



Standard Practice for Dissolving Polymer Materials¹

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1. Scope

1.1 This practice outlines the parameters applicable to the preparation of a polymeric solution, such as solvent, concentration, temperature, pressure, time, agitation, and heating mode.

1.2 The proper use of this practice requires knowledge of solvents and their effect on polymeric materials.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 1—There is no known ISO equivalent to this standard.

2. Referenced Documents

2.1 *ASTM Standards:*²

D883 Terminology Relating to Plastics

D1600 Terminology for Abbreviated Terms Relating to Plastics

2.2 *Other Document:*

Polymer Handbook³

3. Terminology

3.1 Definitions are in accordance with Terminology D883.

3.2 Abbreviations are in accordance with Terminology D1600.

4. Summary of Practice

4.1 A polymer solution is described or prepared using the cell classifications listing the parameters relative to solvate the polymer. The cell classifications are listed in the following order: polymer, solvent, concentration, temperature, time, container, heating mode, and agitation.

¹ This practice is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.70 on Analytical Methods.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from John Wiley and Sons, New York, NY.

4.1.1 A polymer and a list of suggested solvents for making a solution are listed in Annex A1.

4.1.2 Table 1 designates the parameters for container, heating mode, and type of agitation.

NOTE 2—To illustrate the use of the cell classifications with Table 1, a 2 % solution of poly(vinyl chloride) using cyclohexanone would be written as:

PVC – cyclohexanone – 20 – 66 – 40 – BEC

where:

PVC	= abbreviation of the polymer from Annex A1,
cyclohexanone	= the solvent from Annex A1,
20	= weight of polymer in tenths of a percent,
66	= temperature in degrees Celsius,
40	= time in tenths of an hour,
B	= glass container from Table 1,
E	= bath heater from Table 1, and
C	= random agitation from Table 1.

5. Significance and Use

5.1 This practice embodies the specifications to describe the preparation of a polymeric solution.

6. Procedure

6.1 *Polymer*—Select the applicable polymer from Annex A1 and write its abbreviation.

6.2 *Solvent*—Select the solvent applicable to the polymer from Annex A1.

6.3 *Concentration*—Write the polymer gram weight in tenths of a percent per milliliter of solvent.

6.4 *Temperature*—Write the solution temperature in degrees Celsius.

6.5 *Time*—Write the time for solution in tenths of an hour.

6.6 *Container*—Select the type of container from Table 1.

6.7 *Heating Mode*—Select the heating mode from Table 1.

6.8 *Agitation*—Select the agitation mode from Table 1.

7. Precision and Bias

7.1 No statement is made about the precision or bias of this practice since the procedure is descriptive with no measurements being made.

*A Summary of Changes section appears at the end of this standard

TABLE 1 Parameters

Designation	Container	Heater Mode	Agitation Mode
A	unspecified	unspecified	unspecified
B	glass	none	none
C	sealed glass vial	oven	random
D	metal	hot plate	magnetic stirrer
E	fluoropolymer	bath	propeller blade
F		block heater	wrist action
G		electric mantle	ultrasonic
H		microwave	

8. Keywords

8.1 polymer solutions; solution preparation; solutions; solvents

ANNEX

(Mandatory Information)

A1. SUGGESTED SOLVENTS FOR POLYMERIC SOLUTIONS

A1.1 Note the following:

A1.1.1 The solvents in [Table A1.1](#) are listed in random order.

A1.1.2 An increase in polymer molecular weight reduces solubility.

A1.1.3 Branching increases the solubility compared to a linear polymer of the same molecular weight.

A1.1.4 Solubility normally increases with rising temperature.

A1.1.5 The temperature is for room temperature unless noted.

A1.1.6 The following abbreviations are used in [Table A1.1](#):
 D.S. = degree of substitution,
 S.C. = substituent content,
 conc. = concentrated.

