	Α	А	В
LINSEED OIL*/100%		АА	Α	Α	В	А
magnesium carbonate/sat'd	A A	A A	Α	Α	А	Α
MAGNESIUM CHLORIDE/SAT'D	АА	АА	Α	Α	А	Α
magnesium hydroxide/sat'd	A A	A A	А	А	А	А
magnesium nitrate/sat'd	A A	A A	А	А	А	А
magnesium sulphate/sat'd	A A	A A	А	А	А	А
MERCURIC CHLORIDE/40%	A A	A A	А	А	А	С
MERCURIC CYANIDE/SAT'D	A A	A A	В	А	А	С
MERCURY	A A	A A	В	А	А	Α
METHYL ALCOHOL*/100%	СС	A A	А	А	А	Α
METHYLETHYL KETONE*#/100%	ВС	A B	С	С	В	А
METHYLETHYL CHLORIDE*#/100%	СС	В -	С	С	С	Α
MILK	A A	A A	Α	Α	A	Α
MINERAL OILS#	ВС	A B	А	А	С	A



	PE	PP				
REAGENT/CONCENTRATION			DV/C	CDVC	CANITODDENIE	21/55
2222 4 (1)	70°F 140°F	70°F 140°F	PVC	CPVC	SANTOPRENE	316 SS
MOLASSES NAPHTHA*#	A A B C	A A	A	A	A C	A
NAPHTHALENE*#			A	A C		A
	B -	A A	C		C	A
NICKEL CHLORIDE/CONC.	A A	A A	A	A	A	С
NICKEL NITRATE/SAT'D	A A	A A	A	A	-	В
NICKEL SULPHATE/CONC.	A A	A A	A	A	A	В
NICOTINE*/DILUTE	A A	A A	A	A	-	-
NITRIC ACID/0-30%	A A	СС	Α	Α	В	Α
NITRIC ACID+/30-50%	A B	СС	A	Α	C	Α
NITRIC ACID+/70%	A B	СС	С	A	C	Α
NITRIC ACID+/95-98%	СС	СС	С	С	С	А
NITROBENZENE*#/100%	СС	СС	С	С	С	А
N-OCTANE	A A		-	-	В	-
OLEIC ACID	ВС	A B	С	А	-	В
OXALIC ACID*/SAT'D	A A	АВ	А	С	А	В
PERCHLOROETHYLENE*	СС		С	В	С	А
PHOSPHORIC ACID/95%	A A	A A	В	Α	-	В
PHOTOGRAPHIC SOLUTIONS	A A	АА	Α	Α	А	А
PLATING SOLUTIONS* BRASS	A A	A A	Α	Α	-	А
CADIUM	A A	A A	Α	А	-	А
CHROMIUM	АА	A A	Α	Α	А	С
COPPER	АА	A A	Α	А	-	А
GOLD	АА	АА	А	А	-	А
INDIUM	АА	АА	Α	Α	-	-
LEAD	АА	АА	А	Α	А	С
NICKEL	АА	АА	А	Α	-	С
RHODIUM	АА	АА	Α	Α	-	А
SILVER	АА	A A	А	А	-	С
TIN	АА	A A	А	А	-	С
ZINC	АА	A A	А	А	-	С
POTASSIUM BICARBONATE/SAT'D	АА	A A	А	Α	А	В
POTASSIUM BROMIDE/SAT'D	АА	A A	А	А	А	В
POTASSIUM BROMATE/10%	АА	A A	А	А	-	В
POTASSIUM CARBONATE	АА	A A	А	А	А	В
POTASSIUM CHLORATE/SAT'D	АА	A A	Α	Α	А	В
POTASSIUM CHLORIDE/SAT'D	A A	A A	A	А	A	В
POTASSIUM CHROMATE/40%	A A	A A	А	А	A	В
POTASSIUM CYANIDE/SAT'D	A A	A A	A	A	A	В
POTASSIUM DICHROMATE/40%	A A	A A	A	A	A	В
POTASSIUM FERRI/FERRO CYANIDE	sat'd	A A	A	A	- '`	A
POTASSIUM FLUORIDE	A A	A A	A	A		В
POTASSIUM HYDROXIDE/CONC.	A A	A A	A	A	A	В
POTASSIUM NITRATE/SAT'D	A A	A A	A	A	A	В
POTASSIUM PERBORATE/SAT'D	A A	A A	A	A	^	В
POTASSIUM PERCHLORATE/10%	A A	A A	A	A	<u>-</u>	В
POTASSIUM PERMANGANATE/20%	<del></del>			A	- A	В
POTASSIUM PERSULPHATE/SAT'D	A A	A A	A		^	
	A A	 ^ ^	A	A		В
POTASSIUM SULPHATE/CONC.	A A	A A	Α	А	Α	В



