CHEMICAL	%	TEMP C	TEMP F	ABS	ACETAL	PVDF	NYLON	MABS	POLYCARBONATE	POLYPROPYLENE	POLYSULFONE
Acetic Acid	5%	23 C	73 F	Excellent	Unsatisfactory	Excellent	Satisfactory	Satisfactory	Satisfactory	Excellent	Excellent
Acetone	100%	50 C	122 F	Satisfactory	Unsatisfactory	Unsatisfactory	Satisfactory	Unsatisfactory	Unsatisfactory	Excellent	Unsatisfactory
Acetophenone	100%	24 C	75 F	Satisfactory	—	Unsatisfactory	Excellent	—	—	Satisfactory	—
Acetylene	100%	24 C	75 F	—	—	Excellent	Excellent	—	—	—	—
Air	100%	82 C	180 F	Excellent	Excellent	Excellent	Excellent	—	—	—	Excellent
Ammonia, Liquid	100%	24 C	75 F	Satisfactory	—	Unsatisfactory	Satisfactory	—	Unsatisfactory	Excellent	Excellent
Ammonium Hydroxide	10%	23 C	73 F	Satisfactory	—	Excellent	Excellent	—	Unsatisfactory	Excellent	Excellent
Ammonium Hydroxide	10%	70 C	158 F	Unsatisfactory	—	Excellent	Unsatisfactory	—	Unsatisfactory	Excellent	Excellent
Barium Sulfide	100%	24 C	75 F	Excellent	Excellent	Excellent	Satisfactory	—		Excellent	—
Benzene	100%	23 C	73 F	Satisfactory	Excellent	Excellent	Excellent	—	Unsatisfactory	Satisfactory	Unsatisfactory
Bleach	100%	23 C	73 F	Satisfactory	Unsatisfactory	Excellent	Satisfactory	—	Unsatisfactory	Satisfactory	Excellent
Boric Acid	7%	35 C	95 F	Excellent	Excellent	Excellent	Unsatisfactory	—	Excellent	Excellent	—
Calcium Carbonate	Sat. sol.	24 C	75 F	Excellent	—	Excellent	—	—	—	Excellent	
Carbon Dioxide	100%	50 C	122 F	Satisfactory	Excellent	Excellent	Excellent	—	—	Excellent	—
Carbon Monoxide	100%	50 C	122 F	Satisfactory	—	Excellent	Excellent	—	—	Excellent	—
Carbon Tetrachloride	100%	50 C	122 F	Unsatisfactory	—	Excellent	Excellent	—	Unsatisfactory	Unsatisfactory	Unsatisfactory
Chlorine Water	Dilute	23 C	73 F	Unsatisfactory	—	Excellent	Satisfactory	—	Unsatisfactory	Unsatisfactory	Satisfactory
Chlorine Water	Concen.	23 C	73 F	Unsatisfactory	—	Excellent	Unsatisfactory	—	Unsatisfactory	Unsatisfactory	Unsatisfatory
Chlorobenzene	100%	23 C	73 F	Satisfactory	—	Excellent	Excellent	—	Unsatisfactory	Unsatisfactory	Unsatisfactory
Chlorofluorocarbon 11	100%	24 C	75 F	—	—	Excellent	Excellent	—	Satisfactory		Excellent
Chloroform	100%	23 C	73 F	Unsatisfactory	Satisfactory	Excellent	Satisfactory	—	Unsatisfactory	Unsatisfactory	Unsatisfactory
Cyclohexanone	100%	24 C	75 F	Satisfactory	—	Excellent	Excellent	—	Unsatisfactory	Satisfactory	Unsatisfactory
Dichlorethylene	100%	23 C	73 F	—	—	Excellent	Satisfactory	—		Excellent	Unsatisfactory
Ethanol	95%	50 C	122 F	Satisfactory	—	Excellent	Excellent	—	Satisfactory	Excellent	Satisfactory
Ethyl Acetate	95%	50 C	122 F	Satisfactory	—	Unsatisfactory	Excellent	—	Unsatisfactory	Satisfactory	Unsatisfactory
Ethylene Glycol	100%	23 C	73 F	Excellent	Satisfactory	Excellent	Excellent	Unsatisfactory	Satisfactory	Excellent	Excellent
Ethylene Oxide	100%	24 C	75 F	Unsatisfactory	—	Excellent	Satisfactory	—	Satisfactory	Satisfactory	Excellent
Ethylene Oxide	100%	79 C	175 F	Unsatisfactory	—	Excellent	Unsatisfactory	—	Satisfactory	Unsatisfactory	Excellent
Fatty Acids	—	—	—	—	Excellent	Excellent	—	—	—	Excellent	—
Fluorine	100%	23 C	73 F	Unsatisfactory	—	Excellent	Unsatisfactory	—	—	—	—
Formaldehyde	37%	24 C	75 F	Unsatisfactory	Excellent	Excellent	—	—	Unsatisfactory	Excellent	Unsatisfactory
Gasoline	100%	85 C	185 F	Excellent	Satisfactory	Excellent	Excellent	—	Unsatisfactory	Satisfactory	Satisfactory
Glucose	Concen.	24 C	75 F	Excellent	—	Excellent	—	—	—	Excellent	—
Glycerin	100%	24 C	75 F	Excellent	—	Excellent	—	—	Excellent	Excellent	Excellent
