



# FLYING "W" PLASTICS

## HIGH DENSITY POLYETHYLENE (HDPE) CHEMICAL RESISTANCE

Legend: S = Satisfactory O = Some Attack U = Unsatisfactory

	70°F	140°F		70°F	140°F		70°F	140°F
Acetaldehyde	S	O	Butter	S	S	Fuel Oil	S	U
Acetic acid 1-10%	S	S	Butyl acetate 100%	O	U	Galic acid sat'd	S	S
Acetic acid 10-60%	S	O	Butyl alcohol 100%	S	S	Gasolene	S	U
Acetic acid 80-100%	S	O	Butyl glycol	S	S	Glycol	S	S
Acetic anhydride	S	S	Butyric acid 100%	S	S	Glycolic acid 30%	S	S
Acetone	S	S	Calcium Bisulfide	S	S	Grape juice	S	S
Acids, aromatic	S	S	Calcium carbonate sat'd	S	S	Grapefruit juice	S	S
Acrylic emulsions	S	S	Calcium chlorate sat'd	S	S	Heptane	O	U
Adipic acid	S	S	Calcium hypochlorite bleach	S	S	Hydrobromic acid 50%	S	S
Aluminum chloride dilute	S	S	Calcium nitrate 50%	S	S	Hydrocyanic acid sat'd	S	S
Aluminum chloride Conc.	S	S	Calcium sulfate	S	S	Hydrochloric acid 30%	S	S
Aluminum fluoride Conc.	S	S	Carbon dioxide 100% dry	S	S	Hydrofluoric acid 40-60%	S	S
Aluminum sulfate Conc.	S	S	Carbon dioxide 100% wet	S	S	Hydrogen 100%	S	S
Alums (all types) Conc.	S	S	Carbon dioxide cold sat'd	S	S	Hydrogen bromide 10%	S	S
Amino acetic acid	S	S	Carbon monoxide	S	S	Hydrogen chloride gas dry	S	S
Ammonia 100% dry gas	S	S	Chlorine liquid	O	U	Hydroquinone	S	S
Ammonium acetate	S	S	Chlorosulfonic Acid 100%	U	U	Hydrogen sulfide	S	S
Ammonium bromide	S	S	Chromic Acid 50%	S	O	Hypochlorous acid con't	S	S
Ammonium carbonate	S	S	Cider	S	S	Inks	S	S
Ammonium chloride Sat'd	S	S	Coconut oil alcohols	S	S	Iodine crystals	O	O
Ammonium fluoride 20%	S	S	Copper chloride sat'd	S	S	Isobutyl alcohol	S	S
Ammonium hydroxide	S	S	Copper cyanide sat'd	S	S	Isopropyl alcohol	S	S
Ammonium nitrate sat'd	S	S	Copper fluoride 2%	S	S	Isopropyl ether	O	U
Ammonium persulfate sat'd	S	S	Copper Nitrate sat'd	S	S	Kerosene	O	O
Ammonium sulfate sat'd	S	S	Copper sulfate dilute	S	S	Lactic acid 10-90%	S	S
Ammonium sulfide sat'd	S	S	Copper sulfate sat'd	S	S	Lanolin	S	S
Ammonium thiocyanate	S	S	Cuprous chloride sat'd	S	S	Lard	S	S
Amyl acetate 100%	O	U	Cyclohexanone	U	U	Lead acetate sat'd	S	S
Amyl alcohol 100%	S	S	Dextrin sat'd	S	S	Lead nitrate	S	S
Amyl chloride 100%	O	U	Dextrose sat'd	S	S	Lemon juice	S	S
Aniline 100%	S	U	Disodium phosphate	S	S	Lemon oil	O	U
Anise seed oil	O	U	Diethylene glycol	S	S	Lime juice	S	S
Antimony chloride	S	S	Emulsions photographic	S	S	Linseed oil	S	S
Aqua regia	O	U	Ether	O	O	Magnesium carbonate sat'd	S	S
Aromatic hydrocarbons	U	U	Ethyl acetate 100%	O	O	Magnesium chloride sat'd	S	S
Arsenic	S	S	Ethyl alcohol 100%	S	S	Magnesium hydroxide sat'd	S	S
Aspirin	S	S	Ethyl chloride	O	U	Magnesium nitrate sat'd	S	S
Barium carbonate sat'd	S	S	Ethylene glycol	S	S	Magnesium sulfate sat'd	S	S
Barium chloride sat'd	S	S	Ferric chloride sat'd	S	S	Mercuric chloride	S	S
Barium sulfate sat'd	S	S	Ferric nitrate sat'd	S	S	Mercuric cyanide sat'd	S	S
Barium sulfide sat'd	S	S	Ferrous chloride sat'd	S	S	Mercurous nitrate sat'd	S	S
Benzene sulfonic acid	S	S	Ferrous sulfate	S	S	Methyl ethyl ketone 100%	U	U
Bismuth carbonate sat'd	S	S	Fluoboric acid	S	S	Methyl bromide	O	U
Black liquor	S	S	Fluorine	S	U	Methylsulfuric acid	S	S
Borax cold sat'd	S	S	Fluosilicic acid 32%	S	S	Methylene chloride 100%	U	U
Boric acid dilute	S	S	Fluosilicic acid con't	S	S	Milk	S	S
Bromic acid 10%	S	S	Formic acid 20%-100%	S	S			
Bromine liquid 100%	O	U	Fructose sat'd	S	S			
Butanediol 10%	S	S						
Butanediol 60%	S	S						
Butanediol 100%	S	S						