TABLE A1.1 Solvents

Abbreviation	Polymer	Solvents
ABA	Acrylonitrile-butadiene-acrylate	aromatic hydrocarbons, chlorinated hydrocarbons, tetrahydrofuran, esters, ketones, <i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethyl-acetamide (if high acrylonitrile)
ABS	Acrylonitrile-butadiene-styrene	<i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethylacetamide (if high acrylonitrile), cyclohexanone (above 35°C), cyclohexanone/acetone, methylcyclohexane/acetone, decahydronaphthalene/dimethyl oxalate, benzene, toluene, ethylbenzene, styrene, lower chlorinated hydrocarbons, phenol/acetone, tetrahydrofuran, dimethyltetrahydrofuran, dioxane, methyl ethyl ketone, diisopropyl ketone, glycol formal, ethyl acetate, butyl acetate, methyl-, ethyl-, <i>n</i> -butyl phthalate, 1-nitropropane, carbon disulfide, tributyl phosphate, phosphorus trichloride
Alkydes		
AMMA	Acrylonitrile/metha methacrylate	tetrahydrofuran
ADC	Allyl diglycol carbonate	benzene, toluene, xylene, methylene chloride, chloroform, ethylene chloride, chlorobenzene, isobutanol (hot), cyclohexanol (hot), <i>B</i> -ethoxyethanol, dioxane, methyl ethyl ketone, diisopropyl ketone, cyclohexanone, acetic acid, isobutyric acid, methyl formate, ethyl acetate, cyclohexyl acetate, isobutyl propionate, butyl lactate
CMC	Carboxymethyl cellulose	benzene, chloroform, acetone
CA	Cellulose acetate	S.C. = 5 to 10 % —alkali S.C. = 15 to 30 % —water (sodium salt) S.C. = high—benzene/alcohol, benzene/acetone, chloroform, pyridine, acetone, esters, tetrahydrofuran D.S. = 0.6 to 0.8—water D.S. = 1.3 to 1.7—2-methoxyethanol D.S. = 2.0 to 2.3—methylene chloride/methanol at 80:20, chloroform/methanol, benzyl alcohol, phenols, ethylene glycol ethers, dioxane, diethanolamine, pyridine, aniline, acetone, cyclohexanone, formic acid, glacial acetic acid, methyl acetate, ethyl acetate/nitrobenzene, glycol monoethyl ether acetate, nitromethane, tetrahydrofuran
CAB	Cellulose acetate-butyrate	D.S. (acetate) = 0.8 and D.S. (butyrate) = 2.35— benzene, toluene (hot), chloroform, carbon tetrachloride, tetrachloroethane, methanol (hot), acetone, cyclohexanone, dioxane, aliphatic esters, nitroethane
CAB	Cellulose acetate-butyrate	D.S. (acetate) = 2.1 and D.S. (butyrate) = 0.7— chloroform, dichloroethane, tetrachloroethane, dioxane, acetone, cyclohexanone, methyl acetate, ethyl acetate, nitroethane
CAP	Cellulose acetate propionate	benzene, dichloromethane, chlorobenzene, acetone, ethyl acetate

