



POLYETHYLENE RESINS FOR ROTATIONAL MOULDING

This table is intended only as a preliminary guide to the resistance of polyethylene to various chemicals. As the nature of the chemical, its concentration, length of exposure, ambient temperature and pressure, as well as the design of the container may all play a part in the likelihood of attack, you should consult your Superior Pak representative if you have any doubt about the suitability of the application.

GENERAL GUIDE FOR RESISTANCE OF POLYETHYLENE TO VARIOUS CHEMICALS

- Code**
- Resistant, no indication the serviceability would be impaired.
 - Variable resistance, depending on conditions of use.
 - ▲ Not resistant. Not recommended for service applications under any conditions.
- O Oxidiser. A Known stress-crack agent.
P Plasticiser. B Suspected stress-crack agent.

TABLE OF RESISTANCE

Code		Low Den		Med Den		Code		Low Den		Med Den	
		21°C	60°C	21°C	50°C			21°C	60°C	21°C	50°C
A	Acetic Acid (60%)	■	●	■	●	A	Inks	■	■	■	■
	Alums (all types)	■	■	■	■		Magnesium Hydroxide (sat'd)	■	■	■	■
	Ammonia (100% dry gas)	■	■	■	■	A	Methyl Alcohol (100%)	■	■	■	■
	Ammonium Hydroxide (28%)	■	■	■	■		Milk	■	■	■	■
BP	Amyl Acetate (100%)	▲	▲	▲	▲	P	Mineral Oils	●	▲	●	▲
AP	Amyl Alcohol (100%)	▲	▲	▲	▲		Molasses	■	■	■	■
P	Amyl Chloride (100%)	▲	▲	▲	▲	O	Nitric Acid (70%)	■	●	■	●
BP	Aromatic Hydrocarbons	▲	▲	▲	▲	O	Nitric Acid (95-98%)	▲	▲	▲	▲
	Barium Hydroxide	■	■	■	■		Plating Solutions	■	■	■	■
BP	Benzene	▲	▲	▲	▲	A	Brass	■	■	■	■
	Brine	■	■	■	■	A	Cadmium	■	■	■	■
O	Bromide (liquid)	▲	▲	▲	▲	A	Copper	■	■	■	■
B	Butter	■	■	■	■	A	Gold	■	■	■	■
	Calcium Hydroxide (conc)	■	■	■	■	A	Lead	■	■	■	■
	Calcium Hypochlorite (bleach solution)	■	■	■	■	A	Nickel	■	■	■	■
BP	Camphor Oil	▲	▲	▲	▲	A	Silver	■	■	■	■
	Carbon Dioxide (all conc)	■	■	■	■	A	Tin	■	■	■	■
A	Castor Oil (conc)	■	■	■	■	A	Zinc	■	■	■	■
BP	Chloroform	▲	▲	●	▲		Potassium Hydroxide (conc)	■	■	■	■
A	Cider	■	■	■	■	A	n-Propyl Alcohol	■	■	■	■
A	Citric Acid (sat'd)	■	■	■	■		Sea Water	■	■	■	■
A	Cola Concentrates	■	■	■	■	A	Shortening	■	■	■	■
A	Detergents, Synthetic	■	■	■	■	A	Soap Solution (any conc)	■	■	■	■
	Developers, Photo	■	■	■	■		Sodium Hydroxide (conc)	■	■	■	■
A	Emulsions, Photo	■	■	■	■		Sodium Hypochlorite	■	■	■	■
A	Ethyl Alcohol (100%)	■	■	■	■	A	Starch Solution (sat'd)	■	■	■	■
	Ferric Chloride (sat'd)	■	■	■	■	A	Stearic Acid (100%)	■	●	■	●
	Ferric Nitrate (sat'd)	■	■	■	■	O	Sulphuric Acid (70%)	■	▲	■	▲
A	Fish Solubles	■	■	■	■	O	Sulphuric Acid (80%)	■	▲	■	▲
	Fluosilicic Acid (conc)	■	●	■	●		Sulphurous Acid	▲	▲	▲	▲
	Formic Acid (all conc)	■	■	■	■	P	Turpentine	■	■	■	■
B	Fruit Pulp	■	■	■	■		Urea (0-30%)	■	●	■	■
PB	Gasoline	▲	▲	●	▲	A	Vegetable Oils	■	■	■	■
	Glucose	■	■	■	■		Vinegar	■	■	■	■
	Hydrochloric Acid (all conc)	■	■	■	■	B	Water	■	■	■	■
	Hydrofluoric Acid (60%)	■	■	■	■		Wines	■	■	■	■

CONTAINER MATERIALS

Polyethylene (LDPE)

Description	Temperature Range	Chemical Resistance	Moisture Resistance
Low Density - Thermoplastic. Tough, light and resilient with good impact strength & recovery from distortion. Available in several grades.	-10°C to +60°C	Inert to most chemicals (see chart)	Extremely Good

Polyethylene (MDPE)

Description	Temperature Range	Chemical Resistance	Moisture Resistance
Medium Density - Similar properties to low density, but harder and more rigid.	-30°C to +80°C	Inert to most chemicals (see chart)	Extremely Good

Polyethylene Resin Classification

Description			
Low Density	-	0.910 - 0.925 g/cm ³	-
Medium Density	-	0.926 - 0.940 g/cm ³	-

Superior Pak acknowledges the information provided by DuPont in the preparation of this guide.