Polymers Product Guide

Polymers

Polysciences stocks a wide portfolio of polymers. This variety provides the formulation scientist a useful set of tools to design compositions with markedly different performance. These polymers can also be used by the synthetic scientist as platforms on which to build yet more complex polymer systems.

Polymer Selection Guide

Acid Functional Polymers & Salts

Acidic groups are often used to convey solubility to polymers in aqueous media. These versatile moieties can be converted to a wide range of alternative functional groups. Acid groups can be utilized as catalysts for chemical reactions. Additionally they are employed in polymers as the functional group which enables improved adhesion to a variety of substrates through hydrogen bonding or metal chelation.

Carboxylic Acids

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(acrylic acid)	~2,000	63% AQ		06513-250	250 g
	~5,000	50% AQ		06519-250	250 g
	~50,000	25% AQ		00627-250	250 g
	~345,000	25% AQ		03326-250	250 g
	~450,000	powder		03312-100	100 g
	~1,000,000	powder		06500-100	100 g
	~4,000,000	powder		06501-100	100 g
Poly(acrylic acid) ammonium salt	250,000	powder		03311-25	25 g
Poly(acrylic acid) sodium salt	~2,000	powder	water-soluble anionic polymer, low molecular weights used as pigment dispersants, high MW's used as flocculants	06568-250	250 g
	~3,000	40% AQ		18608-250	250 g
	~5,000	40% AQ		18609-250	250 g
	~6,000	powder		06567-250	250 g
	~60,000	35% AQ		18611-250	250 g
	~225,000	20% AQ		18613-250	250 g
Poly(butadiene/maleic acid) 1:1 (molar)	10K–15K	42% AQ	anionic polymer capable of anhydride or backbone unsaturation reaction	07787-500	500 g
Poly(n-butyl acrylate/acrylic acid) [50:50]		20% latex / alcohol		19911-10	10 g
Poly(ethyl acrylate/acrylic acid), [50:50]		20% in EtOH		19914-10	10 g
		powder		21056-5	5 g
Poly(ethylene/acrylic acid) [92:8]				06517-100	100 g
Poly(ethylene/maleic anhydride) 1:1 (molar)	400,000	powder	reacts with alcohols or amines	02308-50	50 g
Poly(maleic acid), 50% soln. in water	800–1,200	50% AQ		09732-10	10 g
Poly(methacrylic acid)	100,000	powder	water soluble polymer	00578-10	10 g
Poly(methacrylic acid) ammonium salt, 30% soln. in water	15,000	30% AQ	forms insoluble salts with polyamines	21169-25	25 g
Poly(methacrylic acid) sodium salt, 30 % soln. in water	15,000	30% AQ	forms insoluble salts with polyamines	21170-25	25 g
Poly(methyl methacrylate/ methacrylic acid)	100,000	powder		08207-50	50 g
	500,000	powder		19629-100	100 g
	1,200,000	powder		08208-100	100 g
		powder		08221-100	100 g
Poly(styrenesulfonic acid/ maleic acid), sodium salt	15,000	25% AQ	can be used as a pigment dispersant	11795-25	25 g
	20,000	powder	can be used as a pigment dispersant	18407-25	25 g
Poly(vinyl chloride/vinyl acetate/ maleic acid) [86:13:1]				18356-500	500 g

Phosphoric Acids

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(vinyl phosphoric acid), sodium salt	>200,000	powder	straight chain; 5% phosphorus	04391-5	5 g

Sulfonic Acids

	Mol. Weight	Form	Comments		
Poly(styrenesulfonic acid)	70,000	30% AQ	ionic polymer in acid form	08770-250	250 g
Poly(styrenesulfonic acid), sodium salt	75,000	powder	ionic polymer in salt form	08772-25	25 g
	1,000,000	powder		08773-25	25 g

Acrylate & Methacrylate Polymers

	Mol. Weight	Form	Comments		
Poly(benzyl methacrylate)				06562-10	10 g
Poly(iso-butyl acrylate)		20% soln. in toluene		07034-250	250 g
Poly(n-butyl acrylate)	10,000	20% soln. in toluene		03561-250	250 g
Poly(tert-butyl acrylate)		35% soln. in toluene		18240-25	25 g
Poly(iso-butyl methacrylate) fine powder, [η] = 0.60	200,000			02452-500	500 g
Poly(n-decyl acrylate)	130,000	20% soln. in toluene		07042-50	50 g
Poly(ethyl acrylate)	70,000			17342-2	2 g
Poly(glycidyl methacrylate), 10% soln. in MEK	25,000	10% soln. in MEK	reacts with carboxyls, hydroxyls or amines	06524-5	5 g
Poly(2-hydroxyethyl methacrylate/ methacrylic acid) [90:10]			water soluble in presence of alkali	08725-10	10 g
Poly(2-hydroxypropyl methacrylate)				09690-10	10 g
Poly(lauryl acrylate), 20% soln. in toluene		20% soln. in toluene		09697-25	25 g
Poly(lead methacrylate 2-ethylhexanoate/ methyl methacrylate) [83:17] (by wt.)				16399-25	25 g
Poly(methyl methacrylate)	25,000			04554-500	500 g
	75,000			04553-500	500 g
	100,000			17913-500	500 g
	500,000			04552-500	500 g
Poly(methyl methacrylate/ n-butyl methacrylate)				01922-500	500 g
Poly(octadecyl methacrylate)	170,000	~40% soln. in toluene		04321-100	100 g
Poly(iso-propyl methacrylate)				07052-10	10 g
Poly(tert-butyl methacrylate)				07037-25	25 g