TABLE A1.1 *Continued*

Abbreviation	Polymer	Solvents
CN	Cellulose nitrate	N = 6.8 % —water N = 10.5 to 12 % —alcohol (lower), alcohol/diethyl ether, acetone, amyl acetate, ethylene glycol ethers, acetic acid (glacial) N = 12.7 % —halogenated hydrocarbons, ethanol/diethyl ether, acetone, methyl amyl acetone, cyclohexanone, methyl acetate, ethyl acetate, ethyl butyrate, ethyl lactate, ethylene glycol ether acetates, ethylene carbonate, furan derivatives, nitrobenzene
CP	Cellulose propionate	benzene, dichloroethane, chlorobenzene, acetone, ethyl acetate
CTA	Cellulose triacetate	methylene chloride, methylene chloride/ethanol at 80:20, chloroform, chloroform/alcohol, trichloroethane, tetrahydrofuran, dioxane, acetone, acetone/water at 80:20, methyl acetate, ethylene glycol ether acetates, ethylene carbonate
EPDM	Diene-modified ethylene-propylene	1,2,4-trichlorobenzene, toluene at 75°C, 1,2,4-trichloro-benzene at 135°C
EP	Epoxy, epoxide	tetrahydrofuran
EC	Ethyl cellulose	D.S. = 0.5 to 0.7—aqueous alkali D.S. = 1.0 to 1.5—pyridine, formic acid, water (cold), cuoxam D.S. = 2—methylene chloride, chloroform, dichloroethylene, chlorohydrins, ethanol, tetrahydrofuran D.S. = 2.3—benzene, toluene, alkyl halogenoids, alcohols, furan derivatives, ketones, acetic esters, carbon disulfide, nitromethane D.S. = 3.0—benzene, toluene, methylene chloride, alcohols, esters aromatic hydrocarbons, chlorinated hydrocarbons, tetrahydrofuran, esters, ketones
EEA	Ethylene/ethyl acrylate	water, aqueous hydrogen chloride (0.002M above 30°C), dilute aqueous sodium hydroxide
EMA	Ethylene/methacrylic acid	copolymer perfluorokerosene (350°C)
ETFE	Ethylene-tetrafluoroethylene	benzene, toluene, chloroform, carbon tetrachloride/ethanol, dichloroethylene/ethanol at 20:80, chlorobenzene, methanol, ethanol/water, n-butanol/water, allyl alcohol, 2,4-dimethyl-3-pentanol, benzyl alcohol, tetrahydrofurfuryl alcohol, tetrahydrofuran, dimethyltetrahydrofuran, dioxane, glycol ethers, glycol ether esters, acetone, methyl ethyl ketone, acetic acid, lower aliphatic acids, vinyl acetate, acetals, acetonitrile, nitromethane, <i>N,N</i> -dimethylformamide, dimethyl sulfoxide, 1,2,4-trichlorobenzene at 135°C (if high ethylene content)
EVA	Ethylene/vinyl acetate	50:50 1,2,4-trichlorobenzene/phenol at 175°C, pentafluorophenol
LCP	Liquid crystal polymer	Very low molecular weight—alcohol, water
MF	Melamine formaldehyde	Intermediates—pyridine, formalin, formic acids, dilute and concentrated acids High molecular weight— <i>m</i> -cresol at 100°C, <i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethylacetamide, <i>N</i> -methyl pyrrolidone at 85 to 100°C
PF	Phenol-formaldehyde	Novalks and low molecular weight—hydrocarbons, diethyl ether, acetone, esters, 4- <i>tert</i> -butylphenol and 4-phenylphenol polymers, drying oils, tetrahydrofuran, methanol Final resins—molten phenols (with some decomposition)
PAA	Poly(acrylic acid)	Atactic—methanol, ethanol, ethylene glycol, methoxyethanol, dioxane, formamide, <i>N,N</i> -dimethyl-formamide, water, dilute alkali solution Isotactic—dioxane/water at 80:20
PAN	Polyacrylonitrile	Polyacrylonitrile (PAN)— <i>o</i> -, <i>m</i> -, <i>p</i> -phenylene diamine, <i>N</i> -formylhexamethyleneimine, <i>N</i> -nitrosopiperidine, maleic anhydride, chloromaleic anhydride, succinic anhydride, acetic anhydride, citraconic anhydride, <i>g</i> -butyrolactone, dioxanone, <i>p</i> -dioxanedione, ethylene oxalate, ethylene carbonate, propylene carbonate, 2-oxazolidone, 1-methyl-2-pyridone, 1,5-dimethyl-2-pyrrolidone, <i>E</i> -caprolactam, <i>N,N</i> -dimethyl-formamide, dimethylthioformamide, <i>N</i> -methyl- <i>B</i> -cyanoethylformamide, cyanoacetic acid, <i>a</i> -cyanoacetamide, <i>N</i> -methylacetamide, <i>N,N</i> -diethylacetamide, <i>N,N</i> -dimethylacetamide, dimethylmethoxyacetamide, <i>N,N</i> -dimethyl- <i>a,a</i> , <i>a</i> -trifluoroacetamide, <i>N,N</i> -dimethylpropionate, <i>N,N,N',N'</i> -tetramethyloxamide, hydroxyacetoneitrile, chloro-acetonitrile/water, <i>B</i> -hydroxypropionitrile, malonitrile, fumaronitrile, succinonitrile, adiponitrile, bis(2-cyanoethyl)ether, bis(2-cyanoethyl)sulfide, bis(4-cyanobutyl)sulfone, 1,3,3,5-tetracyanopentane, nitromethane/water (94:6), 1,1,1-trichloro-3-nitro-2-propane, tri(2-cyanoethyl)nitromethane, 3,4-nitrophenol, methylene dithiocyanate, trimethylene dithiocyanate, dimethyl sulfoxide, tetramethylene sulfoxide, dimethyl sulfone, ethyl methyl sulfone, 2-hydroxyethyl methyl sulfone, ethylene-1,2-bis-(ethyl sulfone), dimethyl phosphite, diethyl phosphite, sulfuric acid, nitric acid, <i>p</i> -phenol sulfonic acid, conc. aqueous lithium chloride, conc. aqueous zinc chloride, conc. aqueous aluminum perchlorate, conc. aqueous sodium thiocyanate, conc. aqueous calcium thiocyanate, molten quaternary ammonium salts and their aqueous solutions

