SPECIFIC ENTHALPIES OF SOLUTION OF POLYMERS AND COPOLYMERS

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Enthalpies of solution or mixing, expressed as the enthalpy change per unit mass of polymer, are given in the table at infinite dilution, i.e., a very small amount of polymer and a large excess of solvent were mixed isothermally to form a homogeneous solution. By thermodynamics, $\Delta_{sol}H_B^{\infty}$ or $\Delta_M H_B^{\infty}$ are obtained from the following derivatives:

$$\Delta_{sol}H_B^{\infty} = \lim_{m_B \to 0} \left(\partial \Delta_{sol} h / \partial m_B\right)_{P,T,m_{j\neq B}} \quad (1)$$

$$\Delta_M H_B^{\infty} = \lim_{m_B \to 0} \left(\partial \Delta_M h / \partial m_B\right)_{P,T,m_{j\neq B}} \quad (2)$$

with a unit of J/g. Thus, they are the partial specific enthalpies of solution or mixing of the polymer B at infinite dilution where $\Delta_{sol}h$ or $\Delta_M h$ is the extensive enthalpy of the solution or mixing process.

The state of the polymer before dissolution can significantly affect the enthalpy of solution. The dissolving of a semicrystalline polymer requires an additional amount of heat associated with the disordering of crystalline regions. Consequently, its enthalpy of solution is usually positive and depends on the degree of crystallinity of the given polymer sample. An amorphous polymer below its glass transition temperature, T_g (see the T_g-table of this Section), often dissolves with the release of heat. The enthalpy of solution of a glassy polymer is additionally dependent to some extent on the thermal history of the glass-forming process. An amorphous polymer above T_g can show endothermic or exothermic dissolution behavior depending on the nature of the solvent and the interaction energies involved as is the case for any enthalpy of mixing. This enthalpy of mixing is then independent of any crystalline or glassy aspects of the polymer. It can be obtained without difficulties for liquid/molten polymers mixed with a solvent. Therefore, the enthalpies given in the table are either enthalpies of solution or enthalpies of mixing, depending on the state of the polymer.

The enthalpies depend on temperature and molar mass. The necessary molar mass information for a system is provided in the table (if available) by the corresponding number average, M_n, mass average, M_w, or viscosity average, M_η, values of the polymer as given in the original sources. Outside the oligomer range, specific enthalpies of solution or mixing do not remarkably depend on molar mass, however. More enthalpy data of polymer-solvent systems can be found in Ref. 106.

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^{∞}/ J/g	Ref.
Acrylonitrile/butadiene copolymer							
(18 wt% Acrylonitrile)				Benzene	298.15	0.0	18
(26 wt% Acrylonitrile)				Benzene	298.15	–1.9	18
(40 wt% Acrylonitrile)				Benzene	298.15	–2.9	18
Acrylonitrile/isoprene copolymer							
(15 mol% Isoprene)				*N,N*-Dimethylformamide	323.15	–32	66
Acrylonitrile/vinyl chloride copolymer							
(13 wt% Acrylonitrile)				*N,N*-Dimethylformamide	293.15	–38	35
(13 wt% Acrylonitrile)				*N,N*-Dimethylformamide	308.15	–22	35
(13 wt% Acrylonitrile)				*N,N*-Dimethylformamide	323.15	–18	35
(13 wt% Acrylonitrile)				*N,N*-Dimethylformamide	338.15	–15	35
(13 wt% Acrylonitrile)				*N,N*-Dimethylformamide	353.15	–12	35
(29 wt% Acrylonitrile)				*N,N*-Dimethylformamide	295.15	–42	35
(29 wt% Acrylonitrile)				*N,N*-Dimethylformamide	308.15	–27	35
(29 wt% Acrylonitrile)				*N,N*-Dimethylformamide	323.15	–21	35
(29 wt% Acrylonitrile)				*N,N*-Dimethylformamide	338.15	–19	35
(29 wt% Acrylonitrile)				*N,N*-Dimethylformamide	353.15	–16	35
(40 wt% Acrylonitrile)				*N,N*-Dimethylformamide	295.15	–47	35
(40 wt% Acrylonitrile)				*N,N*-Dimethylformamide	308.15	–30	35
(40 wt% Acrylonitrile)				*N,N*-Dimethylformamide	323.15	–28	35
(40 wt% Acrylonitrile)				*N,N*-Dimethylformamide	338.15	–18	35
(40 wt% Acrylonitrile)				*N,N*-Dimethylformamide	353.15	–17	35
Benzylcellulose							
				Benzene	298.15	–11	8
				Cyclohexanone	298.15	–15	25
				Trichloromethane	298.15	–38	25

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Bisphenol A-isophthaloyl chloride/terephthaloyl chloride							
(50/50 Iso/terephtaloyl chloride)				*N,N*-Dimethylacetamide	298.15	−56	69
(50/50 Iso/terephtaloyl chloride)				1,1,2,2-Tetrachloroethane	298.15	+72	69
Butadiene/styrene copolymer							
(10 wt% Styrene)				Benzene	293.65	4.9	17
(30 wt% Styrene)				Benzene	293.65	3.0	17
(30 wt% Styrene)				Benzene	298.15	3.0	25
(50 wt% Styrene)				Benzene	293.65	1.8	17
(60 wt% Styrene)				Benzene	293.65	0.0	17
(70 wt% Styrene)				Benzene	293.65	0.0	17
(75 wt% Styrene)				Benzene	298.15	1.5	7
(80 wt% Styrene)				Benzene	293.65	−0.6	17
(90 wt% Styrene)				Benzene	293.65	−4.9	17
Butyl methacrylate/isobutyl methacrylate copolymer (50 wt%/50 wt%)							
Glass		150000		Cyclohexanone	303.15	5.9	98
Liquid		150000		Cyclohexanone	303.15	14.0	98
Butyl methacrylate/methyl methacrylate copolymer (45 wt%/55 wt%)							
Glass	107000	250000		Cyclohexanone	304.15	−5.4	99
Liquid	107000	250000		Cyclohexanone	304.15	+9.1	99
Cellulose acetate							
(52.2 wt% Acetate)				Formic acid	298.15	−30	10
(55.8 wt% Acetate)				Formic acid	298.15	−44	10
(52.5 wt% Acetate)				Methyl acetate	298.15	−80	1
(48 wt% Acetate)				2-Propanone	298.15	−35	25
(52.2 wt% Acetate)				2-Propanone	298.15	−30	10
(55.8 wt% Acetate)				2-Propanone	298.15	−26	10
(56 wt% Acetate)				2-Propanone	298.15	−45	25
(56 wt% Acetate)				2-Propanone	298.15	−30	4
Cellulose triacetate							
				2-Propanone	298.15	−29	4
				Trichloromethane	298.15	−47	4
Dextran							
	8200	10400		Dimethylsulfoxide	298.15	−185	75
	75900	101000		Dimethylsulfoxide	298.15	−187	70
	75900	101000		1,2-Ethanediol	298.15	−98	70
	75900	101000		Formamide	298.15	−228	70
	8200	10400		Water	298.15	−140	75
	75900	101000		Water	298.15	−150	75
(amorph)				Water	298.15	−123	65
Ethylene/propylene copolymer							
(33 mol% Ethylene)				Cyclohexane	298.15	1.4	74
(63 mol% Ethylene)				Cyclohexane	298.15	8.1	74
(75 mol% Ethylene)				Cyclohexane	298.15	11.8	74
(33 mol% Ethylene)				Cyclooctane	298.15	1.2	74