Amides

	Mol. Weight	Form	Comments	Catalog #	Size
Polyacrylamide	10,000	50% AQ	nonionic water soluble polymer; high molecular weight polymers find application as flocculants	22581-250	250 g
	600K–1M	10% AQ		19901-250	250 g
Polyacrylamide	5,000,000	1% AQ		21485-250	250 g
	5M- 6M	powder		02806-250	250 g
	18,000,000	powder		18522-100	100 g
Poly(acrylamide/acrylic acid), Na Salt	200,000	powder		04652-250	250 g
	>10,000,000	powder		18545-250	250 g
	200,000	powder	anionic acrylamide polymer	02220-250	250 g
Polycaprolactam	18,000	powder	widely used in fibers	18180-250	250 g
	35,000	pellets		18179-250	250 g
Polyetherimide	30,000	powder	high softening point resin	16845-100	100 g
Poly(2-ethyl-2-oxazoline)	5,000	powder	neutral water soluble polymer, can be hydrolyzed to linear polyethylenimine	24066-50	50 g
	50,000	powder		17808-100	100 g
	200,000	powder		24882-100	100 g
	500,000	powder		17810-100	100 g
Poly(hexamethyleneadipamide)		powder	used in fibers. mp 265–270° C	06557-500	500 g
Poly(hexamethylenesebacamide)				06558-500	500 g
Polymethacrylamide		powder	water soluble polyamide	16144-10	10 g
Poly(N-iso-propylacrylamide)	40,000	powder	soluble at RT, insoluble above 40° C	21458-10	10 g
Starch, poly(acrylamide/acrylic acid) graft, acid sodium salt			water abosrbing, water holding resin	08215-100	100 g

Amine Functional Polymers

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(4-vinylpyridine / divinylbenzene)		beads	can be used as adsorbant or ion exchange resin	06579-10	10 g
Chitin, practical		powder	acetylated amino glucose	00210-50	50 g
Chitosan	15,000		degree of deacetylation 84%	21161-50	50 g
	100K–300K	powder	amine 7–12%	00281-100	100 g
Poly(acrylamide/2-methacryloxyethyltri-methylammonium bromide) [80:20]	50,000		cationic polymer	21743-10	10 g
Poly(diallyldimethylammonium chloride)		28% AQ		19898-250	250 g
	240,000	powder	linear cationic cyclic polymer	17338-10	10 g
Poly(Allyl Amine)	15,000		water soluble cationic polymer	24826-100	100 g
New! Poly(allylamine hydrochloride)	120K - 200K	40% AQ	polymeric primary amine	25673-100	100 g
Poly(4-aminostyrene)	>150,000	powder	insol in org solvents and mineral acids	02823-1	1 g
Polyaniline, Emeraldine form	15,000	powder	acid doped, conductivity 2^{-4} S/cm	21288-5	5 g
	15,000	powder	undoped, conductivity 10^{-10} S/cm	24043-5	5 g
Polyaniline, water-soluble		powder	product of polyaniline with propanesultone	23614-1	1 g
Poly(butadiene/acrylonitrile), amine terminated				09753-100	100 g
Poly(3-chloro-2-hydroxypropyl-2-methac-ryloxyethyldimethylammonium chloride), 20% soln. in water		20% AQ	chlorohydroxypropyl group, can be cyclized to oxirane by mild alkali	21480-10	10 g
New! Poly(2-dimethylaminoethyl methacrylate), 28% soln. in toluene	200,000	liquid	water soluble cationic polymer	25996-10	10 g

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(ethylene glycol) bis (2-aminoethyl)	1,000	powder	can be used to conjugate proteins and drug substances for drug delivery	24285-1	1 g
	10,000	powder		24303-1	1 g
Poly(ethylene glycol) α-2-aminoethyl, μ-methoxy	2,000	solid	used for protein conjugation	24304-1	1 g
Polyethylenimine, branched	600	liquid	highly branched polyamine containing primary, secondary and tertiary amine groups	02371-500	500 g
	1,200	liquid		06088-100	100 g
	1,800	liquid		06089-100	100 g
	10,000	liquid		19850-100	100 g
	10,000	30% AQ		17938-100	100 g
	70,000	30% AQ		00618-100	100 g
	50K-100K	30% AQ		06090-100	100 g
Polyethylenimine, branched	750,000			25448-100	100 g
	750,000			25449-100	100 g
	750,000			25449-500	500 g
	2,000,000			25450-100	100 g
	2,000,000			25450-500	500 g
Polyethylenimine, Linear	25,000	powder		23966-2	2 g
Polyethyleneimine, Linear	~100,000			25414-2	2 g
Polyethylenimine, Linear	2,500	powder	polymer with all secondary amines	24313-2	2 g
	250,000	powder		24314-2	2 g
Polyethylenimine "Max", (MW 4,000*) High Potency Linear PEI	Nom. 4,000	solid	easy to handle, hydrochloride salt form	24885-2	2 g
Polyethylenimine "Max", (MW 40,000*) High Potency Linear PEI	Nom. 40,000	solid	easy to handle, hydrochloride salt form	24765-2	2 g
Polyethylenimine "Max", (MW 160,000*) High Potency Linear PEI	160,000	solid		25439-2	2 g
Polyethylenimine, branched, permethylated, permethobromide	6,300	10% AQ	high charge density, quaternary salt	21903-10	10 g
Poly(l-lysine hydrobromide)	40K–60K	powder		18619-50	50 mg
	80K–120K	0.1% AQ	cationic polymer, used for promotion of cell adhesion to surfaces	09730-25	25 ml
	100K–140K	powder		21430-100	100 mg
Poly(2-methacryloxyethyltrimethylammonium bromide),	200,000	20% AQ		21746-10	10 g
Poly(N-methylvinylamine)	500,000	powder	water soluble, all secondary polyamine	24038-5	5 g
Poly(vinylamine) hydrochloride	25,000	powder	water soluble, all primary polyamine salt	23965-1	1 g
Poly(2-vinyl-1-methylpyridinium bromide, 20% soln. in water	50,000	20% AQ	degree of quaternization ~50%	21477-10	10 g
Poly(2-vinylpyridine)	200K–400K	powder	adhesive-promoting properties	19238-10	10 g
	40,000	powder	water soluble at low pH	21382-10	10 g
	300K–400K	powder		17770-10	10 g
Poly(4-vinylpyridine)	50,000	powder	water soluble at low pH	00112-50	50 g
	150K–200K	powder		22176-50	50 g
Poly(2-vinylpyridine N-oxide)	300K–400K	powder	water soluble, cationic resin	01564-10	10 g
Poly(4-vinylpyridine N-oxide)	200,000	powder	water soluble, cationic resin	23684-10	10 g

