


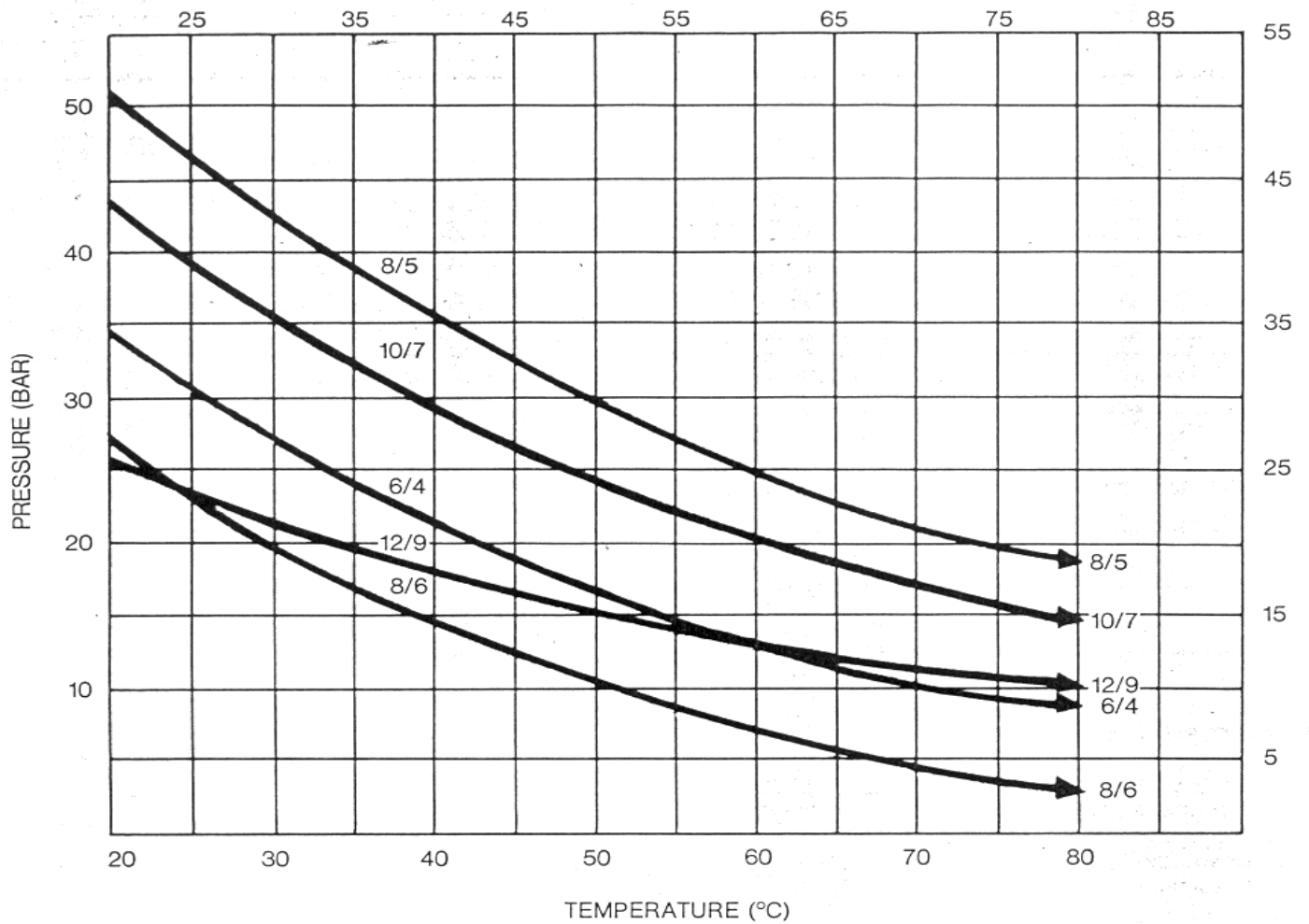


Type	Applications Usual Service and Temperature Range	Performance data Construction/ conformances	
Poly-Flo, PE (NSF Approved) Linear Low Density Polyethylene Tubing 	For pneumatic lines, instrumentation systems, water piping and limited food service. Temperature range: -80°F to + 175°F	Resists most solvents and chemicals. Withstands more than 500 hours in Igepal solution.	Natural: ASTM D-1248, Type 1, Class A, Category 3 Federal Spec: LP390C, Type 1, Class L, Grade 2, Category 3 Colors: ASTM D-1248, Type 1, Class B, Category 3 Federal Spec: LP 370C Type 1, Class L, Grade 2, Category 3 Flexible tubing
Poly-Flo, P Black (Non-NSF Approved) Linear Low Density Polyethylene Tubing 	For pneumatic lines, instrumentation systems and water piping. Temperature range: -80°F to + 175°F	Resists most solvents and chemicals. Withstands more than 500 hours in Igepal solution.	Natural: ASTM D-1248, Type 1, Class C, Category 4 Federal Spec: LP-390C, Type 3, Class L, Grade 2, Category 4 Flexible tubing Black tubing offers outstanding resistance to sunlight
Poly-Flo, PF Black (Non-NSF Approved) Flame Retardent Tubing Linear Low Density Polyethylene Tubing 	For heating control systems in commercial building, chemical conduit, data control equipment systems. Ideal in gas and liquid conducting applications. Temperature range: -80°F to + 175°F	Highest resistance to environmental stress cracking of all regular polyethylene resins. Withstands more than 500 hours in Igepal solution.	Flammability characteristics: Maximum allowable burner rate for PF tubing=3.9 cm/min per ASTM D635 Flexible tubing

