

Chemical Compatibility Guide for: Low Density Polyethylene Products

NOTICE:

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This listing was prepared to provide guidance to the chemical compatibility of New Pig Corporation containment pallets and decks, containers and other polyethylene products.

Polyethylene is susceptible to some chemicals. These chemicals may cause stress cracking, swelling, oxidation, or may permeate the polyethylene. These actions may reduce the physical properties of polyethylene containers.

Stress cracking: Some surface-active chemicals can accelerate the cracking of polyethylene when it is under stress.

Absorption / Swelling: Certain types of chemicals will absorb or swell polyethylene to varying degrees. In some cases, a loss of physical properties may occur. Use of chemicals that may affect polyethylene in this manner will depend upon the performance requirements of the application.

Oxidation: Some aqueous solution of materials with an oxidizing action will attack polyethylene. Short-term containment of these chemicals may not significantly affect the polyethylene. However, long-term storage of high temperature chemicals should be approached with caution.

Chemical	Rating	Chemical	Rating
Acetaldehyde (40%)	L	Hydrogen Bromide (10%)	L
Acetamide	L	Hydrogen Peroxide (90%)	L
Acetic Acid (50%)	L	Hydrogen Phosphide (100%)	L
Acetic Acid Anhydride	S	Hydroquinone	L
Acetic Ether	S	Hydrogen Sulfide	L
Acetone	L	Hypochlorous Acid	L
Acetylene Tetrabromide	S	Inks	L
Acrylic Emulsions	S	Iodine (Alc. Sol.) Conc.	L
Acrylonitrile	L	Iron Salts	L
Adipic Acid	L	Iso-Octane	S
Aliphatic Hydrocarbons (Hexane, Octane, Hexene, Octene, etc.)	L	Isopropyle Acetate	L
Alkaline	L	Isopropyl Alcohol	L
Allyl Alcohol (96%)	L	Isopropyl Ether	N
Alum (Aqueous Solutions)	L	Jet Fuel	S
Aluminum Chloride (20%)	L	Kerosene	S
Aluminum Fluoride	L	Lactic Acid (All concentrations)	L
Aluminum Hydrogen Solution (10%)	L	Lanolin	L
Aluminum Hydroxide	L	Latex	L
Alums (All types)	L	Lead Salts	L
Ammonia (Anhydrous)	L	Lead Acetate Sat'd	L
Ammonia (Aqueous)	L	Lime	L
Ammonia (100% dry gas)	L	Linseed Oil	L
Ammonium Salts	L	Lithium Salts	L
Ammonium Acetate	L	Lube Oil	L