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(N-vinylpyrrolidone)	2,500	powder	water-soluble polymer used as a thickener, protective colloid	16693-250	250 g
	4K–6K	powder		24737-250	250 g
	10,000	powder		03315-250	250 g
	40,000	powder		01051-250	250 g
	40,000	powder	pharmaceutical grade	01052-250	250 g
	1,000,000	powder		06067-250	250 g
Poly(N-vinylpyrrolidone/2-dimethylaminoethyl methacrylate), dimethyl sulfatequaternary	100,000	20% AQ	cationic quaternary salt	16294-100	100 g

Biodegradable Polymers

	Mol. Weight	Form	Comments		
Glycolide, 99.9%	116.1			17085-10	10 g
Guar Gum	1,200,000		natural water soluble polysaccharide	21255-100	100 g
New! Hydroxypropyl Cellulose		powder	[3–6 cP]	25727-100	100 g
		powder	[6–10 cP]	25728-100	100 g
		powder	[150–400 cP]	25729-100	100 g
		powder	[1,000–4,000 cP]	25730-100	100 g
New! Hypromellose		powder	Type 2208 [100 cP]	25731-100	100 g
		powder	Type 2208 [3,550 cP]	25732-100	100 g
		powder	Type 2208 [100,000 cP]	25733-100	100 g
		powder	Type 2910 [4,000 cP]	25735-100	100 g
		powder	Type 2910 [50 cP]	25734-100	100 g
Polycaprolactam	18,000		widely used in fibers	18180-250	250 g
	35,000	pellets		18179-250	250 g
Polycaprolactone	43K–50K	flakes	hydroxyl end group. mp 55–65° C	19561-500	500 g
Polycaprolactone diol	1,250	liquid	hydroxyl # 90mg /g of polymer	09706-500	500 g
	2,000	liquid	hydroxyl # 56mg /g of polymer	09694-500	500 g
Polycaprolactone, powdered	50,000	powder	hydroxyl end group. mp 58–60° C	25090-500	500 g
Poly(glycolic acid) [i.v. 1.0-2.0]	>100,000	powder	i.v. 1.0–2.00. decomposes in 6 months at 37° C at pH 9.0	06525-25	25 g
Poly[(R)-3-hydroxybutyrate]	~500			16930-1	1 g
	~1,000			16932-1	1 g
	~2,000			16934-1	1 g
	~3,000			16936-1	1 g
	~5,000			16938-1	1 g
	~10,000			16940-1	1 g
Poly[(-)3-hydroxybutyric acid]	500,000	powder	mp 168–176° C	16916-10	10 g

Poly(dl-lactide/glycolide) Polymers

	Mol. Weight	Form	Comments		
Poly(dl-lactide/glycolide)	<10,000	powder	i.v. 0.15–0.30	19076-5	5 g
	<10,000		i.v. 0.15–0.30	19077-5	5 g
	10,000	powder	i.v. 0.12–0.30	19247-5	5 g
	150,000	powder	i.v. 0.80–1.2	23987-5	5 g
	12K–16K	powder	i.v. 0.50–0.65	23986-5	5 g
	20,000	powder	i.v. 0.55–0.75	23989-5	5 g
	97,000		i.v. 0.55–0.75	25107-5	5 g
Poly(l-lactide/glycolide) [70:30]	<10,000	powder		16587-5	5 g
	10K–20K	powder		21864-5	5 g

Poly(dl-lactic acid) & Poly(l-lactic acid) Polymers

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(dl-lactic acid)	15,000	powder	i.v. 0.15–0.30	22505-10	10 g
	20K–30K	powder	i.v. 0.35–0.45	16585-10	10 g
	300K–600K	powder	i.v. 2.0–2.8dl/g	23976-10	10 g
Poly(l-lactic acid)	1,600–2,400	powder	i.v. 0.10–0.20	18580-10	10 g
	140K–160K	powder	i.v. 0.80–1.20	06529-1	1 g
	80K–100K	powder	i.v. 1.30–1.60	18402-10	10 g
	325K–460K	powder	i.v. 4.00–5.00	18582-10	10 g
	700,000	powder	i.v. >7.00	21512-10	10 g