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## HIGH DENSITY POLYETHYLENE (HDPE) CHEMICAL RESISTANCE Continued

Legend: S = Satisfactory O = Some Attack U = Unsatisfactory

	70°F	140°F		70°F	140°F		70°F	140°F
Mineral Oils	S	U	Salicylic acid	S	S	Turpentine	O	U
Molasses	S	S	Sea water	S	S	Urea	S	S
Mustard (prepared)	S	S	Shortening	S	S	Urine	S	S
Naphtha	O	U	Silicic acid	S	S	Vanilla extract	S	S
Naphthalene	S	U	Silver nitrate sol'n	S	S	Vaseline	S	S
Natural gas (wet)	S	S	Soap solution con't	S	S	Vinegar common	S	S
Nickel chloride sat'd	S	S	Sodium acetate sat'd	S	S	Wetting agents	S	S
Nickel nitrate con't	S	S	Sodium benzoate 35%	S	S	Whiskey	S	S
Nickel sulfate	S	S	Sodium bicarbonate sat'd	S	S	Wines	S	S
Nicotinic acid	S	S	Sodium bisulfate sat'd	S	S	Xylene	U	U
Nitric acid 0-30%	S	S	Sodium bisulfite sat'd	S	S	Yeast	S	S
Nitric acid 30-70%	S	O	Sodium borate	S	S	Zinc chloride sat'd	S	S
Nitric acid 95-100%	U	U	Sodium carbonate con't	S	S	Zinc oxide	S	S
Nitroglycerine	O	U	Sodium chlorate sat'd	S	S	Zinc sulfate sat'd	S	S
Octane	S	S	Sodium dichromate sat'd	S	S			
Oleum con't	U	U	Sodium ferricyanide sat'd	S	S			
Olive oil	S	S	Sodium ferricyanide	S	S			
Orange juice	S	S	Sodium fluoride sat'd	S	S			
Oxalic acid dilute	S	S	Sodium hydroxide con't	S	S			
Oxalic acid sat'd	S	S	Sodium hypochlorite	S	S			
Ozone	O	O	Sodium nitrate	S	S			
Petroleum ether	U	U	Sodium nitrite	S	S			
Phosphoric acid 0-30%	S	S	Sodium perborate	S	S			
Phosphoric acid 90%	S	S	Sodium phosphate	S	S			
Photographic solutions	S	S	Sodium sulfide 25% to sat'd	S	S			
Potassium bicarbonate sat'd	S	S	Sodium sulfite sat'd	S	S			
Potassium carbonate	S	S	Sodium thiosulphate	S	S			
Potassium chlorate sat'd	S	S	Soybean oil	S	S			
Potassium chloride sat'd	S	S	Stannous chloride sat'd	S	S			
Potassium chromate 40%	S	S	Stannic chloride sat'd	S	S			
Potassium cyanide sat'd	S	S	Starch solution sat'd	S	S			
Potassium ferri cyanide	S	S	Stearic acid 100%	S	S			
Potassium fluoride	S	S	Sulfuric acid 0-50%	S	S			
Potassium nitrate sat'd	S	S	Sulfuric acid 70%	S	O			
Potassium perborate sat'd	S	S	Sulfuric acid 80%	S	U			
Potassium perchlorate 10%	S	S	Sulfuric acid 96%	O	U			
Potassium sulfate con't	S	S	Sulfuric acid 98% con't	O	U			
Potassium sulfide con't	S	S	Sulfuric acid fuming	U	U			
Potassium sulfite con't	S	S	Sulfurous acid	S	S			
Potassium persulfate sat'd	S	S	Tartaric acid	S	S			
Propargyl alcohol	S	S	Tannic acid 10%	S	S			
Propylene glycol	S	S	Tea	S	S			
Pyridine	S	O	Tetrahydrofuran	O	O			
Rayon coagulating bath	S	S	Toluene	U	U			
Resorcinol	S	S	Tomato juice	S	S			
			Transformer oil	S	O			
			Trisodium phosphate sat'd	S	S			
			Trichloroethylene	U	U			

**NOTE:** The above information concerns general chemical resistance only. Since other factors such as permeation, ESCR, and container design are involved full compatibility is recommended.