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
(63 mol% Ethylene)				Cyclooctane	298.15	6.9	74
(75 mol% Ethylene)				Cyclooctane	298.15	8.6	74
(33 mol% Ethylene)				Cyclopentane	298.15	−3.5	74
(63 mol% Ethylene)				Cyclopentane	298.15	1.1	74
(33 mol% Ethylene)				*cis*-Decahydronaphthalene	298.15	−2.4	74
(63 mol% Ethylene)				*cis*-Decahydronaphthalene	298.15	2.4	74
(75 mol% Ethylene)				*cis*-Decahydronaphthalene	298.15	3.9	74
(33 mol% Ethylene)				*trans*-Decahydronaphthalene	298.15	−4.8	74
(63 mol% Ethylene)				*trans*-Decahydronaphthalene	298.15	−1.3	74
(75 mol% Ethylene)				*trans*-Decahydronaphthalene	298.15	−0.3	74
(63 mol% Ethylene)				3,3-Diethylpentane	298.15	−1.4	74
(75 mol% Ethylene)				3,3-Diethylpentane	298.15	<0.1	74
(63 mol% Ethylene)				2,2-Dimethylpentane	298.15	5.3	74
(75 mol% Ethylene)				2,2-Dimethylpentane	298.15	2.3	74
(63 mol% Ethylene)				2,3-Dimethylpentane	298.15	0.7	74
(75 mol% Ethylene)				2,3-Dimethylpentane	298.15	0.4	74
(33 mol% Ethylene)				2,4-Dimethylpentane	298.15	−1.2	74
(63 mol% Ethylene)				2,4-Dimethylpentane	298.15	3.0	74
(75 mol% Ethylene)				2,4-Dimethylpentane	298.15	0.2	74
(33 mol% Ethylene)				3,3-Dimethylpentane	298.15	−2.7	74
(63 mol% Ethylene)				3,3-Dimethylpentane	298.15	0.3	74
(33 mol% Ethylene)				Dodecane	298.15	−0.1	73
(63 mol% Ethylene)				Dodecane	298.15	0.8	73
(75 mol% Ethylene)				Dodecane	298.15	−4.0	73
(63 mol% Ethylene)				3-Ethylpentane	298.15	2.6	74
(75 mol% Ethylene)				3-Ethylpentane	298.15	−0.6	74
(33 mol% Ethylene)				2,2,4,4,6,8,8-Heptamethylnonane	298.15	−0.5	73
(63 mol% Ethylene)				2,2,4,4,6,8,8-Heptamethylnonane	298.15	2.2	73
(75 mol% Ethylene)				2,2,4,4,6,8,8-Heptamethylnonane	298.15	−0.9	73
(33 mol% Ethylene)				Hexadecane	298.15	0.7	73
(63 mol% Ethylene)				Hexadecane	298.15	−1.1	73
(75 mol% Ethylene)				Hexadecane	298.15	−4.6	73
(63 mol% Ethylene)				3-Methylhexane	298.15	0.7	74
(75 mol% Ethylene)				3-Methylhexane	298.15	1.7	74
(33 mol% Ethylene)				Octane	298.15	−1.6	73
(63 mol% Ethylene)				Octane	298.15	3.6	73
(75 mol% Ethylene)				Octane	298.15	0.3	73
(33 mol% Ethylene)				2,2,4,6,6-Pentamethylheptane	298.15	−0.3	73
(63 mol% Ethylene)				2,2,4,6,6-Pentamethylheptane	298.15	3.6	73
(75 mol% Ethylene)				2,2,4,6,6-Pentamethylheptane	298.15	0.0	73
(63 mol% Ethylene)				2,2,4,4-Tetramethylpentane	298.15	2.7	74
(75 mol% Ethylene)				2,2,4,4-Tetramethylpentane	298.15	3.1	74
(33 mol% Ethylene)				2,2,4-Trimethylpentane	298.15	−0.2	73
(63 mol% Ethylene)				2,2,4-Trimethylpentane	298.15	1.9	73
(75 mol% Ethylene)				2,2,4-Trimethylpentane	298.15	3.5	73

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Ethylene/vinylacetate copolymer							
(85 wt% Vinyl acetate)				Cyclopentanone	298.15	−0.5	104
(70 wt% Vinyl acetate)		220000		Tetrahydrofuran	304.65	−1.3	93
Gelatine							
				Water	293.15	−92	29
				Water	323.15	−63	29
Guttapercha							
				Trichloromethane	303.15	47	22
Isobutyl methacrylate/methyl methacrylate copolymer (51 wt%/49 wt%)							
Glass		150000		Cyclohexanone	303.15	−11	98
Liquid		150000		Cyclohexanone	303.15	15	98
Natural rubber							
				Benzene	298.15	10	25
				Benzene	298.15	12	20
Nitrocellulose							
			16600	2-Butanone	298.15	−80	4
			23000	2-Butanone	298.15	−81	4
			40000	2-Butanone	298.15	−81	4
				Butyl acetate	293.15	−75	23
				Butyl acetate	298.15	−75	23
				Butyl acetate	298.15	−73	26
				Butyl acetate	303.15	−75	23
				Butyl acetate	308.15	−71	23
				Butyl acetate	313.15	−65	23
				Butyl acetate	313.15	−67	26
				Butyl acetate	318.15	−59	23
				Butyl acetate	323.15	−54	23
				Butyl acetate	328.15	−50	23
				Butyl acetate	333.15	−59	26
				Butyl acetate	343.15	−55	26
				Butyl acetate	353.15	−47	26
				Diethyl ether	295.15	−62	3
				Dibutyl phthalate	273.15	−45	26
				Dibutyl phthalate	298.15	−46	26
				Dibutyl phthalate	313.15	−46	26
				Dibutyl phthalate	333.15	−42	26
				Ethanol	295.15	−46	3
				Ethyl acetate	293.15	−76	23
				Ethyl acetate	298.15	−75	23
				Ethyl acetate	303.15	−69	23
				Ethyl acetate	308.15	−61	23
				Ethyl acetate	313.15	−54	23
				Ethyl acetate	318.15	−50	23
				Ethyl acetate	323.15	−50	23
				Ethyl acetate	328.15	−50	23
				Methanol	293.15	−69	23