TABLE A1.1 *Continued*

Abbreviation	Polymer	Solvents
PA	Polyamide	6- <i>m</i> -cresol, chlorophenol, formic acid, acetic acid, trichloroacetic acid, ethylene carbonate, sulfuric acid, phosphoric acid, hexamethyltrisphosphoramide, hexafluoroisopropanol 6:6 (at room temperature)—trifluoroethanol, trichloroethanol, phenol, cresols, chloral hydrate, formic acid, halogenated acetic acids, hydrogen fluoride, hydrogen cyanide/methanol, liquid sulfur dioxide, sulfuric acid, phosphoric acid, saturated solution of alcohol-soluble salts, for example, calcium chloride, magnesium chloride, in methanol, hexafluoroisopropanol 6:6 (at temperatures of 120 to 140°C)—benzyl alcohol, ethylene chlorohydrin, 1,3-chloropropanol, 2-butene-1,4-diol, diethylene glycol, acetic acid, formamide, <i>N</i> -acetylmorpholine, dimethyl sulfoxide 6:10—chlorobenzene, hexafluoroisopropanol, dimethyl succinate (79°C) 11:—higher primary alcohols, <i>N,N</i> -dimethylformamide, dimethyl sulfoxide, hexafluoroisopropanol
PA/PET	Polyamide + Polyethylene terephthalate	pentafluorophenol
PB	Poly(butadiene)	tetrahydrofuran, toluene, chloroform
PBAN	Polybutadiene-acrylonitrile	benzene, halogenated hydrocarbons, aliphatic, cycloaliphatic and aromatic hydrocarbons, chlorinated hydrocarbons, tetrahydrofuran, higher ketones, higher aliphatic esters, <i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethylacetamide (if high acrylonitrile content)
PBS	Polybutadiene-styrene	benzene, halogenated hydrocarbons, aliphatic, cycloaliphatic and aromatic hydrocarbons, chlorinated hydrocarbons, tetrahydrofuran, higher ketones, higher aliphatic esters
PBT	Poly(butylene terephthalate)	<i>m</i> -cresol at 100°C, hexafluoroisopropanol
PB	Polybutene-1	see Polyethylene
PC	Polycarbonate	benzene, chloroform, acetone, tetrahydrofuran, methylene chloride
Neoprene	Polychloroprene	tetrahydrofuran, toluene
PEEK	Polyetheretherketone	50:50 1,2,4-trichlorobenzene/phenol at 135°C
PEI	Poly(ether imide)	<i>N</i> -methyl pyrrolidone, <i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethylacetamide at 85°C
PES	Poly(ether sulfone)	tetrahydrofuran, <i>N,N</i> -dimethylformamide
PE	Polyethylene	High-density (HDPE) (at temperatures above 80°C)—aliphatic, cycloaliphatic, and aromatic hydrocarbons, halogenated aliphatic, cycloaliphatic, and aromatic hydrocarbons, higher aliphatic esters and ketones, di- <i>n</i> -amyl ether Low-density (LDPE)(LLDPE)—as high density, but temperatures 20 to 30°C lower depending on the degree of branching
CPE	Polyethylene, chlorinated, 40 % Cl (at elevated temperature)	tetrahydronaphthalene, toluene, xylene, tetrachloroethane, chlorobenzene, cyclohexanone
CPE	Polyethylene, chlorinated, 60 % Cl	tetrahydronaphthalene, benzene, toluene, methylene chloride, chloroform, dioxane, tetrahydrofuran, cyclohexanone, acetone/carbon disulfide at 1:1
PEO	Poly(ethylene oxide)	benzene, toluene, methylene chloride, chloroform, carbon tetrachloride, <i>n</i> -butanol, methyl ethyl ketone, cyclohexanone, water
PET	Poly(ethylene terephthalate)	chloral hydrate, phenol, phenol/tetrachloroethane at 1:1 by volume, phenol/2,4,6-trichlorophenol at 10:7 by volume, chlorophenol, hexafluoroisopropanol, nitrobenzene, dimethyl sulfoxide (hot), halogenated aliphatic carboxylic acids, <i>m</i> -cresol at 100°C
PETG	Poly(ethylene terephthalate), glycol comonomer	see Poly(ethylene terephthalate)
PI	Polyimide	<i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethylacetamide, <i>N</i> -methyl pyrrolidone at 85°C
PIB	Polyisobutylene	tetrahydrofuran, toluene
	Polyisoprene	tetrahydrofuran, toluene
PMCA	Poly(methyl- <i>a</i> -chloroacrylate)	aromatic hydrocarbons, chlorinated hydrocarbons, tetrahydrofuran, esters, ketones
PMMA	Poly(methyl methacrylate)	benzene, toluene, xylene, methylene chloride, chloroform, ethylene chloride, chlorobenzene, isobutanol (hot), cyclohexanol (hot), <i>B</i> -ethoxyethanol, dioxane, methyl ethyl ketone, diisopropyl ketone, cyclohexanone, acetic acid, isobutyric acid, methyl formate, ethyl acetate, cyclohexyl acetate, isobutyl propionate, butyl lactate, ethanol/water, ethanol/carbon tetrachloride, isopropanol/methyl ethyl ketone at 1:1 above 25°C, formic acid, nitroethane, methylene chloride, hexafluoroisopropanol
PMP	Poly(4-methylpentene-1), isotactic	see Poly(ethylene)
PCTFE	Polymonochlorotrifluoroethylene	cyclohexane (235°C), benzene (200°C), toluene (142°C), <i>p</i> -xylene (140°C), 1,1,1-trichloroethane (120°C), carbon tetrachloride (114°C), 1,2,3-trifluoropentachloropropane, 1,1,2,2-tetrafluoro-3,3,4,4-tetrachlorocyclobutane, 1,2-dichlorotrifluorobenzene, 2,5-dinitrotrifluorobenzene (130°C), mesitylene (140°C), hexamethyltrisphosphoramide
POM	Polyoxymethylene, polyacetal (at elevated temperatures)	benzyl alcohol, phenol, chlorophenols, aniline, formamide, <i>N,N</i> -dimethylformamide, malodinitrile, <i>g</i> -butyrolactone, ethylene carbonate, bromobenzene, diphenyl ether, benzyl benzoate
PPE	Poly(phenylene ether)	1,2,4-trichlorobenzene at 135°C

