ULTRATECH INTERNATIONAL, INC.

Chemical Compatibility Guide - Polyethylene

For UltraTech Spill Containment Products

This listing was prepared to provide guidance to the chemical compatibility of UltraTech Spill Containment Products which are manufactured and constructed of a molded polyethylene.

Polyethylene is susceptible to attack by some chemicals which may cause stress cracking, swelling, oxidation or may permeate the polyethylene. These reactions may reduce the physical properties of polyethylene.

When considering an UltraTech polyethylene product for use in secondary containment applications, it is important to note that most secondary containment products are designed to hold leaked chemicals for only hours, a day, at most a week.

These secondary containment units would then be cleaned of any chemical. In these short term applications, a greater variety of chemicals may be used with the polyethylene since the exposure time of the chemical to the polyethylene is limited.

A = Suitable for long term storage at 100 degrees Fahrenheit or less.

B = Suitable for short term storage less than one year.

C = Do NOT store these chemicals in UltraTech containment products.

User testing may prove some of these chemicals are suitable for secondary containment applications with an exposure time of one week or less.

Acetaldehyde (40%) ..... A	Ascetic Acid (50%) ..... A	Carbon Bisulfide C
Acetamide ..... A	Ascetic Acid Anhydride ..... B	Carbon Disulfide C
Acetone ..... A	Ascetic Ether ..... B	Carbon Monoxide ..... A
Acetylene Tetrabromide ..... B	Barium Carbonate ..... A	Carbon Tetrachloride C
Acrylic Emulsions ..... B	Barium Chloride ..... A	Carbonic Acid (Aq. C02) ..... A
Acrylonitrile ..... A	Barium Cyanide ..... A	Caustic (Aqueous) ..... A
Adipic Acid ..... A	Barium Hydroxide ..... A	Caustic Potash Sol. (50%) ..... A
Aliphatic Hydrocarbons ..... A	Barium Nitrate ..... A	Caustic Soda Sol. (10%) ..... A
Alkaline ..... A	Barium Salts ..... A	Chloroacetic Acid ..... A
Allyl Alcohol (96%) ..... A	Barium Sulfate ..... A	Chlorobezene ..... A
Aluminum Chloride (20%) ..... A	Barium Sulfide ..... A	Chloroform C
Aluminum Fluoride ..... A	Battery Fluid, Acid ..... B	Chloromethane C
Aluminum Hydrogen Solution (10%) ..... A	Benzaldehyde ..... A	Chlorsulfonic Acid (100%) C
Aluminum Hydroxide ..... A	Benzene Sulfonic Acid ..... B	Chrome Alum Sat'd ..... A
Alums (All Types) ..... A	Benzene ..... B	Chromic Acid (50%) ..... B
Ammonia (Aqueous) ..... A	Benzoic Acid ..... A	Clycolic Acid (All Conc.) ..... A
Ammonium Acetate ..... A	Benzyl Alcohol ..... A	Copper Cyanide ..... A
Ammonium Bifluoride ..... A	Benzyl Chloroformate ..... A	Cresylic Acid ..... A
Ammonium Carbonate (50%) ..... A	Boric Acid Conc. ..... A	Crotonic Aldehyde ..... A
Ammonium Chloride ..... A	Boric Acid Dilute ..... A	Cuprous Chloride Sat'd ..... A
Ammonium Hydrogen Fluoride (50%) ..... A	Borzx Cold Sat'd ..... A	Cyclohenanone ..... B
Ammonium Hydroxide ..... A	Bromine, Liquid C	Cyclohexane ..... A
Ammonium Metaphsophate Sat'd ..... A	Bromine, Water C	Cyclohexanol ..... A
Ammonium Nitrate Sat'd ..... A	Bromobenzene C	Dextrin Sat'd ..... A
Ammonium Persulfate Sat'd ..... A	Bromoform C	Dextrose Sat'd ..... A
Ammonium Phosphate ..... A	Butadiene ..... A	Di Isobutyl Ketone ..... B
Ammonium Salts ..... A	Butanediol (100%) ..... A	Dibutyl Ether C
Ammonium Sulfate Sat'd ..... A	Butanol ..... A	Dibutyl Sebacate ..... B
Ammonium Sulfide, Sat'd ..... A	Butyl Acetate ..... A	Dibutylphthalate ..... B
Ammonium Thiocyanate Sat'd ..... A	Butyl Alcohol (100%) ..... A	Dichloroacetic Acid ..... B
Amyl Acetate ..... A	Butyl Phenol C	Dichlorobenzene, Liquid C
Amyl Alcohol (100%) ..... A	Butylene Glycol ..... A	Dichloroethylene C
Amyl Chloride C	Butylene Liquid C	Diesel Fuel ..... B
Aniline (100%) ..... B	Butylene C	Diesel Oil ..... B
Aniline Hydrochloride ..... B	Butyric Acid ..... A	Diethanolamine ..... B
Anti Freeze ..... A	Calcium Carbonate ..... A	Diethyl Carbonate ..... A
Antimony Salts ..... A	Calcium Chloride ..... A	Diethylene Glycol ..... A
Antimony Trichloride (90%) ..... A	Calcium Hydroxide ..... A	Digycolic Acid (30%) ..... A
Aqua Regia C	Calcium Hypochlorite ..... A	Dimethyl Formamide ..... B
Aqueous Alkalies (NaOH) ..... A	Calcium Nitrate (50%) ..... A	Dimethylamine ..... B
Arsenic Acid ..... A	Calcium Sulfate ..... A	Dinonyl Phthalate C