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
				Methanol	298.15	−56	23
				Methanol	303.15	−50	23
				Methanol	308.15	−50	23
				Methanol	313.15	−50	23
				Methanol	318.15	−50	23
				Methanol	323.15	−50	23
				Methanol	328.15	−50	23
				2,4-Pentanedione	298.15	−74	4
				2-Pentanone	298.15	−64	4
				2-Propanone	273.15	−75	26
				2-Propanone	293.15	−75	23
				2-Propanone	298.15	−83	2
				2-Propanone	298.15	−68	4
				2-Propanone	298.15	−71	8
				2-Propanone	298.15	−74	23
				2-Propanone	298.15	−79	25
				2-Propanone	298.15	−75	26
				2-Propanone	303.15	−60	23
				2-Propanone	308.15	−51	23
				2-Propanone	313.15	−50	23
				2-Propanone	313.15	−65	26
				2-Propanone	318.15	−50	23
				2-Propanone	323.15	−50	23
				2-Propanone	323.15	−50	26
				2-Propanone	328.15	−50	23
				Pyridine	298.15	−106	2
				Tri(4-methylphenyl) phosphate	298.15	−16	26
				Tri(4-methylphenyl) phosphate	313.15	−28	26
				Tri(4-methylphenyl) phosphate	333.15	−41	26
				Tri(4-methylphenyl) phosphate	343.15	−44	26
				Tri(4-methylphenyl) phosphate	353.15	−47	26
Nylon-6 (unoriented)							
				Formic acid	295.15	−53	24
				Tricresol	323.55	−66	22
				Tricresol	345.55	−66	22
Poly(acrylonitrile)							
				Benzene	298.15	0.0	18
				N,N-Dimethylformamide	295.15	−23	35
				N,N-Dimethylformamide	298.15	−21	18
				N,N-Dimethylformamide	298.15	−43	42
				N,N-Dimethylformamide	308.15	−17	35
				N,N-Dimethylformamide	323.15	−13	35

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
				N,N-Dimethylformamide	323.15	−15	66
				N,N-Dimethylformamide	338.15	−10	35
				Dimethylsulfoxide	298.15	−70	42
Poly(γ-benzyl-L-glutamate)							
		160000		Dichloroacetic acid	303.15	−35	46
		160000		1,2-Dichloroethane	303.15	−1.6	46
Polybutadiene							
				Benzene	298.15	6.1	7
				Benzene	298.15	7.1	25
				Benzene	298.15	10.5	32
				2,2,4-Trimethylpentane	298.15	1.1	32
1,4-cis-Polybutadiene							
	low			Cyclohexane	298.15	5.4	74
	low			Cyclooctane	298.15	5.8	74
	low			Cyclopentane	298.15	<0.1	74
	low			*cis*-Decahydronaphthalene	298.15	4.2	74
	low			*trans*-Decahydronaphthalene	298.15	2.6	74
	low			3,3-Diethylpentane	298.15	5.2	74
	low			2,2-Dimethylpentane	298.15	4.1	74
	low			2,3-Dimethylpentane	298.15	4.5	74
	low			2,4-Dimethylpentane	298.15	3.2	74
	low			3,3-Dimethylpentane	298.15	3.2	74
	low			Dodecane	298.15	4.2	74
	low			3-Ethylpentane	298.15	3.7	74
	low			2,2,4,4,6,8,8-Heptamethylnonane	298.15	4.8	74
	low			Hexadecane	298.15	4.9	74
	low			3-Methylhexane	298.15	3.6	74
	low			Octane	298.15	4.3	74
	low			2,2,4,6,6-Pentamethylheptane	298.15	5.0	74
	low			2,2,4,4-Tetramethylpentane	298.15	5.8	74
	low			2,3,3,4-Tetramethylpentane	298.15	5.1	74
Poly(1-butene)							
			20000	Cyclohexane	298.15	1.0	74
			20000	Cyclooctane	298.15	1.8	74
			20000	Cyclopentane	298.15	−2.9	74
			20000	*cis*-Decahydronaphthalene	298.15	<0.1	74
			20000	*trans*-Decahydronaphthalene	298.15	−2.0	74
			20000	Decane	298.15	1.2	62
			20000	3,3-Diethylpentane	298.15	−2.6	74
			20000	2,2-Dimethylpentane	298.15	−4.0	74
			20000	2,3-Dimethylpentane	298.15	−2.8	74
			20000	2,4-Dimethylpentane	298.15	−2.3	74
			20000	3,3-Dimethylpentane	298.15	−2.2	74
			20000	Dodecane	298.15	2.1	74

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			20000	3-Ethylpentane	298.15	−2.8	74
			20000	Heptane	298.15	0.0	73
			20000	Hexadecane	298.15	3.0	62
			20000	Hexane	298.15	−1.2	62
			20000	3-Methylhexane	298.15	−2.1	74
			20000	Nonane	298.15	0.9	73
			20000	Octane	298.15	0.4	73
			20000	2,2,4,6,6-Pentamethylheptane	298.15	0.6	73
			20000	Pentane	298.15	−2.6	62
			20000	Tetradecane	298.15	2.7	62
			20000	2,2,4,4-Tetramethylpentane	298.15	−1.4	74
			20000	2,3,3,4-Tetramethylpentane	298.15	−2.2	74
			20000	2,2,4-Trimethylpentane	298.15	−0.5	73
Poly(butyl acrylate)							
				2-Propanone	298.15	0.8	25
Poly(butyl methacrylate)							
Glass	91300	210000		Cyclohexanone	304.15	7.7	99
Liquid	91300	210000		Cyclohexanone	304.15	8.2	99
				2-Propanone	298.15	19.5	25
Polychloroprene							
				Benzene	298.15	0.5	7
Poly(2,6-dimethyl phenylene oxide)							
	17000	46400		1,2-Dichlorobenzene	303.05	55	89
Poly(dimethylsiloxane)							
	13000			Benzene	298.15	11.2	50
			20000	Benzene	298.15	13.5	61
			100000	Benzene	298.15	14.2	40
			170000	Bromocyclohexane	303.15	10.2	51
			80000	2-Butanone	293.15	14.4	77
	30900			2-Butanone	303.15	14.2	44
			170000	2-Butanone	303.15	14.7	51
			80000	2-Butanone	308.15	14.3	77
			80000	2-Butanone	323.15	14.3	77
			80000	Butyl acetate	298.15	6.1	41
			80000	Butyl propanoate	298.15	4.9	41
			100000	Chlorobenzene	298.15	7.5	40
	13000			Cyclohexane	298.15	3.0	50
			20000	Cyclohexane	298.15	5.2	74
			100000	Cyclohexane	298.15	5.2	40
			20000	Cyclooctane	298.15	6.8	74
			20000	Cyclopentane	298.15	1.0	74
			20000	*cis*-Decahydronapthalene	298.15	7.1	74
			20000	*trans*-Decahydronapthalene	298.15	4.3	74
			20000	Decamethyltetrasiloxane	297.65	0.45	37
			20000	Decane	298.15	3.8	37
			20000	Decane	298.15	3.9	61