TABLE A1.1 *Continued*

Abbreviation	Polymer	Solvents
PP	Polypropylene	Atactic—hydrocarbons and chlorinated hydrocarbons at room temperature, isoamyl acetate, diethyl ether Isotactic (at temperatures above 135°C)—trichlorobenzene, xylenes, decahydronaphthalene
PPO	Poly(propylene oxide)	benzene, toluene, carbon tetrachloride, methanol (hot), ethanol, tetrahydrofuran, dioxane, acetone, methyl ethyl ketone
PSU	Polysulfone	methylene chloride, <i>N,N</i> -dimethylformamide, dimethyl sulfoxide
PS	Polystyrene	cyclohexane (above 35°C), cyclohexane/acetone, methylcyclohexane/acetone, decahydronaphthalene/dimethyl oxalate, benzene, toluene, ethylbenzene, styrene, lower chlorinated aliphatic hydrocarbons, phenol/acetone, tetrahydrofuran, dimethyltetrahydrofuran, dioxane, methyl ethyl ketone, diisopropyl ketone, cyclohexanone, glycol formal, ethyl acetate, butyl acetate, methyl-, ethyl-, <i>n</i> -butyl phthalate, 1-nitropropane, carbon disulfide, tributyl phosphate, phosphorus trichloride
PTFE	Polytetrafluoroethylene	perfluorokerosene (350°C)
PUR	Polyurethane	phenol, <i>m</i> -cresol, formic acid, sulfuric acid, tetrahydrofuran, chloroform, <i>N,N</i> -dimethylformamide
PVK	Polyvinylcarbazole	benzene, toluene, xylene, methylene chloride, chloroform, tetrachloroethane, chlorobenzene, tetrahydrofuran, dioxane, cyclohexanone, benzyl acetate, conc. nitric acid, conc. sulfuric acid
PVP	Polyvinylpyrrolidone	water
PVAC	Poly(vinyl acetate)	benzene, toluene, chloroform, carbon tetrachloride/ethanol, dichloroethylene/ethanol at 20:80, chlorobenzene, methanol, ethanol/water, <i>n</i> -butanol/water, allyl alcohol, 2,4-dimethyl-3-pentanol, benzyl alcohol, tetrahydrofurfuryl alcohol, tetrahydrofuran, dimethyltetrahydrofuran, dioxane, glycol ethers, glycol ether esters, acetone, methyl ethyl ketone, acetic acid, lower aliphatic esters, vinyl acetate, acetals, acetonitrile, nitromethane, <i>N,N</i> -dimethylformamide, dimethyl sulfoxide Syndiotactic—chloroform, chlorobenzene
PVAL	Poly(vinyl alcohol)	glycols (hot), glycerol (hot), piperazine, methylenediamine, formamide, <i>N,N</i> -dimethylformamide, dimethyl sulfoxide (hot), water, hexamethyltrisphosphoramide, tetrahydrofuran
PVB	Poly(vinyl butural)	Acetalization 70 %—alcohols, cyclohexanone, ethyl acetate, ethyl glycol acetate Acetalization 77 %—methylene chloride, alcohols, acetone, methyl ethyl ketone cyclohexanone, lower esters Acetalization 83 %—methylene chloride, alcohols, ketones, lower esters