Continued on next page

Dioctyl Phthalate	C
Dioxane	A
Diphenyl Oxide	C
Disodium Phosphate	A
Electrolyte	A
Ethanol	A
Ether	C
Ethyl Acetate (100%)	B
Ethyl Alcohol	A
Ethyl Butyrate	B
Ethyl Chloride	C
Ethyl Ether	C
Ethylene Chloride	C
Ethylene Chlorohydrin	A
Ethylene Diamine	A
Ethylene Dichloride	C
Ethylene Glycol	A
Ethylene Oxide	C
Fatty Acids	A
Ferric Sulfate	A
Ferrous Salts	A
Ferrous Sulfate	A
Fluoboric Acid	A
Fluosilicic Acid (All Conc.)	A
Formaldehyde (40%)	A
Formamide	A
Formic Acid (All Conc.)	A
Fuel Oil	A
Furfural (100%)	A
Furfuryl Alcohol	C
Gallic Acid Sat'd	A
Gasoline	A
Gluconic Acid (All Conc.)	A
Glycerine	A
Glycol	A
Heptane	A
Hexane	A
Hydrazone Hydrate	A
Hydrobromic Acid (50%)	A
Hydrochloric Acid (All Conc.)	A
Hydrocyanic Acid Sat'd	A
Hydrofluoric Acid (All Conc.)	A
Hydrofluorisilicic Acid (All Conc.)	A
Hydrogen Bromide (10%)	A
Hydrogen Peroxide (90%)	A
Hydrogen Phosphide (100%)	A
Hydrogen Sulfide	A
Hydroiodic Acid (All Conc.)	A
Hydroquinone	A
Hydrosulfite (10%)	A
Hydroxylamine Sulfate	A
Hydrozine (35%)	A
Hydrozine Hydrochloride	A
Hypochlorous Acid	A
Iso Octane	B
Isopropyl Acetate	A
Isopropyl Alcohol	A
Isopropyl Ether	C
Jet Fuel	B
Kerosene	B
Lactic Acid (All Conc.)	A
Lead Acetate Sat'd	A
Magnesium Carbonate	A
Magnesium Hydroxide	A
Magnesium Nitrate	A
Magnesium Oxide	A
Magnesium Salts	A
Magnesium Sulfate	A
Maleic Acid	A
Methanol	A
Methyl Acetate	A
Methyl Alcohol (100%)	A
Methyl Amine (32%)	A
Methyl Bromide	C
Methyl Chloride	C
Methyl Ethyl Ketone	B
Methyl Isobutyl Ketone	B
Methyl Isopropyl Ketone	B
Methyl Sulfate	A
Methyl Sulfuric Acid (All Conc.)	A
Methylene Chloride	C
Mineral Oils	A
Monochloroacetic Acid Ethyl Ester	A
Monochloroacetic Acid Methyl Ester	A
Mowilith D	A
Naptha	B
Napthalene	B
Nicotine Dilute	A
Nicotinic Acid	A
Nitric Acid (50%)	A
Nitrobenzene	B
Nitrotoluene	B
Octyl Cresol	A
Oleic Acid (All Conc.)	A
Oleum Conc.	C
Oxalic Acid (All Conc.)	A
Palmitic Acid	C