Chemical	Rating	Chemical	Rating
Ammonium Acetate	L	Magnesium Salts	L
Ammonium Bifluoride	L	Magnesium Carbonate	L
Ammonium Carbonate (50%)	L	Magnesium Hydroxide	L
Ammonium Chloride	L	Magnesium Nitrate	L
Ammonium Hydrogen Fluoride (50%)	L	Magnesium Oxide	L
Ammonium Hydroxide	L	Magnesium Sulfate	L
Ammonium Metaphosphate Sat'd	L	Maleic Acid	L
Ammonium Nitrate (10%)	L	Malic Acid (1%)	L
Ammonium Nitrate Sat'd	L	Mercuric Salts	L
Ammonium Persulfate Sat'd	L	Mercurous Salts	L
Ammonium Phosphate	L	Mercury	L
Ammonium Sulfate (10%)	L	Methanol	L
Ammonium Sulfate Sat'd	L	Methyl Acetate	L
Ammonium Sulfide Sat'd	L	Methyl Alcohol (100%)	L
Ammonium Thiocyanate Sat'd	L	Methyl Amine (32%)	L
Amyl Acetate	L	Methyl Bromide	N
Amyl Alcohol (100%)	L	Methyl Chloride	N
Amyl Chloride	N	Methylene Chloride	N
Aniline (100%)	S	Methyl Ethyl Ketone	S
Aniline Hydrochloride	S	Methyl Isobutyl Ketone	S
Animal Fats	L	Methyl Isopropyl Ketone	S
Anti-Freeze	L	Methyl Sulfate	L
Antimony Salts	L	Methyl Sulfuric Acid (All conc.)	L
Antimony Trichloride (90%)	L	Milk	L
Aqua Regia	N	Mineral Oils	L
Aqueous Salt Solutions (NaCl)	L	Molasses	L
Aqueous Alkalies (NaOH)	L	Monochloroacetic Acid Ethyl Ester	L
Arsenic Acid	L	Monochloroacetic Acid Methyl Ester	L
Arsenic Salts	L	Morpholin	L
Barium Salts	L	Mowilith D	L
Barium Carbonate	L	Naphtha	S
Barium Chloride	L	Napthalene	S
Barium Cyanide	L	Nickel Salts	L
Barium Sulfide	L	Nicotine Dilute	L
Battery Fluid, Acid	S	Nicotinic Acid	L
Beef Tallow Emulsion, Sulfonated	L	Nitric Acid <50%	L
Beer	L	Nitrobenzene	S
Benzaldehyde	L	Nitrotoluene	S
Benzene	L	Octyl Cresol	L
Benzene Sulfonic Acid	S	Oils and Fats	L
Benzoic Acid	L	Oleic Acid (All concentrations)	L
Benzyl Alcohol	L	Oleum Conc.	N
Benzyl Chloroformate	L	Olive Oil	L
Bismuth Salts	L	Orange Extract	L
Bleach Lye (10%)	S	Oxalic Acid (All concentrations)	L
Black Liquor	L	Palmitic Acid	N
Borax Cold Sat'd	L	Palm Oil	S
Boric Acid Dilute	L	Paraffin Emulsions	L
Boric Acid Conc.	L	Paraffin Oil	L
Bromine, Liquid	N	Perchloric Acid (50%)	L
Bromine, Water	N	Perchloroethylene	N
Bromobenzene	N	Petroleum	L
Bromoform	N	Petroleum Ether	S
Butadiene	L	Phenol (10%)	S
Butane	L	Phenylhydrazine	N

Chemical	Rating	Chemical	Rating
Butanediol (100%)	L	Phosphoric Acid (All conc.)	L
Butanol	L	Phosphorous Chlorides	S
Butyl Acetate	L	Phosphorous (Yellow 100%)	L
Butyl Alcohol (100%)	L	Phosphorous Pentoxide	L
Butylene	N	Photographic Solutions	L
Butylene Glycol	L	Phthalic Acid (All concentrations)	L
Butylene Liquid	N	Phthalic Anhydride	L
Butyl Phenol	N	Pickling Baths	
Butyric Acid	L	Sulfuric Acid	L
Calcium Carbonate	L	Hydrochloric Acid	L
Calcium Chloride	L	Picric Acid (1%)	L
Calcium Hydroxide	L	Plating Solutions	
Calcium Hypochlorite	L	Brass	
Calcium Nitrate (50%)	L	Cadmium	L
Calcium Sulfate	L	Copper	L
Camphor Oil	N	Gold	L
Carbon Bisulfide	N	Indium	L
Carbon Disulfide	N	Lead	L
Carbonic Acid (AQ. CO2)	L	Nickel	L
Carbon Monoxide	L	Rhodium	L
Carbon Tetrachloride	N	Silver	L
Castor Oil Conc.	L	Tin	L
Caustic (Aqueous)	L	Potassium / Aluminum Sulfates (50%)	L
Caustic Potash Sol. (50%)	L	Potassium Bichromate	L
Caustic Soda Sol. (10%)	L	Potassium Borate (10%)	L
Chloral Hydrate	L	Potassium Bromide	L
Chloroethanol	L	Potassium Chlorate	L
Chloric Acid (10%)	L	Potassium Chloride	L
Chloroacetic Acid	L	Potassium Chromate	L
Chlorobenzene	S	Potassium Cyanide	L
Chloroform	N	Potassium Dichromate (40%)	L
Chloromethane	N	Potassium Ferri / Ferro Cyanide Sat'd	L
Chlorosulfonic Acid (100%)	N	Potassium Fluoride	L
Chrome Alum Sat'd	L	Potassium Hydroxide	L
Chromic Acid (50%)	S	Potassium Iodide	L
Cider	L	Potassium Nitrate Sat'd	L
Citric Acid (All Concentrations)	L	Potassium Perborate Sat'd	L
Clorox Bleach	L	Potassium Perchlorate	L
Coconut Oil Alcohols	L	Potassium Permanganate	L
Cola Concentrates	L	Potassium Persulfate Sat'd	L
Compressed Air Conditioning Oil	L	Potassium Phosphates	L
Copper Salts	L	Potassium Sulfate	L
Copper Cyanide	L	Propanol	L
Copper Nitrate	L	Propionic Acid (50%)	L
Copper Sulfate	L	Propyl Alcohol	L
Corn Oil	L	Propylene Dichloride (100%)	L
Cottonseed Oil	L	Propylene Glycol	L
Cresol (90%)	L	Propylene Oxide	L
Cresylic Acid	L	Pyridine	S
Crotonic Aldehyde	L	Rayon Coagulation Salts	L
Cuprous Chloride Sat'd	L	Rust Inhibitors	L
Cyclohexane	L	Sea Water	L
Cyclohexanol	L	Selenic Acid	L
Cyclohexanone	S	Sewage	L