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			80000	Decane	298.15	3.8	41
			80000	Decyl acetate	298.15	4.5	41
			80000	Dibutyl ether	298.15	0.6	41
			80000	Diethoxymethane	298.15	1.8	41
			80000	Diethyl ether	298.15	−1.3	41
			20000	3,3-Diethylpentane	298.15	1.9	74
			80000	Dihexyl ether	298.15	3.0	41
			80000	1,2-Dimethoxyethane	298.15	12.2	41
			80000	Dimethoxymethane	298.15	7.4	41
	13000			1,2-Dimethylbenzene	298.15	4.3	50
	13000			1,3-Dimethylbenzene	298.15	3.0	50
	13000			1,4-Dimethylbenzene	298.15	3.2	50
			20000	1,4-Dimethylbenzene	298.15	4.2	61
			80000	2,6-Dimethyl-4-heptanone	293.15	6.1	77
			20000	2,2-Dimethylpentane	298.15	0.8	74
			20000	2,3-Dimethylpentane	298.15	1.4	74
			20000	2,4-Dimethylpentane	298.15	1.6	74
			20000	3,3-Dimethylpentane	298.15	0.5	74
			80000	Dipentyl ether	298.15	2.1	41
			80000	Dipropyl ether	298.15	−1.2	41
			20000	Dodecamethylpentasiloxane	297.65	−0.3	37
			20000	Dodecane	297.65	4.5	37
			20000	Dodecane	298.15	4.4	73
			80000	Dodecane	298.15	4.5	41
			80000	Ethyl acetate	298.15	12.7	41
			170000	Ethyl acetate	303.15	13.7	51
	13000			Ethylbenzene	298.15	6.4	50
			20000	Ethylbenzene	298.15	6.2	61
			80000	Ethyl butanoate	298.15	6.0	41
			80000	Ethyl decanoate	298.15	3.8	41
			80000	Ethyl dodecanoate	298.15	3.8	41
			80000	Ethyl heptanoate	298.15	4.1	41
			80000	Ethyl hexanoate	298.15	4.3	41
			80000	Ethyl nonanoate	298.15	3.7	41
			80000	Ethyl octanoate	298.15	3.8	41
			20000	3-Ethylpentane	298.15	0.6	74
			80000	Ethyl propanoate	298.15	8.0	41
			20000	2,2,4,4,6,8,8-Heptamethylnonane	298.15	3.5	74
	13000			Heptane	298.15	1.8	50
			20000	Heptane	298.15	1.9	73
			20000	Heptane	297.65	2.0	37
			20000	Heptane	298.15	2.0	61
			80000	Heptane	298.15	2.0	41
			100000	Heptane	298.15	2.1	40
			170000	Heptane	303.15	1.9	51
			80000	3-Heptanone	308.15	8.8	77
			80000	3-Heptanone	323.15	8.8	77

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			20000	Hexadecane	297.65	5.5	37
			20000	Hexadecane	298.15	5.5	73
			20000	Hexamethyldisiloxane	298.15	−1.2	37
			20000	Hexamethyldisiloxane	298.15	−1.6	61
			170000	Hexamethyldisiloxane	303.15	−1.5	51
			20000	Hexane	297.65	0.7	37
			20000	Hexane	298.15	0.7	61
			80000	Hexane	298.15	0.7	41
			170000	Hexane	303.15	0.3	51
			80000	Hexyl acetate	298.15	5.0	41
	13000			Isopropylbenzene	298.15	4.1	50
			80000	Methyl butanoate	298.15	8.6	41
	13000			Methylcyclohexane	298.15	2.9	50
			100000	Methylcyclohexane	298.15	1.9	40
			80000	Methyl decanoate	298.15	4.8	41
			20000	3-Methylhexane	298.15	1.3	74
			80000	Methyl hexanoate	298.15	5.3	41
			80000	Methyl octanoate	298.15	5.0	41
			80000	4-Methyl-2-pentanone	293.15	9.9	77
			80000	4-Methyl-2-pentanone	308.15	9.0	77
			80000	Methyl propanoate	298.15	12.1	41
			20000	Nonane	297.65	3.4	37
			20000	Nonane	298.15	3.3	73
			80000	Nonane	298.15	3.4	41
			80000	Octamethylcyclotetrasiloxane	293.15	−0.4	78
			20000	Octamethyltrisiloxane	297.65	−0.6	37
			20000	Octamethyltrisiloxane	298.15	−0.8	61
			170000	Octamethyltrisiloxane	303.15	−1.0	51
			20000	Octane	297.65	2.6	37
			20000	Octane	298.15	2.4	73
			20000	Octane	298.15	2.6	61
			80000	Octane	298.15	2.6	41
			20000	2,2,4,6,6-Pentamethylheptane	298.15	2.7	73
			20000	Pentane	298.15	−0.9	37
			20000	Pentane	298.15	−0.9	61
			80000	Pentane	298.15	−1.0	41
			80000	Pentyl acetate	298.15	5.8	41
			80000	Pentyl propanoate	298.15	3.8	41
			80000	Propyl acetate	298.15	8.6	41
			170000	Propyl acetate	303.15	9.9	51
			80000	Propyl propanoate	298.15	5.6	41
			100000	Tetrachloromethane	298.15	2.4	40
			20000	Tetradecane	297.65	5.1	37
			20000	Tetradecane	298.15	5.1	61
			80000	Tetradecane	298.15	5.1	41
			20000	2,2,4,4-Tetramethylpentane	298.15	2.1	73
			20000	2,2,4,4-Tetramethylpentane	298.15	2.3	74

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			20000	2,3,3,4-Tetramethylpentane	298.15	1.9	74
	13000			Toluene	298.15	5.5	50
			20000	Toluene	298.15	6.7	61
			20000	Tridecane	297.65	4.8	37
			80000	Tridecane	298.15	4.8	41
	13000			1,3,5-Trimethylbenzene	298.15	3.7	50
			20000	2,2,4-Trimethylpentane	298.15	1.4	73
			20000	Undecane	297.65	4.2	37
			80000	Undecane	298.15	4.3	41
Polyethylene							
Semicrystalline		65000		1-Chloronaphthalene	373.15	780	47
Semicrystalline		65000		1-Chloronaphthalene	383.15	980	47
Semicrystalline		65000		1-Chloronaphthalene	393.15	800	47
Liquid		65000		1-Chloronaphthalene	403.15	49	47
Semicrystalline		144000		1-Chloronaphthalene	383.15	920	47
Semicrystalline		144000		1-Chloronaphthalene	393.15	990	47
Semicrystalline		144000		1-Chloronaphthalene	403.15	690	47
Liquid		144000		1-Chloronaphthalene	413.15	67	47
Liquid		144000		1-Chloronaphthalene	423.15	85	47
Semicrystalline		670000		1-Chloronaphthalene	363.15	380	47
Semicrystalline		670000		1-Chloronaphthalene	373.15	430	47
Semicrystalline		670000		1-Chloronaphthalene	383.15	165	47
Liquid		670000		1-Chloronaphthalene	393.15	39	47
Liquid		670000		1-Chloronaphthalene	403.15	36	47
Semicrystalline		900000		1-Chloronaphthalene	391.80	245	105
Semicrystalline		900000		Cyclohexane	379.50	205	105
Semicrystalline		900000		Cyclopentane	380.00	190	105
Alkathene				Decahydronaphthalene	349.85	142	56
Rigidex-3				Decahydronaphthalene	366.65	180	56
Rigidex-50				Decahydronaphthalene	374.05	233	56
Semicrystalline		900000		Decahydronaphthalene	384.00	260	105
Semicrystalline				1,2-Dichloroethane	333.15	30	27
Semicrystalline				1,2-Dichloroethane	338.15	38	27
Semicrystalline				1,2-Dichloroethane	343.15	54	27
Semicrystalline				1,2-Dichloroethane	348.15	65	27
Semicrystalline			10000	1,4-Dimethylbenzene	354.15	139	5
Semicrystalline			11800	1,4-Dimethylbenzene	352.15	139	5
Semicrystalline			15600	1,4-Dimethylbenzene	353.65	154	5
Semicrystalline			15600	1,4-Dimethylbenzene	363.65	113	5
Semicrystalline			15600	1,4-Dimethylbenzene	368.65	104	5
Semicrystalline		900000		2,4-Dimethylpentane	393.00	230	105
Semicrystalline		900000		2,2,4,4,6,8,8-Heptamethylnonane	399.50	170	105
Semicrystalline		900000		Hexadecane	399.50	262	105
Semicrystalline		900000		2-Methylbutane	394.20	165	105
Semicrystalline		65000		1,2,3,4-Tetrahydronaphthalene	373.15	940	47