"TPU" POLYURETHANE				
TUBE	PRESSURE BURST		MINIMUM BEND RADIUS	
	psi	bar	mm	inch
22	400	27.5	10	0.39
33	400	27.5	15	0.59
44	400	27.5	25	0.98
55	400	27.5	25	0.98
66	400	27.5	30	1.18
88	400	27.5	40	1.57
4	400	27.5	15	0.59
6	400	27.5	18	0.71
8	400	27.5	20	0.79
10	400	27.5	25	0.98
12	400	27.5	35	1.38





Characteristics

- Has great dimensional stability
- High molecular weight of Poly-Flo polyethylene provides greater strength, more uniform structure, better resistance to the elements
- Resists most solvents and chemicals
- Is not attacked by vermin, will not support fungus
- Exposure to sunlight: black tubing should be used in installations where the tubing is exposed to sunlight due to the degrading effect on nearly all types of thermoplastic tubing.

General Information

Thermoplastic Chemical Resistance Chart, tested at 23 °C

The information given below is based on reliable test results. Care should be taken to use this data as a guide only, and to take into account such variables as temperature, concentration and fluid contamination. Each application should be tested prior to its use in commercial systems. All ratings are given at 73° F. Contact Imperial Eastman for high temperature applications.

Key to Ratings:

A = Excellent. Little or no swelling or softening.
 B = Good. Swelling or softening is moderate.
 C = Fair. Conditional service may be expected.
 D = Unsatisfactory. Not recommended.
 NT = Not tested.