Polycaprolactone & Polyethylene Glycol Diblock Polymers

	Form	Comments	Catalog #	Size
PCL(1,000)-b-PEG(1,000)	solid	biodegradable, diblock copolymers	25010-1	1 g
PCL(1,000)-b-PEG(2,000)	solid		25011-1	1 g
PCL(1,000)-b-PEG(5,000)	solid		25012-1	1 g
PCL(5,000)-b-PEG(1,000)	solid		25022-1	1 g
PCL(5,000)-b-PEG(2,000)	solid		25023-1	1 g
PCL(5,000)-b-PEG(5,000)	solid		25024-1	1 g

Polycaprolactone & Polyethylene Glycol Triblock Polymers

	Form	Comments	Catalog #	Size
PCL(1,000)-b-PEG(1,000)-b-PCL(1,000)	solid	biodegradable, triblock copolymers	25019-1	1 g
PCL(1,000)-b-PEG(2,000)-b-PCL(1,000)	solid		25020-1	1 g
PCL(1,000)-b-PEG(6,000)-b-PCL(1,000)	solid		25021-1	1 g
PCL(1,000)-b-PEG(10,000)-b-PCL(1,000)	solid		25013-1	1 g
PCL(5,000)-b-PEG(1,000)-b-PCL(5,000)	solid		25014-1	1 g
PCL(5,000)-b-PEG(2,000)-b-PCL(5,000)	solid		25015-1	1 g
PCL(5,000)-b-PEG(5,000)-b-PCL(5,000)	solid		25016-1	1 g
PCL(5,000)-b-PEG(10,000)-b-PCL(5,000)	solid		25025-1	1 g

Polylactic Acid & Polyethylene Glycol Diblock Polymers

	Form	Comments	Catalog #	Size
PEG(350)-b-PLA(300)	liquid	biodegradable, diblock copolymers	24375-1	1 g
PEG(1000)-b-PLA(750)	visc. liquid		24378-1	1 g
PEG(1000)-b-PLA(5000)	solid		24381-1	1 g
PEG(5000)-b-PLA(1000)	solid		24386-1	1 g
PEG(5000)-b-PLA(5000)	solid		24389-1	1 g
PEG(5000)-b-PLA(10,000)	solid		25018-1	1 g
PEG(10,000)-b-PLA(5,000)	solid		25017-1	1 g

Polylactic Acid & Polyethylene Glycol Triblock Polymers

	Form	Comments	Catalog #	Size
PLA(1000)-b-PEG(1000)-b-PLA(1000)	visc. liquid	biodegradable, triblock copolomers	24500-1	1 g
PLA(2000)-b-PEG(1000)-b-PLA(2000)	solid		24501-1	1 g
PLA(5000)-b-PEG(1000)-b-PLA(5000)	solid		24502-1	1 g
PLA(1000)-b-PEG(4000)-b-PLA(1000)	solid		24503-1	1 g
PLA(1000)-b-PEG(10,000)-b-PLA(1000)	solid		24509-1	1 g
PLA(5,000)-b-PEG(10,000)-b-PLA(5,000)	solid		25026-1	1 g
PLA(10,000)-b-PEG(10,000)-b-PLA(10,000)	solid		25027-1	1 g

Block Copolymers

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(dimethylsiloxane-b-ethylene oxide), methyl terminated	600	liquid	surfactant-like diblock copolymer	09780-100	100 g
	3,000			21870-100	100 g
Poly(ethylene oxide-b-propylene oxide)	1,100	liquid	water-soluble or water-dispersible polymers with surfactant properties, chains are hydroxyl terminated	16273-100	100 g
	2,900	liquid		16275-100	100 g
	3,400	liquid		16274-100	100 g
	8,750	waxy solid		16277-100	100 g
	13,300	waxy solid		16276-100	100 g
Polyethylene-co-vinyl acetate 70:30 (wt)	55,000			25356-25	25 g
	60,000			25357-25	25 g
	65,000			25358-25	25 g
	75,000			25359-25	25 g
Poly(styrene-b-isoprene-b-styrene)	19,000			18347-250	250 mg

Conductive Polymers

	Mol. Weight	Form	Comments		
Polyaniline, Emeraldine form	15,000	powder	acid doped, conductivity 2^{-4} S/cm	21288-5	5 g
	15,000	powder	undoped, conductivity 10^{-10} S/cm	24043-5	5 g
Polyaniline, water-soluble		powder	product of polyaniline with propanesultone	23614-1	1 g
Poly(3,4-ethylenedioxythiophene) / poly(styrenesulfonate), aqueous dispersion (PEDT/PSS)		liquid	conductive polymer	24215-100	
Polypyrrole		powder	conductive polymer	21304-5	5 g
Poly(N-vinylcarbazole)	40,000	powder	photoconductive polymer	02428-50	50 g

Halogen-containing Polymers

	Mol. Weight	Form	Comments		
Dextran, hydrogenated	4K–6K		i.v. 0.055 terminal alcohol	16653-100	100 g
Fluorinated Ethylene Propylene Copolymer		fine powder	high release characteristics, 10–35 MFI	24778-100	100 g
		fine powder	high release characteristics, 35–70 MFI	24779-100	100 g
Halocarbon 200 Oil [Poly(chlorotrifluoroethylene)		liquid	200 centistokes	25073-100	100 ml
Halocarbon 400 Oil [Poly(chlorotrifluoroethylene)		liquid	400 centistokes	25074-100	100 ml
Halocarbon 700 Oil [Poly(chlorotrifluoroethylene)		liquid	700 centistokes	25075-100	100 ml
Halocarbon 1000N Oil [Poly(chlorotrifluoroethylene)		liquid	1,000 centistokes	25076-100	100 ml
Poly(4-bromostyrene)		powder	reactive bromine. ~43%	07030-1	1 g
Poly(2-chloro-1,3-butadiene)				21289-100	100 g
Poly(3-chloro-2-hydroxypropyl-2-methacryloxyethyldimethylammonium chloride), 20% soln. in water			chlorohydroxypropyl group can be cyclized to oxirane by mild alkali	21480-10	10 g
Poly(4-chlorostyrene)	250,000	powder		07041-5	5 g
Poly(chlorotrifluoroethylene)	500–600	oil	inert liquid of high temp baths	15176-100	100 g
Polyethylene, chlorinated, 25% Cl				01814-100	100 g