Chemical	Rating	Chemical	Rating
Detergents, General	L	Shortening	L
Developers, Photographic	L	Silicic Acid	L
Dextrin Sat'd	L	Silicone Oil	L
Dextrose Sat'd	L	Silver Salts	L
Diazo Salts	L	Silver Nitrate	L
Dibutyl Ether	N	Soda Solution (All concentrations)	L
Dibutyl Phthalate	S	Soda Ash	L
Dibutyl Sebacate	S	Sodium Salts	L
Dichloroacetic Acid	S	Sodium Acetate Sat'd	L
Dichloroacetic Acid, Methyl Ester	L	Sodium Acrylates	L
Dichlorobenzene, Liquid	N	Sodium Benzoate	L
Dichloroethylene	N	Sodium Bicarbonate	L
Diesel Fuel	S	Sodium Bisulfate (10%)	L
Diesel Oil	S	Sodium Bisulfite	L
Diethylene Glycol	L	Sodium Bromate	S
Diethanolamine	S	Sodium Bromide	L
Diethyl Carbonate	L	Sodium Bromide Dilute Solution	L
Diglycolic Acid (30%)	L	Sodium Carbonate	L
Di-Isobutyl Ketone	S	Sodium Chlorate	L
Dimethylamine	S	Sodium Chloride	L
Dimethyl Formamide	S	Sodium Chlorite	L
Dinonyl Phthalate	N	Sodium Chromate	L
Diocetyl Phthalate	N	Sodium Disulfite	L
Dioxane	L	Sodium Dithionite (10%)	L
Diphenyl Oxide	N	Sodium Ferricyanide	L
Disodium Phosphate	L	Sodium Ferrocyanide Sat'd	L
Electrolyte	L	Sodium Fluoride Sat'd	L
Emulsions, Photographic	L	Sodium Hydroxide Conc.	L
Ethanol	L	Sodium Hypochlorite	L
Ether	N	Sodium Iodine	L
Ethyl Acetate (100%)	S	Sodium Nitrate	L
Ethyl Alcohol	L	Sodium Oxalate	L
Ethyl Butyrate	S	Sodium Persulfate	L
Ethyl Chloride	N	Sodium Phosphate	L
Ethyl Ether	N	Sodium Silicate	L
Ethylene Chloride	N	Sodium Sulfate	L
Ethylene Chlorohydrin	L	Sodium Sulfide	L
Ethylene Diamine	L	Sodium Sulfite	L
Ethylene Dichloride	N	Sodium Sulfonates	L
Ethylene Glycol	L	Sodium Thiosulfate	L
Ethylene Oxide	N	Spindle Oil	N
Fatty Acids	L	Stannic Salts	L
Fatty Alcohol Sulfonate	L	Stannous Salts	L
Ferric Salts	L	Starch Solution Sat'd	L
Ferric Sulfate	L	Stearic Acid (All concentrations)	L
Ferrous Salts	L	Succinic Acid	L
Ferrous Sulfate	L	Sugar Solutions	
Fertilizer Salts	L	Glucose	L
Fish Solubles	L	Lactose	L
Fluoboric Acid	L	Sucrose, Etc.	L
Fluosilicic Acid (All concentrations)	L	Sulfur	L
Formaldehyde (40%)	L	Sulfuric Acid (98%)	S
Formamide	L	Sulfuric Acid, Fuming	N
Formic Acid (All concentrations)	L	Sulfurous Acid	L
Fruit Pulp	L	Sulfuryl Chloride	N