	Poly-Flo®	Impolene	Nylo-Seal®	PVC
A				
Acetaldehyde	D	B	B	D
Acetate solvents-crude	B	A	A	D
Acetate solvents-pure	B	A	A	D
Acetic Acid 20%	A	A	B	B
Acetic Acid 50%	A	A	C	B
Acetic Acid-pure	B	A	D	D
Acetone	D	A	A	D
Acetophenone	B	A	NT	D
Acetylene	B	A	A	D
Air	A	A	A	A
Alcohols	A	A	A	C
Aluminum Chloride	A	A	D	A
Aluminum Sulfate	A	A	A	A
Alums	A	A	C	A
Ammonia (Aqueous, liquid and cold gas)				
Ammonium Acetate	A	A	A	A
Ammonium Carbonate	A	A	B	A
Ammonium Chloride	A	A	D	A
Ammonium Hydroxide	A	A	A	B
Ammonium Nitrate	A	A	B	B
Ammonium Phosphate	A	A	A	A
Ammonium Sulfate	A	A	B	B
Amyl Acetate	B	B	B	D
Amyl Alcohol	B	B	A	B
Amyl Chloride	D	D	A	D
Aniline	A	B	C	D
Asphalt	A	A	A	D
B				
Barium Salts	A	A	A	A
Beer	A	A	A	A
Beet Sugar Liquors	A	A	A	NT
Benzaldehyde	D	A	A	D
Benzene or Benzol	D	B	A	D
Benzoic Acid	A	A	A	A
Borax	A	A	B	A
Boric Acid	A	A	C	A
Brandy	A	A	B	NT
Bromine Water, saturated	D	D	D	D
Butane	C	B	A	D
Butter	A	A	A	B
Butyl Acetate	D	C	B	A
C				
Calcium Bisulfite	A	A	D	A
Calcium Hypochlorite	A	A	D	B
Calcium Salts	A	A	A	A
Cane Sugar Liquors	A	A	A	A
Carbon Dioxide	A	A	A	A
Carbon Dioxide (dry)	A	A	B	A
Carbon Dioxide (wet)	A	A	C	A
Carbon Tetrachloride	D	C	D	D
Carrot	A	A	A	A
Chlorine	D	D	D	D
Chloroform	D	B	D	D

	Poly-Flo®	Impolene	Nylo-Seal®	PVC
D				
Chocolate Syrup	A	A	A	B
Chromic Acid	B	NT	B	C
Citric Acid	A	A	A	A
Coke Oven Gas	B	A	A	B
Copper Salts	B	A	A	A
Copper Sulfate	B	A	A	A
Core Oils	B	A	A	NT
Cottonseed Oil	A	A	A	B
Creosote	D	A	D	D
Cyclohexanol	C	A	B	D
Cyclohexanone	D	B	B	D
D				
Dibutyl Phthalate	C	A	A	D
Dichloroethylene	NT	A	C	NT
Dioxane	D	C	A	D
E				
Ethers	D	D	A	D
Ethyl Acetate	A	A	A	D
Ethyl Alcohol 40%	B	A	D	D
Ethylene Glycol	A	A	A	A
F				
Ferric Chloride	A	A	D	A
Ferric Sulfate	A	A	A	A
Ferrous Chloride	B	A	A	A
Ferrous Sulfate	A	A	A	A
Formaldehyde	B	B	A	B
Formic Acid	A	A	D	C
Freon	C	NT	NT	D
Furfural	D	D	C	D
G				
Gasoline (sour)	D	D	A	D
Gasoline (refined)	D	D	A	D
Gelatin	A	A	A	A
Glucose	A	A	A	A
Glue	A	A	C	A
Glycerin or Glycerol	A	A	A	A
H				
Hydraulic Fluid	D	C	A	D
Hydraulic Fluid (water/glycol)	A	A	A	NT
Hydrochloric Acid 30%	A	A	D	A
Hydrochloric Acid 50%	A	A	D	A
Hydrocyanic Acid	A	A	D	B
Hydrofluoric Acid (dil.)	A	A	C	A
Hydrofluoric Acid 38-40%	A	A	D	B
Hydrofluoric Acid 50%	A	A	D	B
Hydrogen Fluoride	B	A	D	D
Hydrogen	A	A	A	A
Hydrogen Peroxide	A	A	D	B
Hydrogen Sulfide (dry)	A	A	C	A
Hydrogen Sulfide (wet)	A	A	C	A

Thermoplastic Chemical Resistance Chart II (tested at 23 °C)