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(4-iodostyrene/styrene/ divinylbenzene) ~58:40:2		powder	crosslinked styrene polymer with reactive iodine group	18148-5	5 g
Polystyrene, brominated		powder	66% brominated	21305-100	100 g
Poly(styrenesulfonyl fluoride)				16146-5	5 g
Poly(tetrafluoroethylene)		60% in H_2O	dispersion; 0.05–0.5 microns	21539-100	100 g
		powder	35 microns	08816-100	100 g
		powder	500 microns	01344-100	100 g
Poly(tetrafluoroethylene propylene) (PTFE)				04615-50	50 g
Poly(vinyl chloride)				09708-250	250 g
Poly(vinylidene chloride/acrylonitrile) [80:20]	150,000	powder	polymer with barrier properties	09747-100	100 g
Poly(vinylidene fluoride)		powder	inert polymer, often used as a coating	15190-100	100 g
		powder		15191-100	100 g
		powder		06094-100	100 g
		powder		18734-100	100 g
Poly(4-vinylphenol) brominated, 50% Br			softens at 210° C. flame retardant	09762-50	50 g

Liquid Crystal Polymers

Organic compounds capable of responding to small amounts of radiant energy and undergo a phase transition with selective reflection of light. Specific colors are obtained depending on the wavelength of light which is determined by the organic crystal array "pitch length." Application areas range from thermally activated displays to sensors, and detection devices to cosmetics.

	Form	Comments		
Cholesteryl Chloride	powder	cholesteric derivaties, liquid crystal polymers	24814-50	50 g
Cholesteryl Nonanoate	powder		24817-50	50 g
Cholesteryl Oleyl Carbonate	powder		24815-50	50 g
Cholesteryl Propionate	powder		24816-50	50 g
Poly(λ-benzyl l-glutamate)	powder		21444-1	1 g

Miscellaneous Polymers

Poly(vinyl methyl ether), 50% methanol solution			25505-100	100 g

Phenol-functional Polymers

	Mol. Weight	Form	Comments		
Poly(4-vinylphenol)	1,500–7,000	powder	reactive polyphenol	06527-10	10 g
	9,000–11,000	powder		18979-10	10 g
	22,000	powder		18980-10	10 g
Poly(4-vinylphenol)	9,000–11,000			25447-10	10 g

Photoactive Polymers

	Mol. Weight	Form	Comments		
Poly(vinyl alcohol), N-methyl-4(4'-formyl-styryl)pyridinium methosulfate acetal	~45,000	13.3% AQ	photocrosslinkable polymer, high dielectric constant, used in making silkscreen printing screens	22570-75	75 g
Poly(N-vinylcarbazole)	40,000	powder	photoconductive polymer	02428-50	50 g
Poly(vinyl cinnamate)		powder	photocrosslinkable polymer	02648-10	10 g

Poly(ethylene glycol) Polymers

	Mol. Weight	Comments	Catalog #	Size
Poly(ethylene glycol)	200		01112-250	250 g
	300		01110-250	250 g
	400		01109-250	250 g
	600		00684-250	250 g
	1,000		00682-250	250 g
Poly(ethylene glycol)	1,450		00679-250	250 g
	3,400		06102-250	250 g
	7,500		06103-250	250 g
	10K-16K		22567-250	250 g
	2,000		25360-250	250 g
	20,000		22568-250	250 g
	1,450	pharmaceutical grade	01102-100	100 g
	8,000	pharmaceutical grade	17243-100	100 g
Poly(ethylene glycol) (200) adipate	530	reaction product for one mole (adipic acid) and two moles (PEG 200)	21509-100	100 g
Poly(ethylene glycol) bis (2-aminoethyl)	~1,000	can be used to conjugate proteins and drug substances for drug delivery	24285-1	1 g
	~10,000		24303-1	1 g
Poly(ethylene glycol) α-2-aminoethyl, ω-methoxy	2,000	used for protein conjugation	24304-1	1 g
Poly(ethylene glycol)-bisphenol A diglycidyl ether adduct	18,500		04686-250	250 g
Poly(ethylene glycol) (n) diacrylate	200		00669-250	250 g
	400		01871-250	250 g
	4,000		15246-1	1 g
Poly(ethylene glycol) (n) diglycidyl ether	200	crosslinker for amine-, hydroxyl- and carboxyl- functional polymers	08209-100	100 g
	400		08210-100	100 g
	600		08211-100	100 g
	1,000		24047-100	100 g
Poly(ethylene glycol) (n) dimethacrylate	200		00096-100	100 g
	400		15179-100	100 g
	1,000		15178-100	100 g
Poly(ethylene glycol) (n) dimethyl ether	~500		25405-25	25 g
	1,000		17032-25	25 g
	2,000		17033-25	25 g
Poly(ethylene glycol) (n) distearate	200		02298-100	100 g
	400		01048-100	100 g
	6,000		19234-100	100 g
Poly(ethylene glycol) (750) monocarboxymethyl ether monomethyl ether	750	carboxylic acid-terminated, can be coupled to molecules with carbodiimides	21483-500	500 mg
Poly(ethylene glycol) (n) monomethacrylate	200		16712-100	100 g
	400		16713-100	100 g
Poly(ethylene glycol) monomethyl ether	350	hydroxyl group at one end	04200-500	500 g
	550		04457-500	500 g
	750		00626-500	500 g
	1,900		04242-500	500 g
	5,000		05986-500	500 g
Poly(ethylene glycol) (n) monomethyl ether monomethacrylate	200		16664-100	100 g
	400		16665-100	100 g
	1000		16666-100	100 g