Chemical	Rating	Chemical	Rating
Fuel Oil	L	Tallow	L
Furfural (100%)	L	Tannic Acid	L
Furfuryl Alcohol	N	Tanning Extracts	L
Gallic Acid Sat'd	L	Tartaric Acid Sat'd	L
Gasoline	L	Tetrachloroethane	N
Gasohol	L	Tetrachloroethylene	N
Gelatine	L	Tetraethyl Lead	L
Gin	L	Tetrahydrofurane	N
Gluconic Acid (All concentrations)	L	Tetrahydronaphthalene	N
Glucose	L	Thionyl Chloride	N
Glycerine	L	Tin Salts	L
Glycol	L	Titanium Salts	S
Glycol Ethers	L	Toluene	S
Glycolic Acid (All conc.)	L	Toluene Sulfonic Acid (All conc.)	S
Grape Sugar Sat'd Aq.	L	Transformer Oil	L
Heptane	L	Tributylphosphate	L
Hexane	L	Trichloroacetic Acid	S
Hexanol Tert	L	Trichloroethane	N
Hydrazine (35%)	L	Trichloroethylene	N
Hydrazine Hydrate	L	Tricresyl Phosphate	L
Hydrazine Hydrochloride	L	Triethanolamine	L
Hydrosulfite (10%)	L	Trioctyl Phosphate	N
Hydroxylamine Sulfate	L	Trisodium Phosphate Sat'd	L
Hydriodic Acid (All conc.)	L	Turpentine Oil	N
Hydrobromic Acid (50%)	L	Urea	L
Hydrocyanic Acid Sat'd	L	Urine	L
Hydrochloric Acid (All conc.)	L	Vegetable Oils	L
Hydrofluoric Acid (All conc.)	L	Vinegar	L
Hydrofluorosilicic Acid (All conc.)	L	Vanilla Extract	L
		Wax Alcohol	N
		Wetting Agents	L
		Whiskey	L
		White Acid (75%)	L
		Wine	L
		Xylene	N
		Yeast	L
		Zinc Salts	L
		Zinc Sulfate	L

KEY:

L = Containers should be suitable for long term storage of the substances, under the conditions specified.

S = These substances may adversely affect the polyethylene. New Pig Corporation containers may be suitable for storage of up to one year. The user should perform qualification tests before or during usage of the container.

N = These substances aggressively attack polyethylene or have vapor pressures incompatible with the containers. Do not use polyethylene containers in these applications.

Note: Use judgment as to use of product. Is it for short or long term use when using L, S, or N? (Example: Drum Funnel is normally for short term use.)

For additional assistance, please contact New Pig Technical Services at 1-800-HOT-HOGS® (468-4647).

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