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Semicrystalline		65000		1,2,3,4-Tetrahydronaphthalene	383.15	990	47
Semicrystalline		65000		1,2,3,4-Tetrahydronaphthalene	393.15	790	47
Liquid		65000		1,2,3,4-Tetrahydronaphthalene	403.15	58	47
Semicrystalline		84000		1,2,3,4-Tetrahydronaphthalene	373.15	835	47
Semicrystalline		130000		1,2,3,4-Tetrahydronaphthalene	353.15	630	47
Semicrystalline		130000		1,2,3,4-Tetrahydronaphthalene	373.15	520	47
Liquid		130000		1,2,3,4-Tetrahydronaphthalene	393.15	69	47
Semicrystalline		144000		1,2,3,4-Tetrahydronaphthalene	373.15	610	47
Semicrystalline		144000		1,2,3,4-Tetrahydronaphthalene	383.15	1200	47
Semicrystalline		144000		1,2,3,4-Tetrahydronaphthalene	393.15	1130	47
Semicrystalline		144000		1,2,3,4-Tetrahydronaphthalene	403.15	800	47
Liquid		144000		1,2,3,4-Tetrahydronaphthalene	413.15	136	47
Liquid		144000		1,2,3,4-Tetrahydronaphthalene	423.15	88	47
Semicrystalline		310000		1,2,3,4-Tetrahydronaphthalene	343.15	485	47
Semicrystalline		670000		1,2,3,4-Tetrahydronaphthalene	353.15	560	47
Semicrystalline		670000		1,2,3,4-Tetrahydronaphthalene	363.15	560	47
Semicrystalline		670000		1,2,3,4-Tetrahydronaphthalene	373.15	460	47
Semicrystalline		670000		1,2,3,4-Tetrahydronaphthalene	383.15	155	47
Liquid		670000		1,2,3,4-Tetrahydronaphthalene	393.15	67	47
Liquid		670000		1,2,3,4-Tetrahydronaphthalene	403.15	39	47
Semicrystalline			16000	Toluene	353.15	110	22
Semicrystalline			22000	Toluene	358.35	118	22
Semicrystalline			22000	Toluene	367.35	106	22
Semicrystalline		900000		1,2,4-Trichlorobenzene	386.50	255	105
Poly(ethylene glycol)							
	180			Benzene	303.15	110	71
	385			Benzene	303.15	60	71
	560			Benzene	303.15	40	71
	1050			Benzene	303.15	90	71
	1610			Benzene	303.15	140	71
	1940			Benzene	303.15	215	71
	3200			Benzene	303.15	195	71
	4330			Benzene	303.15	195	71

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
	5850			Benzene	303.15	190	71
	9950			Benzene	303.15	195	71
			43400	Benzene	303.15	190	71
	400	420		Trichloromethane	303.15	–79	95
	590	615		Trichloromethane	303.15	–88	95
	180			Water	303.15	–136	71
	200			Water	321.35	–125	83
	355			Water	303.15	–159	71
	400			Water	321.35	–150	83
	560			Water	303.15	–150	71
	990			Water	321.35	–101	83
	1050			Water	303.15	–106	71
	1460			Water	321.35	–137	83
	1610			Water	303.15	–6	71
	1940			Water	303.15	57	71
	3200			Water	303.15	58	71
	4330			Water	303.15	28	71
	5850			Water	303.15	39	71
	9950			Water	303.15	30	71
			14000	Water	303.15	7	55
			14000	Water	313.15	27	55
			20300	Water	303.15	45	71
			34500	Water	303.15	34	71
			43300	Water	303.15	+40	71
Poly(ethylene glycol) dimethyl ether							
	250			Tetrachloromethane	303.15	–12	95
	250			Tetrachloromethane	318.15	–7.6	95
	400			Tetrachloromethane	303.15	–12	95
	520	550		Tetrachloromethane	303.15	–12	95
	520	550		Tetrachloromethane	303.15	–7.6	95
	250			Trichloromethane	303.15	–184	95
	520	550		Trichloromethane	303.15	–135	95
Poly(ethylene glycol) monododecyl ether							
	230			Dodecane	302.15	42	68
	274			Dodecane	302.15	23	68
	318			Dodecane	302.15	34	68
	362			Dodecane	302.15	37	68
	406			Dodecane	302.15	42	68
Poly(ethylene glycol) monomethyl ether							
	353	377		Trichloromethane	303.15	–125	95
	550	580		Trichloromethane	303.15	–117	95
Poly(ethylene oxide)							
Semicrystalline	6000			Dichloromethane	303.15	+84	58
Liquid	6000			Dichloromethane	303.15	–160	58