	Mol. Weight	Comments	Catalog #	Size
Poly(ethylene glycol) (n) monomethyl ether, mono(succinimidyl succinate) ester	1,900		21482-500	500 mg
	5,000		18000-500	500 mg
Poly(ethylene glycol) (200) mono-stearate	200		03142-100	100 g
Poly(ethylene glycol terephthalate)	20K – 30K	used in films, fibers and drink bottles	04301-250	500 g

Reactive Polymers

Aldehyde and Ketone Functional Polymers

	Mol. Weight	Form	Comments		
Polyacrolein	200K–2M	powder	due to intermolecular acetals, acts as if heavily crosslinked	04287-10	10 g
Poly(vinyl methyl ketone)		powder	reactive carbonyl	04320-10	10 g

Carboxylic Acid Anhydride Functional Polymers

	Mol. Weight	Form	Comments		
Poly(butadiene/maleic anhydride) 1:1 (molar)	10K–15K	25% in acetone	can be reacted at anhydride or backbone olefin	07788-500	500 g
Poly(ethylene/maleic anhydride) 1:1 (molar)	400,000	powder	reacts with alcohols or amines	02308-50	50 g
Poly(maleic anhydride)	~10,000	powder	reacts with alcohols or amines	02348-5	5 g
Poly(maleic anhydride 1-octadecene) 1:1 (molar)	30K–50K	powder	reacts with alcohols or amines, hydrophobic	05152-100	100 g
Poly(styrene/maleic anhydride)	7,500		i.v. ~0.80	03497-500	500 g
	9,500		i.v. ~0.80	03498-500	500 g

Carboxylic Acid Chloride Functional Polymers

	Mol. Weight	Form	Comments		
Poly(acryloyl chloride), 25% soln. in dioxane	10,000	25% in dioxane	reacts with alcohols or amines	04293-10	10 g
Poly(methacryloyl chloride), 25% soln. in dioxane	~155K	25% in dioxane	reacts with alcohols or amines	04315-10	10 g

Hydroxyl-Functional Polymers

	Mol. Weight	Form	Comments		
Poly(1-glycerol methacrylate)		waxy solid	hydrophilic, water swellable polymer, probably crosslinked	16855-10	10 g
Poly(2-hydroxyethyl methacrylate)	200,000	powder		09689-25	25 g
	200,000	12% in Ethanol	water swellable	18894-100	100 ml

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(vinyl alcohol)	6,000	powder	80% hydrolyzed	22225-500	500 g
	25,000	powder	88% hydrolyzed	02975-500	500 g
	25,000	powder	98% hydrolyzed	04397-500	500 g
	78,000	powder	88% hydrolyzed	15132-500	500 g
	78,000	powder	98% hydrolyzed	15130-500	500 g
	78,000	powder	99.7% hydrolyzed	15129-500	500 g
	108,000	powder	99.7% hydrolyzed	04324-500	500 g
	125,000	powder	88% hydrolyzed	04398-500	500 g
	133,000	powder	99% hydrolyzed	02815-500	500 g

Nitrile Functional Polymers

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(butadiene/acrylonitrile) 67:33	63K	solid	widely used nitrile rubber	06561-500	500 g

Oxirane Functional Polymers

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(glycidyl methacrylate), 10% soln. in MEK	25,000	10% in MEK	reacts with carboxyls, hydroxyls or amines	06524-5	5 g

Styrenic Polymers

	Mol. Weight		Comments	Catalog #	Size
Poly(4-iodostyrene/styrene/ divinylbenzene) ~58:40:2			crosslinked styrene polymer with reactive iodine group	18148-5	5 g
Poly(α-methylstyrene)	5,000			07630-500	500 g
Poly(4-methylstyrene/styrene) [90:10]	50K			19831-10	10 g
Polystyrene	300K	atactic pellets		00574-100	100 g
	800–5,000	atactic flakes	softening point 125°	23637-100	100 g
	50,000	atactic flakes	biomodal with MW ~50,000 & 1500 (50:50)	18544-100	100 g
Polystyrene, brominated			66% brominated	21305-100	100 g

Water Soluble Polymers

	Mol. Weight	Form	Comments	Catalog #	Size
Cellulose, ethyl ether	160K			02354-500	500 g
	160K			05429-500	500 g
Cellulose, ethyl hydroxyethyl ether				05431-100	100 g
Cellulose, hydroxyethyl ether	~90,000	powder	water-soluble cellulose ether, used as a binder and thickening agent	05570-500	500 g
	720,000	powder		05569-500	500 g
	1,000,000	powder		05568-500	500 g
Cellulose, methyl hydroxyethyl ether	110K	2% soln. in H_2O	cellulose derivative	21275-500	500 g
Chitosan	~15,000	powder	degree of deacetylation 84%	21161-50	50 g
	100K–300K	powder	amine 7-12%	00281-100	100 g
Dextran	15K–20K	powder	i.v. 0.10–0.14	01341-100	100 g
	100K–200K	powder	i.v. 0.343	05056-100	100 g
	200K–300K	powder	i.v. 0.4–0.5/37° C	22500-100	100 g
	3M–7M	powder		05059-100	100 g
Dextran, DEAE ether	500,000			15757-50	50 g
Dextran, hydrogenated	4K–6K	powder	i.v. 0.055 terminal alcohol	16653-100	100 g
Dextran sulfate, sodium salt	500,000	powder	sulfur 19%, anionic dextran derivative	00407-100	100 g