	Poly-Fl®	Impolene	Nylo-Seal®	PVC		Poly-Fl®	Impolene	Nylo-Seal®	PVC
I					R				
Iodine (in alcohol)	D	A	A	A	Rosin (light)	A	A	A	D
Isopropanol	B	A	A	NT	S				
K					Sauerkraut	A	A	A	A
Karo Syrup	A	A	A	A	Shellac	A	A	A	D
L					Silver Nitrate	B	A	A	B
Lacquer Solvents	B	A	A	D	Soap Solutions	B	A	A	B
Lactic Acid	A	A	A	B	Sodium Bicarbonate	A	A	A	A
Lead Acetate	A	A	A	B	Sodium Bisulfate	B	A	D	A
Lime Sulfur	A	A	A	NT	Sodium Bisulfite	A	A	A	A
Linseed Oil	D	A	A	NT	Sodium Borate	A	A	A	A
M					Sodium Carbonate	A	A	A	A
Machine Oil	C	A	A	B	Sodium Chlorate	B	A	C	B
Magnesium Chloride	A	A	A	A	Sodium Chloride	A	A	A	B
Magnesium Hydroxide	A	A	A	A	Sodium Cyanide	A	A	A	A
Magnesium Sulfate	A	A	A	A	Sodium Hydroxide	C	A	B	A
Maleic Acid	A	NT	C	NT	Sodium Hypochlorite	A	A	D	B
Manganese Salts	A	A	A	A	Sodium Metaphosphate	A	A	A	B
Mayonnaise	A	A	A	A	Sodium Nitrate	A	A	A	A
Mercuric Chloride	C	C	C	D	Sodium Perborate	A	A	A	A
Mercury	A	A	A	B	Sodium Phosphate	B	A	C	A
Methanol	A	A	B	B	Sodium Silicate	A	A	A	A
Methylene Chloride	C	C	C	D	Sodium Sulfate	A	A	A	A
Milk	A	A	A	A	Sodium Sulfide	A	A	A	A
Molasses	A	A	A	A	Sodium Sulfite	A	A	A	A
N					Sodium Thiosulfate (hypo)	A	A	A	B
Natural Gas	C	B	A	B	Stearic Acid	C	A	A	A
Nickel Chloride	B	A	A	A	Succinic Acid	A	A	A	A
Nickel Salts	A	A	A	A	Sulfate Liquors	A	A	D	A
Nickel Sulfate	A	A	D	A	Sulfur	B	C	A	B
Nitric Acid (dil.)	B	A	D	B	Sulfur Chloride	B	C	D	C
Nitric Acid (med. conc.)	B	A	D	D	Sulfur Dioxide	A	A	D	A
Nitric Acid (conc.)	D	A	D	D	Sulfuric Acid 10%	A	A	D	B
Nitrobenzene	D	B	C	D	Sulfuric Acid 10-75%	C	A	D	C
Nitrogen Oxides	D	A	B	A	Sulfuric Acid 75-98%	D	C	D	D
Nitrous Acids	NT	C	D	A	Sulfurous Acid	A	A	D	B
O					T				
Oils, Vegetable	A	A	B	D	Tannic Acid	B	A	B	A
Oleic Acid	D	A	A	D	Tar	D	A	B	A
Olive Oil	A	A	A	D	Tartaric Acid	A	A	A	A
Oxalic Acid	A	A	A	A	Tetrahydrofurane	D	B	B	D
Oxygen Gas	A	A	A	A	Tetralin	D	D	A	NT
P					Thiopen	D	B	A	NT
Palmitic Acid	B	A	D	C	Toluene or Toluol	C	B	A	D
Perchloric Acid	B	B	D	D	Tomato	A	A	A	A
Petroleum Oils (sour)	B	B	B	B	Trichlorethylene	D	D	C	D
Petroleum Oils (refined)	B	B	B	B	Turpentine	D	B	A	B
Phenol	NT	NT	D	D	U				
Phosphoric Acid 25%	A	A	A	A	Urea	A	A	A	B
Phosphoric Acid 25-50%	A	A	B	A	V				
Phosphoric Acid 50-85%	A	A	C	A	Varnish	A	A	A	D
Picric Acid	D	A	D	D	Vinegar	A	A	A	A
Potassium Carbonate	A	A	C	B	W				
Potassium Chlorate	B	A	A	B	Water (fresh)	A	A	A	A
Potassium Chloride	A	A	A	A	Water (salt)	A	A	A	A
Potassium Hydroxide	A	A	B	B	Whiskey	A	A	A	A
Potassium Iodide	A	A	A	B	Wines	A	A	A	A
Potassium Sulfate	A	A	A	B	X				
Propane	C	D	B	A	Xylene or Xylol	D	C	B	D
Pyridine	C	A	C	D	Z				
					Zinc Chloride	A	A	A	A
					Zinc Sulfate	B	A	D	NT