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Semicrystalline	6000			Trichloromethane	303.15	+52	58
Liquid	6000			Trichloromethane	303.15	−186	58
Quenched	1520	1720		Water	293.15	−403	64
Annealed	1520	1720		Water	293.15	−392	64
Quenched	1520	1720		Water	298.15	−180	64
Annealed	1520	1720		Water	298.15	−150	64
Quenched	1520	1720		Water	303.15	+68	64
Annealed	1520	1720		Water	303.15	+109	64
Liquid	6000			Water	303.15	−50	58
Quenched	6840	7525		Water	293.15	−28	64
Annealed	6840	7525		Water	293.15	+209	64
Quenched	6840	7525		Water	298.15	+241	64
Annealed	6840	7525		Water	298.15	+540	64
Quenched	16600	19600		Water	293.15	−160	64
Annealed	16600	19600		Water	293.15	−143	64
Quenched	16600	19600		Water	298.15	+59	64
Annealed	16600	19600		Water	298.15	+155	64
Quenched	16600	19600		Water	303.15	+353	64
Annealed	16600	19600		Water	303.15	+490	64
Semicrystalline		20000		Water	298.15	+10	84
Polyindene							
	765	1023		Anisole	299.15	2.1	102
	765	1023		Benzene	299.15	−0.04	102
	765	1023		Benzonitrile	299.15	−4.4	102
	765	1023		Bromobenzene	299.15	−3.9	102
	765	1023		2-Butanone	299.15	1.9	102
	765	1023		Chlorobenzene	299.15	−3.9	102
	765	1023		1-Chlorobutane	299.15	−4.0	102
	765	1023		1-Chloroheptane	299.15	1.5	102
	765	1023		Cyclohexane	299.15	15	102
	765	1023		*N,N*-dimethylaniline	299.15	−8.2	102
	765	1023		Ethyl acetate	299.15	4.2	102
	765	1023		Ethylbenzene	299.15	−1.4	102
	765	1023		Ethyl benzoate	299.15	−0.7	102
	765	1023		Nitrobenzene	299.15	4.6	102
	765	1023		1-Nitropropane	299.15	8.4	102
	765	1023		Pyridine	299.15	−6.7	102
	765	1023		1,1,2,2-Tetrachloroethane	299.15	−19	102
	765	1023		Tetrachloromethane	299.15	−2.5	102
	765	1023		1,1,1-Trichloroethane	299.15	−1.8	102
	765	1023		Trichloromethane	299.15	−20	102
Polyisobutylene							
	360		700	Benzene	298.15	30	67
	1000		2000	Benzene	298.15	25	67
	1300		2500	Benzene	298.15	23	67
			30000	Benzene	297.65	19	38
			30000	Benzene	298.15	19	40

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
	44700			Benzene	303.15	16	44
			48000	Benzene	303.4	19	72
			50000	Benzene	303.15	16	45
			72000	Benzene	300.15	19	53
			72000	Benzene	323.15	18	53
			72000	Benzene	343.15	16	53
			72000	Benzene	375.15	13	53
			72000	Benzene	394.15	9.2	53
			72000	Benzene	423.15	3.5	53
			72000	Benzene	437.15	−0.5	53
			72000	Benzene	453.15	−4.7	53
			90000	Benzene	298.15	6.7	32
			160000	Benzene	303.15	16	51
			560000	Benzene	298.15	18	34
				Benzene	298.15	6.8	7
				Benzene	298.15	6.8	10
			30000	Chlorobenzene	297.65	12	38
			30000	Chlorobenzene	298.15	13	40
			50000	Chlorobenzene	303.15	12	45
			160000	Chlorobenzene	303.15	12	51
			560000	Chlorobenzene	298.15	12	34
	360		700	Cyclohexane	298.15	3.8	67
	1000		2000	Cyclohexane	298.15	1.2	67
	1300		2500	Cyclohexane	298.15	1.1	67
			4500	Cyclohexane	298.15	−0.6	74
			30000	Cyclohexane	297.65	−0.7	38
			30000	Cyclohexane	298.15	−0.6	40
			50000	Cyclohexane	303.15	−0.7	45
			160000	Cyclohexane	303.15	−0.6	51
			1990000	Cyclohexane	298.15	−0.7	39
			4500	Cyclooctane	298.15	+0.3	74
			4500	Cyclopentane	298.15	−5.9	74
			4500	*cis*-Decahydronaphthalene	298.15	0.2	74
			4500	*trans*-Decahydronaphthalene	298.15	−0.8	74
			30000	Decane	297.65	−0.5	38
			50000	Decane	303.15	−0.5	45
			30000	Dibutyl ether	297.65	1.2	37
			30000	Diethyl ether	297.65	2.8	37
			30000	Diethyl ether	297.65	2.8	38
			4500	3,3-Diethylpentane	298.15	−1.4	74
			30000	Dihexyl ether	297.65	0.9	37
			4500	2,2-Dimethylpentane	298.15	−1.1	74
			4500	2,3-Dimethylpentane	298.15	−1.9	74
			4500	2,4-Dimethylpentane	298.15	−1.1	74
			4500	3,3-Dimethylpentane	298.15	−1.7	74
			30000	Dipentyl ether	297.65	1.0	37
			30000	Dipropyl ether	297.65	1.8	37

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
	360		700	Dodecane	298.15	1.9	67
	1000		2000	Dodecane	298.15	0.7	67
	1300		2500	Dodecane	298.15	0.5	67
			4500	Dodecane	298.15	0.2	73
			30000	Dodecane	297.65	−0.1	38
			30000	Dodecane	298.15	−0.1	40
			48000	Ethylbenzene	291.15	9.5	72
			48000	Ethylbenzene	343.15	3.6	72
			30000	Ethyl decanoate	297.65	3.0	37
			30000	Ethyl heptanoate	297.65	5.6	37
			30000	Ethyl hexadecanoate	297.65	1.3	37
			30000	Ethyl hexanoate	297.65	6.7	37
			30000	Ethyl nonanoate	297.65	3.7	37
			30000	Ethyl octanoate	297.65	4.6	37
			4500	3-Ethylpentane	298.15	−2.0	74
			30000	Ethyl tetradecanoate	297.65	1.8	37
			4500	2,2,4,4,6,8,8-Heptamethylnonane	298.15	−0.5	74
	360		700	Heptane	298.15	−0.5	67
	1000		2000	Heptane	298.15	−1.0	67
	1300		2500	Heptane	298.15	−1.4	67
			4500	Heptane	298.15	−1.7	73
			30000	Heptane	297.65	−1.8	38
			30000	Heptane	298.15	−2.0	40
			50000	Heptane	303.15	−1.8	45
			160000	Heptane	303.15	−1.6	51
				Heptane	298.15	−1.4	7
				Heptane	298.15	−1.4	10
	360		700	Hexadecane	298.15	4.5	67
	1000		2000	Hexadecane	298.15	2.1	67
	1300		2500	Hexadecane	298.15	1.0	67
			4500	Hexadecane	298.15	0.9	73
			30000	Hexadecane	297.65	0.04	38
			30000	Hexane	297.65	−2.5	38
			30000	Hexane	298.15	−2.6	40
			50000	Hexane	303.15	−2.5	45
			72000	Hexane	303.15	−1.8	53
			72000	Hexane	324.15	−2.3	53
			72000	Hexane	348.15	−2.9	53
			72000	Hexane	373.15	−3.7	53
			72000	Hexane	393.15	−5.3	53
			72000	Hexane	408.15	−6.7	53
			72000	Hexane	423.15	−9.0	53
			72000	Hexane	433.15	−9.9	53
			160000	Hexane	303.15	−2.5	51
			30000	2-Methylbutane	297.65	−3.1	38
			30000	Methylcyclohexane	297.65	−1.2	38
			50000	Methylcyclohexane	303.15	−1.2	45