	Mol. Weight	Form	Comments	Catalog #	Size
Guar Gum	1,200,000	powder	natural water soluble polysaccharide	21255-100	100 g
Polyacrylamide	10,000	50% AQ	nonionic water soluble polymer; high molecular weight polymers find application as flocculants	22581-250	250 g
	600K–1M	10% AQ		19901-250	250 g
	5,000,000	1% AQ		21485-250	250 g
	5M–6M	powder		02806-250	250 g
	18,000,000	powder		18522-100	100 g
Poly(acrylamide/acrylic acid), Na Salt	200,000	powder		04652-250	250 g
	>10,000,000			18545-250	250 g
	200,000	powder	anionic acrylamide polymer	02220-250	250 g
Poly(acrylamide/acrylic acid), potassium salt, crosslinked		powder	active ingredient of low-bulk diapers, potassium salt	24620-250	250 g
Poly(acrylamide/2-methacryloxyethyltri-methylammonium bromide) [80:20]	50,000	20% AQ	cationic polymer	21743-10	10 g
Poly(acrylic acid)	2,000	63% AQ		06513-250	250 g
	5,000	50%AQ		06519-250	250 g
Poly(acrylic acid)	50,000	25% AQ		00627-250	250 g
	345,000	25% AQ		03326-250	250 g
	450,000	powder		03312-100	100 g
	1,000,000	powder		06500-100	100 g
	4,000,000	powder		06501-100	100 g
Poly(acrylic acid) ammonium salt	250,000	powder		03311-25	25 g
Poly(acrylic acid) sodium salt	~2,000	powder	water-soluble anionic polymer, low molecular weights used as pigment dispersants, high MW's used as flocculants	06568-250	250 g
	~3,000	40% AQ powder		18608-250	250 g
	~5,000	40% AQ		18609-250	250 g
	~6,000	powder		06567-250	250 g
	~60,000	35% AQ		18611-250	250 g
	~225,000	20% AQ		18613-250	250 g
Poly(acrylic acid), sodium salt, crosslinked				24619-250	250 g
Poly(diallyldimethylammonium chloride)	240,000	powder	linear cationic cyclic polymer	17338-10	10 g
Poly(Diallyl Dimethyl Ammonium Chlo-ride)	8,500	28% solid in H2O	supplied as hydrochloride salts	24828-100	100 g
Poly(Allyl Amine)	15,000	15% solid in H2O	water soluble cationic polymer	24826-100	100 g
Poly(butadiene/maleic acid) 1:1 (molar)	10K–15K	42% AQ	anionic polymer capable of anhydride or backbone unsaturation reaction	07787-500	500 g
Poly(n-butyl acrylate/2-methacryloxyeth-yltrimethylammonium bromide) [80:20]		20% AQ	cationic polymer	21744-10	10 g
Poly(3-chloro-2-hydroxypropyl-2-methac-ryloxyethyldimethylammonium chloride), 20% soln. in water		20% AQ	chlorohydroxypropyl group can be cyclized to oxirane by mild alkali	21480-10	10 g
New! Poly(2-dimethylaminoethyl meth-acrylate), 28% soln. in toluene	200,000	liquid	water soluble cationic polymer	25996-10	10 g
Poly(ethyl acrylate/acrylic acid), [50:50]		20% in EtOH powder		19914-10	10 g
				21056-5	5 g
Poly(ethylene/acrylic acid) [92:8]	65K			06517-100	100 g
Poly(ethylene oxide)	5,000,000	waxy solid		04031-500	500 g