	PE	PP				
REAGENT/CONCENTRATION	70°F 140°F	70°F 140°F	PVC	CPVC	Santoprene	316 SS
POTASSIUM SULPHIDE/CONC.	A A	A A	А	Α	-	В
POTASSIUM SULPHITE/CONC.	АА	A A	А	А	-	В
PROPARGYL ALCOHOL*	АА		-	-	-	-
N-PROPYL ALCOHOL*	АА	A A	А	-	-	А
PROPYLENE DICHLORIDE*#/100%	СС	СС	А	-	-	С
PROPYLENE GLYCOL*	АА		С	-	А	В
PYRIDINE*	Α -	Α -	С	В	А	А
resorcinal/sat'd	АА		-	-	-	-
SALICYLIC ACID/SAT'D	АА		А	А	-	А
SEA WATER	АА	A A	А	А	А	А
SELENIC ACID	АА		А	А	-	-
SHORTENING*	АА	A A	А	А	-	А
SILVER NITRATE SOLUTION	АА	A A	А	А	А	А
SOAP SOLUTION*/ANY CONC.	АА	АА	А	А	А	А
SODIUM ACETATE/SAT'D	АА	A A	В	В	А	В
SODIUM BENZOATE/35%	АА	A A	А	А	-	А
SODIUM BICARBONATE/SAT'D	A A	A A	А	А	А	В
SODIUM BISULPHATE/SAT'D	АА	АА	А	А	-	В
SODIUM BISULPHITE/SAT'D	АА	АА	А	А	А	В
SODIUM BORATE	АА	АА	А	А	А	В
SODIUM BROMIDE/DILUTE	АА	A A	А	А	-	А
SODIUM CARBONATE/CONC.	АА	АА	А	А	А	А
SODIUM CHLORATE/SAT'D	АА	АА	Α	Α	А	В
SODIUM CHLORIDE/SAT'D	АА	АА	Α	Α	А	С
SODIUM CYANIDE	A A	A A	Α	А	А	В
SODIUM DICHROMATE/SAT'D	A A	A A	Α	А	-	А
SODIUM FERRI/FERRO CYANIDE/SAT'D	A A	A A	Α	Α	-	А
SODIUM FLUORIDE/SAT'D	A A	A A	Α	А	-	С
SODIUM HYDROXIDE/CONC.	A A	A A	Α	А	А	В
SODIUM HYPOCHLORITE 1	A A	A B	В	В	В	С
SODIUM NITRATE	A A	A A	Α	А	А	В
SODIUM SULPHATE	A A	A A	А	А	А	В
SODIUM SULPHIDE/SAT'D	A A	A A	Α	А	А	В
SODIUM SULPHITE/SAT'D	A A	A A	А	А	-	В
STANNIC CHLORIDE/SAT'D	A A	A A	А	А	А	С
STANNOUS CHLORIDE/SAT'D	A A	A A	А	А	-	А
STARCH SOLUTION*/SAT'D	A A	A A	Α	А	А	А
STEARIC ACID*/100%	A A	A A	В	В	В	А
SULPHURIC ACID/0-50%	A A	АВ	Α	Α	А	С
SULPHURIC ACID+/70%	A B	A B	Α	А	А	С
SULPHURIC ACID+/80%	A C	СС	А	А	А	С
SULPHURIC ACID+/96%	ВС	C -	С	В	А	С
SULPHURIC ACID+/98-CONC.	ВС	C -	С	В	В	С
SULPHURIC ACID+/FUMING	СС	СС	С	В	-	С
SULPHUROUS ACID	A A	A A	А	А	А	В
TALLOW#	Α -	A A	-	-	В	А
TANNIC ACID*/SAT'D	A A	A A	А	Α	А	С
TARTARIC ACID	A A	A A	А	А	А	А