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			160000	Methylcyclohexane	303.15	−1.2	51
			4500	3-Methylhexane	298.15	−1.0	74
			30000	3-Methylpentane	297.65	−2.8	38
			30000	Nonane	297.65	−0.8	38
			4500	Nonane	298.15	−0.8	73
			4500	Octane	298.15	−1.1	73
			30000	Octane	297.65	−1.2	38
			72000	Octane	303.15	−0.3	53
			72000	Octane	324.15	−0.8	53
			72000	Octane	348.15	−0.9	53
			72000	Octane	373.15	−1.1	53
			72000	Octane	393.15	−1.3	53
			72000	Octane	423.15	−3.6	53
			4500	2,2,4,6,6-Pentamethylheptane	298.15	−0.1	73
	360		700	Pentane	298.15	−1.9	67
	1000		2000	Pentane	298.15	−2.9	67
	1300		2500	Pentane	298.15	−3.2	67
			30000	Pentane	297.65	−3.6	38
			72000	Pentane	303.15	−2.8	53
			72000	Pentane	333.15	−3.4	53
			72000	Pentane	352.15	−4.5	53
			72000	Pentane	365.15	−5.5	53
	360		700	Tetrachloromethane	298.15	5.9	67
	1000		2000	Tetrachloromethane	298.15	5.8	67
	1300		2500	Tetrachloromethane	298.15	5.0	67
			1990000	Tetrachloromethane	298.15	4.1	39
			30000	Tetradecane	297.65	0.0	38
			4500	2,2,4,4-Tetramethylpentane	298.15	−0.6	74
			4500	2,3,3,4-Tetramethylpentane	298.15	−2.3	74
			50000	Toluene	303.15	7.4	45
			160000	Toluene	303.15	7.4	51
			1990000	Toluene	298.15	8.8	39
				Toluene	298.15	1.8	7
				Toluene	298.15	1.8	10
			30000	Tridecane	297.65	−0.04	38
			4500	2,2,4-Trimethylpentane	298.15	−0.4	73
			30000	2,2,4-Trimethylpentane	297.65	−0.6	38
			1990000	2,2,4-Trimethylpentane	298.15	0.0	39
				2,2,4-Trimethylpentane	298.15	0.0	7
				2,2,4-Trimethylpentane	298.15	0.0	10
			30000	Undecane	297.65	−0.4	38
Poly(isobutyl methacrylate)							
Glass		260000		Cyclohexanone	303.15	−5.2	98
Liquid		260000		Cyclohexanone	303.15	13	98
Poly(methyl acrylate)							
				2-Propanone	298.15	0.0	25

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Poly(methyl methacrylate)							
Glass	73900	170000		Cyclohexanone	304.15	−14	98
Liquid	73900	170000		Cyclohexanone	304.15	17	98
	1930			1,2-Dichloroethane	298.15	−20	32
	240000			1,2-Dichloroethane	298.15	−27	32
			53000	Ethylbenzene	298.15	−31	28
			180000	Ethylbenzene	298.15	−29	28
	28900	35900		4-Methyl-2-pentanone	303.15	−21	76
	93940	101000		4-Methyl-2-pentanone	303.15	−24	76
	137000	215000		4-Methyl-2-pentanone	303.15	−28	76
				2-Propanone	298.15	−30	25
	93940	101000		Toluene	303.15	−22	76
	689000	782000		Toluene	303.15	−24	76
			12000	Trichloromethane	298.15	−65	52
			54000	Trichloromethane	298.15	−80	52
			80000	Trichloromethane	298.15	−81	52
			100000	Trichloromethane	298.15	−84	52
			320000	Trichloromethane	298.15	−83	52
	93940	101000		Trichloromethane	303.15	−71	76
	689000	782000		Trichloromethane	303.15	−72	76
		2320000		Trichloromethane	303.15	−73	76
Poly(4-methyl-1-pentene)							
Semicrystalline			350000	Cyclohexane	303.15	30	79
Poly(α-methylstyrene)							
	1030	1180		Toluene	298.15	−7.1	43
		1430		Toluene	298.15	−30	43
	1820	2230		Toluene	298.15	−34	43
	1920			Toluene	298.15	−37	43
	2700	3300		Toluene	298.15	−39	43
	3280			Toluene	298.15	−46	43
	5260			Toluene	298.15	−46	43
	8600			Toluene	298.15	−45	43
	12200			Toluene	298.15	−46	43
		10500		Toluene	310.15	−8.4	92
		53000		Toluene	310.15	−13	92
		55000		Toluene	333.15	−16	96
		87000		Toluene	298.15	−17	90
		87000		Toluene	310.15	−16	92
		87000		Toluene	333.15	−11	90
Poly(2-methyl-5-vinyltetrazole)							
				Acetic acid	298.15	47	100
				Acetonitrile	298.15	14	100
				1,2-Dichloroethane	298.15	17	100
				N,N-Diethylacetamide	298.15	17	100
				N,N-Dimethylformamide	298.15	33	100
				Dimethylsulfoxide	298.15	10	100

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
				Formamide	298.15	12	100
				Formic acid	298.15	110	100
				Nitromethane	298.15	10	100
				Pyridine	298.15	16	100
Poly(octamethylene oxide)							
	7000			Benzene	298.15	20	64
	7000			Benzene	303.15	22	64
	7000			Benzene	308.15	25	64
Polypentenamer							
			50000	Cyclohexane	298.15	4.6	74
			50000	Cyclooctane	298.15	5.1	74
			50000	Cyclopentane	298.15	−2.3	74
			50000	*cis*-Decahydronaphthalene	298.15	2.6	74
			50000	*trans*-Decahydronaphthalene	298.15	<0.1	74
			50000	3,3-Diethylpentane	298.15	2.4	74
			50000	2,2-Dimethylpentane	298.15	3.3	74
			50000	2,3-Dimethylpentane	298.15	2.2	74
			50000	2,4-Dimethylpentane	298.15	3.3	74
			50000	3,3-Dimethylpentane	298.15	2.7	74
			50000	Dodecane	298.15	2.9	74
			50000	3-Ethylpentane	298.15	2.1	74
			50000	2,2,4,4,6,8,8-Heptamethylnonane	298.15	3.2	74
			50000	Hexadecane	298.15	2.6	74
			50000	3-Methylhexane	298.15	2.4	74
			50000	Octane	298.15	2.2	74
			50000	2,2,4,6,6-Pentamethylheptane	298.15	3.8	74
			50000	2,2,4,4-Tetramethylpentane	298.15	4.5	74
			50000	2,3,3,4-Tetramethylpentane	298.15	2.4	74
			50000	2,2,4-Trimethylpentane	298.15	4.3	74
Poly(m-phenyleneisophthalamide)							
Glass				*N,N*-Dimethylacetamide	298.15	−171	60
Semicrystalline				*N,N*-Dimethylacetamide	298.15	−128	60
Glass				*N,N*-Dimethylformamide	298.15	−149	60
Semicrystalline				*N,N*-Dimethylformamide	298.15	−125	60
Glass				1-Methyl-2-pyrrolidone	298.15	−177	60
Semicrystalline				1-Methyl-2-pyrrolidone	298.15	−118	60
Polypropylene (atactic)							
			18000	Benzene	298.15	31	80
			6000	Cyclohexane	298.15	2.3	74
			18000	Cyclohexane	298.15	3.9	80
			6000	Cyclooctane	298.15	3.0	74
			6000	Cyclopentane	298.15	−2.3	74
			6000	*cis*-Decahydronaphthalene	298.15	0.5	74