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(ethylene oxide)	100,000	waxy solid		06104-500	500 g
	200,000	waxy solid		17503-500	500 g
	300,000	waxy solid		06105-500	500 g
	600,000	waxy solid		06106-500	500 g
	1,000,000	waxy solid		21295-500	500 g
	4,000,000	waxy solid		04030-500	500 g
	8,000,000	waxy solid		21296-500	500 g
Poly(ethylene oxide-b-propylene oxide)	1,100	liquid	water-soluble or water-dispersible polymers with surfactant properties, chains are hydroxyl terminated	16273-100	100 g
	2,900	liquid		16275-100	100 g
Poly(ethylene oxide-b-propylene oxide)	3,400	liquid		16274-100	100 g
	8,750	waxy solid		16277-100	100 g
	13,300	waxy solid		16276-100	100 g
Poly(2-ethyl-2-oxazoline)	5,000	powder	neutral water soluble polymer, can be hydrolyzed to linear polyethylenimine	24066-50	50 g
	50,000	powder		17808-100	100 g
	200,000	powder		24882-100	100 g
	500,000	powder		17810-100	100 g
Poly(1-glycerol methacrylate)		waxy solid	hydrophilic, water swellable polymer, probably crosslinked	16855-10	10 g
Poly(2-hydroxyethyl methacrylate/ methacrylic acid) [90:10]		solid	water soluble in presence of alkali	08725-10	10 g
Poly(2-hydroxypropyl methacrylate)				09690-10	10 g
Poly(l-lysine hydrobromide)	40K–60K	powder		18619-50	50 mg
	80,000	0.1% AQ	cationic polymer, used for promotion of cell adhesion to surfaces	09730-25	25 ml
	120,000	powder		21430-100	100 mg
Poly(maleic acid), 50% soln. in water	800–1,200	50% AQ		09732-10	10 g
Polymethacrylamide	5,000	powder	water soluble polyamide	16144-10	10 g
Poly(methacrylic acid)	100,000	solid	water soluble polymer	00578-50	50 g
Poly(methacrylic acid) ammonium salt, 30% soln. in water	15,000	30% AQ	forms insoluble salts with polyamines	21169-25	25 g
Poly(methacrylic acid) sodium salt, 30 % soln. in water	15,000	30% AQ	forms insoluble salts with polyamines	21170-25	25 g
Poly(2-methacryloxyethyltrimethylammonium bromide)	200,000	20% AQ		21746-10	10 g
Poly(N-methyl N-vinyl acetamide) homopolymer		powder	may be converted to poly (N-methyl vinyl amine) by hydrolysis	24810-50	50 g
Poly(oxyethylene) sorbitan monolaurate (Tween 20®)	1,227.5	liquid	surfactant, Tween® 20	06110-100	100 g
Poly(N-iso-propylacrylamide)	40,000	solid	soluble at RT, insoluble above 40° C	21458-10	10 g
Polypropylene, Chromatographic Grade			chromatographic grade	04342-100	100 g
			atactic	23968-100	100 g
	220,000	flakes	isotactic	06536-100	100 g
Poly(styrenesulfonic acid)	70,000	30% AQ	ionic polymer in acid form	08770-250	250 g
Poly(styrenesulfonic acid), sodium salt	75,000	powder	ionic polymer in salt form	08772-25	25 g
	1,000,000	powder		08773-25	25 g
Poly(styrenesulfonic acid/maleic acid), sodium salt	15,000	25% AQ	can be used as a pigment dispersant	11795-25	25 g
	20,000	solid	can be used as a pigment dispersant	18407-25	25 g
Poly(N-vinyl acetamide) homopolymer), Crosslinked			moderately water soluble, stable	24807-50	50 g
Poly(N-vinyl acetamide)	~4,060,000	powder	moderately water soluble, stable	24808-50	50 g
Poly(vinyl acetate)	90,000			06069-500	500 g

	Mol. Weight	Form	Comments	Catalog #	Size
Poly(vinyl acetate), 40% hydrolyzed	72,000		40% hydrolyzed	17561-25	25 g
Poly(vinyl alcohol)	6,000	powder	80% hydrolyzed	22225-500	500 g
	25,000	powder	88% hydrolyzed	02975-500	500 g
	25,000	powder	98% hydrolyzed	04397-500	500 g
	78,000	powder	88% hydrolyzed	15132-500	500 g
Poly(vinyl alcohol)	78,000	powder	98% hydrolyzed	15130-500	500 g
	78,000	powder	99.7% hydrolyzed	15129-500	500 g
	108,000	powder	99.7% hydrolyzed	04324-500	500 g
	125,000	powder	88% hydrolyzed	04398-500	500 g
	133,000	powder	99% hydrolyzed	02815-500	500 g
Poly(vinyl alcohol), N-methyl-4(4'-formyl-styryl)pyridinium methosulfate acetal	45,000	13.3% AQ	photocrosslinkable polymer, high dielectric constant, used in making silkscreen printing screens	22570-75	75 g
Poly(vinylamine) hydrochloride	25,000	powder	all primary amine	23965-1	1 g
Poly(vinyl methyl ether), 50% aqueous solution	~30,000	50% AQ		03032-500	500 g
Poly(2-vinyl-1-methylpyridinium bromide, 20% soln. in water	50,000	20% AQ	degree of quaternization ~50%	21477-10	10 g
Poly(vinylphosphonic acid), 30% Soln.	24,000	30% AQ	polydispersity ~1.24	24297-10	10 g
Poly(2-vinylpyridine)	200K–400K	powder	adhesive-promoting properties	19238-10	10 g
Poly(vinyl phosphoric acid), sodium salt	200,000	solid	straight chain; 5% phosphorus	04391-5	5 g
Poly(2-vinylpyridine)	40,000	powder	water soluble at low pH	21382-10	10 g
	300K–400K	powder		17770-10	10 g
Poly(4-vinylpyridine)	50,000	solid	water soluble at low pH	00112-50	50 g
	150K–200K	solid		22176-50	50 g
Poly(N-vinyl acetamide-co-sodium acrylate)		powder	moderately water soluble, stable	24809-50	50 g
Poly(2-vinylpyridine N-oxide)	300K–400K	powder	water soluble cationic resin	01564-10	10 g
Poly(4-vinylpyridine N-oxide)	200,000	powder	water soluble cationic resin	23684-10	10 g
Poly(N-vinylpyrrolidone)	2,500	powder	water-soluble polymer used as a thickener, protective colloid	16693-250	250 g
	4,000–6,000			24737-250	250 g
	10,000	powder		03315-250	250 g
	40,000	powder		01051-250	250 g
	40,000		pharmaceutical grade	01052-250	250 g
	1,000,000	powder		06067-250	250 g
Poly(N-vinylpyrrolidone/2-dimethyl-aminoethyl methacrylate), dimethyl sulfatequaternary	100,000	20% AQ	cationic quaternary salt	16294-100	100 g
Poly(N-vinylpyrrolidone/vinyl acetate), 50% soln. in isopropanol	25,000		hydrophilic neutral polymer	09718-100	100 g
	45,000			09717-100	100 g
	66,000			09716-100	100 g
Poly(vinylsulfonic acid) sodium salt,	4K–6K	25% AQ	anionic polymer	04392-100	100 g

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