Hydrochloric Acid	2%	23 C	73 F	Excellent	Satisfactory	Excellent	Excellent	—	Excellent	Excellent	Excellent
Hydrochloric Acid	10%	25 C	77 F	Excellent	Satisfactory	Excellent	Unsatisfactory	—	Excellent	Excellent	Excellent
Hydrofluoric Acid	10%	23 C	73 F	Satisfactory	—	Excellent	Unsatisfactory	—		Excellent	Excellent
Hydrogen Peroxide	1%	24 C	75 F	Excellent	Unsatisfactory	Excellent	Satisfactory	Satisfactory	Excellent	Excellent	Excellent
Hydrogen Peroxide	5%	43 C	110 F	Satisfactory	Unsatisfactory	Excellent	Unsatisfactory	Satisfactory	Excellent	Satisfactory	Excellent
Isopropanol	100%	23 C	73 F	—	Excellent	Excellent	Excellent	Unsatisfactory	Excellent	Excellent	Satisfactory
Kerosene	100%	85 C	185 F	Satisfactory	—	Excellent	Excellent	—	Satisfactory	Satisfactory	Satisfactory
Methyl Ethyl Ketone	100%	50 C	122 F	Satisfactory	—	Unsatisfactory	Excellent	—	Unsatisfactory	Satisfactory	Unsatisfactory
Methylene Chloride	100%	23 C	73 F	Unsatisfactory	—	Excellent	Satisfactory	—	Unsatisfactory	Excellent	Unsatisfactory
Methanol	100%	23 C	73 F	Unsatisfactory	—	Excellent	Excellent	Satisfactory	Satisfactory	Excellent	Satisfactory
Nitric Acid	10%	23 C	73 F	Satisfactory	—	Excellent	Unsatisfactory	Unsatisfactory	Unsatisfactory	Excellent	Satisfactory
Oxygen	100%	24 C	75 F	—	—	Excellent	Satisfactory	—	—	—	—
Ozone	100%	43 C	110 F	Satisfactory	—	Excellent	Unsatisfactory	—	Unsatisfactory	—	—
Phenol	90%	23 C	73 F	Unsatisfactory	Unsatisfactory	Excellent	Unsatisfactory	—	—	Excellent	—
Phosphoric Acid	5%	98 C	208 F	Satisfactory	Unsatisfactory	Excellent	Unsatisfactory	—	Unsatisfactory	Excellent	Excellent
Propane	100%	23 C	73 F	Satisfactory	—	Excellent	Excellent	—	—	—	—
Sodium Bicarbonate	Concen.	24 C	75 F	Excellent	Excellent	Excellent	Excellent	—	—	Excellent	Excellent
Sodium Chloride	10%	23 C	73 F	Excellent	—	Excellent	Excellent	Satisfactory	—	Excellent	Excellent
Sodium Chloride	Sat. sol.	24 C	75 F	Excellent	—	Excellent	Excellent	—	—	Excellent	Excellent
Sodium Hydroxide	10%	70 C	158 F	Satisfactory	—	Excellent	Satisfactory	Satisfactory	—	Excellent	Excellent
Steam	—	120 C	248 F	Unsatisfactory	—	Excellent	Unsatisfactory	—	Unsatisfactory	Satisfactory	Excellent
Sulfuric Acid	30%	23 C	73 F	Satisfactory	Unsatisfactory	Excellent	Unsatisfactory	Satisfactory	Excellent	Excellent	Excellent
Tetrahydrofuran	100%	23 C	73 F	Satisfactory	—	Unsatisfactory	Excellent	—	—	Unsatisfactory	—
Toluene	100%	50 C	122 F	Satisfactory	Unsatisfactory	Excellent	Excellent	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
Trichloroethylene	100%	23 C	73 F	Satisfactory	—	Excellent	Satisfactory	—	Unsatisfactory	Unsatisfactory	Unsatisfactory
Water	100%	79 C	175 F	Excellent	—	Excellent	Excellent	Satisfactory	Unsatisfactory	Excellent	Excellent

Material/ Manufacturer & Grade	VP Code	Regulatory Status of Base Resin*	Animal Derivative Free*	Gamma Radiation** (Sterilization)	Ethylene Oxide (Sterilization)	Autoclave (Sterilization)
ABS Dow Magnum 9020	-81	21 CFR 181.32 FDA Approved for Food Contact; RoHS Compliant	No	Compatible up to 1 Mrad	Not recommended	Poor. Components may distort due to low heat deflection temperatures
ABS (Methyl Methacrylate) BASF Terlux 2802 TR	-8003	USP Class VI Certified; FDA Approved; RoHS Compliant	Yes	Withstands up to 5 Mrad doses without yellowing	Good	Poor. Components may distort due to low heat deflection temperatures
ABS (Sno White) INEOS Lustran 348-012002	-8012	USP Class VI Certified; FDA Approved; ISO 10993 Part I Compliant; RoHS Compliant	N/A	Compatible up to 5 Mrads	Good	Not suitable due to low heat deflection temperatures