	PE	PP				
REAGENT/CONCENTRATION	70°F 140°F	70°F 140°F	PVC	CPVC	Santoprene	316 SS
TETROLYDROFURAN*#	ВС	СС	С	С	-	А
TITANIUM TETRACHLORIDE*/SAT'D	С -		-	-	С	А
TOLUENE	ВВ	СС	С	С	С	В
TRICHLORORETHYLENE*#	СС	СС	С	С	С	А
TRIETHYLENE GLYCOL*	A A		-	-	-	А
TRISODIUM PHOSPHATE/SAT'D	АА	A A	Α	Α	-	А
TURPENTINE#	СС	СС	В	В	С	А
UREA/30%	A A	A A	В	В	-	А
URINE	A A	A A	Α	А	Α	А
VANILLA EXTRACT*	АА	A A	-	-	-	-
VINEGAR	A A	АА	Α	А	А	А
WATER	A A	A A	Α	А	Α	А
WETTING AGENT*	АА	АА	-	-	-	-
WHISKEY*	A A	A A	Α	А	Α	А
WINES*	A A	A A	С	А	А	А
XYLENE#	СС	СС	С	С	С	А
YEAST	АА	A A	Α	Α	-	А
ZINC BROMIDE/SAT'D	A A		Α	Α	-	А
ZINC CARBONATE/SAT'D	АА		А	Α	-	А
ZINC CHLORIDE/SAT'D	A A	A A	Α	Α	Α	А
ZINC OXIDE/SAT'D	АА	A A	Α	Α	-	А
ZINC STERATE	АА		Α	Α	-	А
ZINC SULPHATE/SAT'D	АА	АА	А	А	А	А

<sup>\*</sup> Stress-crack agent-Certain surface active materials, although they have no chemical effect on polyethylene, can accelerate the cracking of polyethylene when it is under stress. Although our tanks are generally stress-free, caution should be used when large tanks are unsupported and welded fittings are used.

cause no actual chemical degradation of the resin. Some of these chemicals have a strong plasticizing effect (e.g. aromatic hydrocarbons benzene), whereas others have weaker effects (e.g. gasoline). Certain plasticizers are sufficiently volatile that, if they are removed from contact with the polyethylene, the part will "dry" out and return to its original condition with no loss of properties.

+ Oxidizers are the only group of materials capable of chemically degrading polyethylene. The effect on the polyethylene may be gradual even for strong oxidizers and short term effects may not be measurable. However, if continuous, long-term exposure is intended, the chemical effects should be checked.

(1) Welded tank connections are not recommended. USP® uses only the highest quality raw materials available with outstanding resistance to both physical and chemical attack. These charts should be used as a guide for evaluating the suitability of products with the chemical agent to be used. Special consideration must be given to the expected temperature, stress involved in the application and length and type of exposure (i.e. intermittent, or continuous).

A = Resistant, no indication that serviceability would be impaired

B = Variable resistance, depending on conditions of use

C = Unresistant, not recommended for service applications under any conditions

- = Information not yet available

Material codes:

PE = Polyethylene

PP = Polypropylene

PVC = Polyvinyl Chloride

CPVC = Chlorinated Polyvinyl Chloride

<sup>#</sup> Plasticizer-Certain types of chemicals are absorbed to varying degrees by polyethylene, causing swelling, weight gain, softening and some loss of yield strength. These plasticizing materials