Paraffin Emulsions	A
Perchloric Acid (50%)	A
Perchloroethylene	B
Petroleum Ether	B
Petroleum	A
Phenylhydrazine	C
Phosphoric Acid (All Conc.)	A
Phosphorous (Yellow 100%)	A
Phosphorous Chlorides	B
Phosphorous Pentoxide	A
Photographic Solutions	A
Phthalic Acid (All Conc.)	A
Phthalic Anhydride	A
Pickling Baths	
• Sulfuric Acid	A
• Hydrochloric Acid	A
Picric Acid (1%)	A
Plating Solutions	A
Potassium Aluminum Sulfates (50%)	A
Potassium Bichromate	A
Potassium Borate (10%)	A
Potassium Bromide	A
Potassium Chlorate	A
Potassium Chloride	A
Potassium Chromate	A
Potassium Cyanide	A
Potassium Dichromate (40%)	A
Potassium Ferri Ferro Cyanide Sat'd	A
Potassium Fluoride	A
Potassium Hydroxide	A
Potassium Nitrate Sat'd	A
Potassium Perborate Sat'd	A
Potassium Perchlorate	A
Potassium Phosphates	A
Potassium Sulfate	A
Propanol	A
Propargyl Alcohol (7%)	A
Propionic Acid (50%)	A
Propyl Alcohol	A
Propylene Dichlrode (100%)	A
Propylene Glycol	A
Propylene Oxide	A
Pyridine	B
Selenic Acid	A
Sewage	A
Silicic Acid	A
Silver Nitrate	A
Soda Ash	A
Sodium Acetate Sat'd	A
Sodium Benzoate	A
Sodium Bisulfate (10%)	A
Sodium Bisulfite	A
Sodium Bromate	B
Sodium Chloride	A
Sodium Chlorite	A
Sodium Chromate	A
Sodium Disulfite	A
Sodium Dithionite (10%)	A
Sodium Fluoride Sat'd	A
Sodium Hydroxide Conc	A
Sodium Hypochlorite	A
Sodium Nitrate	A
Sodium Oxalate	A
Sodium Persulfate	A
Sodium Phosphate	A
Sodium Sulfonates	A
Stearic Acid (All Conc.)	A
Succinic Acid	A
Sulfuric Acid (98%)	B
Sulfuric Acid, Fuming	C
Sulfurous Acid	A
Sulfuryl Chloride	C
Tartaric Acid Sat'd	A
Tetrachlorethylene	C
Tetrachloroethane	C
Tetrahydrofurane	C
Tetrahydronaphthalene	C
Thionyl Chloride	C
Titanium Salts	B
Toluene Sulfonic Acid (All Conc.)	B
Toluene	B
Transformer Oil	A
Tributylphosphate	A
Trichloroacetic Acid	B
Trichloroethane	C
Trichloroethylene	C
Tricresyl Phosphate	A
Triethanolamine	A
Trioctyl Phosphate	C
Trisodium Phosphate Sat'd	A
Turpentine Oil	C
Xylene	C