Acetal Dupont Delrin 500P	-10	RoHS Compliant	No	Compatible up to 1 Mrad	Excellent	Very Good
Acetal Copolymer BASF Ultraform N 23020 003 UNC Q600	-1006	USP Class VI Certified; FDA Approved 21 CFR 177.2470; RoHS Compliant	No	Compatible up to 1.5 Mrads	Excellent	Very Good
Acrylic Cyrolite Med 2	-50	USP Class VI Certified; 21 CFR 177.1010 FDA Approved; RoHS Compliant	Yes	Very good up to commonly used doses (6 Mrads).	Excellent	Not Recommended
Copolyester Eastman EASTAR MN211 Natural	-CM018	USP Class VI Certified; ISO 10993 Compliant; RoHS Compliant	N/A	Compatible up to 6 Mrads	Highly compatible	-
Nylon BASF Ultramid A3K	-0USP	21 CFR 177.1500 FDA Approved; RoHS Compliant	N/A	Very good. May discolor to brownish hue.	Very good. Some suceptibility to oxidizing agents.	Very good. Product may swell slightly due to water absorption.
Nylon Dupont Zytel 101F	-0, -1, -2, -3, -4, -5, -06, -07	21 CFR 177.1500 FDA Approved; RoHS Compliant	No	Very good. May discolor to brownish hue.	Very good. Some suceptibility to oxidizing agents.	Very good. Product may swell slightly due to water absorption.
Nylon (Glass Reinforced) Dupont Zytel 70G33L	-7, -72	-	No	Very good. May discolor to brownish hue.	Very good. Some suceptibility to oxidizing agents.	Excellent
Polycarbonate (Clear) Bayer Makrolon 2558 550115	-9	USP Class VI Certified; 21 CFR 177.1580; FDA Approved; ISO 10993 Compliant; RoHS Compliant	No	Compatible up to 10 Mrads with minor loss of physical properties. Will discolor to yellow-green hue.	Highly compatible	Poor. May craze or stress crack due to molding stresses.
Polycarbonate (Clear) Bayer Makrolon Rx 1805 451118	-9010	USP Class VI Certified; ISO 10993 Compliant; RoHS Compliant	Yes	Compatible up to 10 Mrads with minor loss of physical properties. May discolor slightly dependent upon dose/number of cycles.	Highly compatible	Poor. May craze or stress crack due to molding stresses.
Polycarbonate (Tinted) Dow Calibre Megarad 2081-15	-9002	USP Class VI Certified; ISO 10993 Compliant; RoHS Compliant	Yes	Excellent up to 10 Mrads with minor loss of physical properties. Light violet hue turns clear upon sterilization.	Highly compatible	Not Recommended
Polyethylene Eastman Voridian 1870A	-CM006	USP Class VI Certified; FDA Approved; RoHS Compliant	Yes	Compatible up to 6 Mrads	Highly compatible	Not Recommended
Polypropylene Basell Profax PD626	-6	USP Class VI Certified; 21 CFR 177.1520 FDA Approved; RoHS Compliant	No	Excellent up to commonly used sterilization doses (6 Mrads).	Good. May react poorly to EtO/CFC mix.	Poor. Components may distort due to low heat deflection temperatures
Polypropylene Flint Hills P5-080X	-6005	USP Class VI Certified; 21 CFR 177.1520 FDA Approved; RoHS Compliant	Yes	Very good to commonly used sterilization doses (6 Mrads).	HIghly compatible	Not Recommended
Polysulfone Solvay Udel P1700 MG11	-F1A	USP Class VI Certified; 21 CFR 177.1655 FDA Approved; RoHS Compliant	Yes	Highly compatible. Will discolor to brownish hue.	Excellent	Excellent
Polysulfone Solvay Udel P1700 CL2611	-40	21 CFR 177.1655 FDA Approved	Yes	Highly compatible. Will discolor to brownish hue.	Excellent	Excellent
PVDF Atofina Kynar 1000 HD	-J1A	USP Class VI Certified; 21 CFR 177.1500 FDA Approved; RoHS Compliant	Yes	Highly compatible. Will discolor to brownish hue.	Excellent	Highly Compatible

*as determined by resin manufacturer

**1 Megarad (Mrad) = 10 kiloGrays (kGy)