PVC	Poly(vinyl chloride)	High molecular weight—tetrahydrofuran, acetone/carbon disulfide, methyl ethyl ketone, cyclopentanone, cyclohexanone, <i>N,N</i> -dimethylformamide, nitrobenzene, dimethyl sulfoxide Low molecular weight—toluene, xylene, methylene chloride, ethylene chloride, perchloroethylene/acetone, 1,2-dichlorobenzene, dioxane, acetone/carbon disulfide, cyclopentanone, cyclohexanone, diisopropyl ketone, mesityl oxide, isophorone, <i>N,N</i> -dimethylformamide, nitrobenzene, hexamethyltrisphosphoramide, tricresyl phosphate Chlorinated, 63 %—aromatic hydrocarbons, chloroform, chlorobenzene, tetrahydrofuran, dioxane, acetone, cyclohexanone, butyl acetate, nitrobenzene, <i>N,N</i> -dimethylformamide, dimethyl sulfoxide
PVCA	Poly(vinyl chloride-acetate)	see Poly(vinyl chloride)
PVF	Poly(vinyl fluoride)	cyclohexanone (hot), <i>N,N</i> -dimethylformamide, dinitrile, <i>N,N</i> -dimethylacetamide (hot), dimethyl sulfoxide (hot) Chlorinated, 30 %— <i>N,N</i> -dimethylformamide Chlorinated, 60 %—carbon tetrachloride
PVFM	Poly(vinyl formed)	benzene/alcohol at 70:30, toluene, methylene chloride, chloroform, carbon tetrachloride/alcohol at 70:30, dichloroethylene, dichloroethylene/diacetone alcohol at 50:50, 2-chloroethanol, benzyl alcohol, furfural, tetrahydrofuran, dioxane, cyclohexanone, formic acid, acetic acid, <i>N,N</i> -dimethylformamide
PVDC	Poly(vinylidene chloride)	tetrahydrofuran (hot), tetrahydronaphthalene (hot), trichloroethane, pentachloroethane, 1,2-dichlorobenzene, trichlorobenzene, tetrahydrofurfuryl alcohol, dioxane, cyclohexane, <i>N,N</i> -dimethylamide, butyl acetate, <i>N,N</i> -dimethylformamide, <i>N</i> -methylpyrrolidone, benzonitrile, tetrahydrofuran, cyclohexanone
PVDF	Poly(vinylidene fluoride)	cyclohexanone, <i>g</i> -butyrolactone, ethylene carbonate, propylene carbonate, <i>N,N</i> -dimethylacetamide, <i>N</i> -methylpyrrolidone, dimethyl sulfoxide
SI	Silicone plastics	tetrahydrofuran, chlorinated hydrocarbons, toluene
SAN	Styrene-acrylonitrile	<i>N,N</i> -dimethylformamide (if high acrylonitrile), also see Polystyrene
SB	Styrene-butadiene	chloroform, toluene
SMS	Styrene/ <i>a</i> -methylstyrene	see Polystyrene
SRP	Styrene-rubber plastics	toluene
UP	Unsaturated polyester	tetrahydrofuran
UF	Urea-formaldehyde	hexafluoro-2-propanol, <i>N,N</i> -dimethylformamide, <i>N,N</i> -dimethylacetamide at 85°C

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