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			6000	*trans*-Decahydronaphthalene	298.15	−2.4	74
			18000	Decane	298.15	3.1	80
			6000	3,3-Diethylpentane	298.15	−3.9	74
			18000	1,2-Dimethylbenzene	298.15	13	80
			18000	1,3-Dimethylbenzene	298.15	12	80
			18000	1,4-Dimethylbenzene	298.15	10	80
			6000	2,2-Dimethylpentane	298.15	−2.2	74
			6000	2,3-Dimethylpentane	298.15	−2.5	74
			6000	2,4-Dimethylpentane	298.15	−1.8	74
			6000	3,3-Dimethylpentane	298.15	−3.0	74
			6000	Dodecane	298.15	1.7	73
			18000	Ethylbenzene	298.15	14	80
			6000	3-Ethylpentane	298.15	−2.5	74
			6000	2,2,4,4,6,8,8-Heptamethylnonane	298.15	−0.7	73
			6000	Heptane	298.15	−1.6	73
			18000	Heptane	298.15	0.5	80
			6000	Hexadecane	298.15	2.3	73
			18000	Hexane	298.15	−1.4	80
			6000	3-Methylhexane	298.15	−1.8	74
			6000	Nonane	298.15	0.8	73
			18000	Nonane	298.15	2.4	80
			6000	Octane	298.15	−1.2	73
			18000	Octane	298.15	1.0	80
			6000	2,2,4,6,6-Pentamethylheptane	298.15	−0.2	73
			18000	Pentane	298.15	−4.7	80
			18000	Tetrachloromethane	298.15	6.6	80
			6000	2,2,4,4-Tetramethylpentane	298.15	−0.8	74
			6000	2,3,3,4-Tetramethylpentane	298.15	−3.1	74
			18000	Toluene	298.15	17	80
			18000	Trichloromethane	298.15	17	80
			6000	2,2,4-Trimethylpentane	298.15	−1.0	73
Polypropylene (isotactic)							
				1-Chloronaphthalene	383.15	26	47
				1-Chloronaphthalene	393.15	170	47
				1-Chloronaphthalene	403.15	245	47
				1-Chloronaphthalene	423.15	275	47
				1,2,3,4-Tetrahydronaphthalene	373.15	140	47
				1,2,3,4-Tetrahydronaphthalene	383.15	215	47
				1,2,3,4-Tetrahydronaphthalene	393.15	330	47
				1,2,3,4-Tetrahydronaphthalene	403.15	330	47
				1,2,3,4-Tetrahydronaphthalene	413.15	335	47
				1,2,3,4-Tetrahydronaphthalene	423.15	290	47

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Poly(propylene glycol)							
	150			Benzene	321.35	200	103
	425			Benzene	321.35	80	103
	2025			Benzene	321.35	45	103
	150			Ethanol	321.35	40	103
	425			Ethanol	321.35	60	103
	2025			Ethanol	321.35	65	103
	396	412		Tetrachloromethane	303.15	4.7	95
	396	412		Tetrachloromethane	318.15	5.2	95
	1900			Tetrachloromethane	303.15	−8.2	95
	1900			Tetrachloromethane	318.15	11	95
	1900			Trichloromethane	303.15	−81	95
		400		Water	298.15	−165	97
	150			Water	321.35	−90	103
	425			Water	321.35	−95	103
Polystyrene							
		600		Benzene	298.15	−1.3	54
		600		Benzene	313.15	−2.5	54
		900		Benzene	291.15	−10	54
		900		Benzene	318.15	−5.8	54
		2000		Benzene	291.15	−16	54
		2000		Benzene	318.15	−6.8	54
		5000		Benzene	291.15	−23	54
		5000		Benzene	318.15	−12	54
		10300		Benzene	291.15	−26	54
		10300		Benzene	318.15	−18	54
			18000	Benzene	298.15	−4.1	19
	20000			Benzene	296.15	−15	9
			29000	Benzene	298.15	−5.0	19
			30000	Benzene	298.15	−7.5	19
			59000	Benzene	298.15	−13	19
			91000	Benzene	298.15	−15	19
		97200		Benzene	318.15	−21	54
			142000	Benzene	298.15	−17	19
			190000	Benzene	303.15	−18	51
	214000			Benzene	300.15	−16	85
			216000	Benzene	298.15	−18	19
			272000	Benzene	298.15	−21	19
			300000	Benzene	298.15	−21	12
				Benzene	298.15	−27	25
				Benzene	298.15	−10	7
	20000			Butyl acetate	296.15	−13	9
	20000			2-Butanone	296.15	−15	9
			142000	2-Butanone	296.15	−17	30
			190000	Butylbenzene	303.15	−14	51
	150000			Chlorobenzene	293.15	−32	49
			266000	Chlorobenzene	298.15	5.4	34

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
				Chlorobenzene	293.15	−39	21
	1260			Cyclohexane	298.15	10	16
	1910			Cyclohexane	298.15	5.4	16
	3160			Cyclohexane	298.15	−5.4	16
	3980			Cyclohexane	298.15	−6.9	16
	5630			Cyclohexane	298.15	−9.3	16
	9070			Cyclohexane	298.15	−11	16
	20000			Cyclohexane	296.15	2.5	9
			190000	Cyclohexane	303.15	−2.1	51
				Cyclohexane	293.15	−14	21
	22400			Cyclohexanone	298.15	−29	25
	20000			Cyclohexene	296.15	−9.4	9
			190000	Decahydronaphthalene	303.15	3.8	51
	110000	115000		1,2-Dichlorobenzene	303.05	26	89
	20000			1,2-Dimethylbenzene	296.15	−13	9
	20000			1,3-Dimethylbenzene	296.15	−12	9
			190000	1,3-Dimethylbenzene	303.15	−15	51
			190000	1,4-Dioxane	303.15	−12	51
	20000			Ethyl acetate	296.15	−11	9
			142000	Ethyl acetate	296.15	−13	30
			785	Ethylbenzene	298.15	0.0	14
			18000	Ethylbenzene	298.15	−3.8	14
			18000	Ethylbenzene	298.15	−3.9	19
			30000	Ethylbenzene	298.15	−5.7	19
			35000	Ethylbenzene	298.15	−6.5	19
			45000	Ethylbenzene	298.15	−8.4	19
			91000	Ethylbenzene	298.15	−11	19
			142000	Ethylbenzene	298.15	−13	19
			216000	Ethylbenzene	298.15	−17	19
	60000			Ethylbenzene	303.15	−22	57
	113000	122000		Ethylbenzene	306.65	−24	63
	113000	122000		Ethylbenzene	317.15	−19	63
	113000	122000		Ethylbenzene	337.15	−11	63
	113000	122000		Ethylbenzene	347.15	−6.4	63
	113000	122000		Ethylbenzene	350.65	−4.9	63
	113000	122000		Ethylbenzene	366.65	−2.3	63
	113000	122000		Ethylbenzene	367.15	−2.1	63
	113000	122000		Ethylbenzene	368.65	−2.6	63
	113000	122000		Ethylbenzene	372.15	−4.2	63
	113000	122000		Ethylbenzene	378.15	−4.6	63
	113000	122000		Ethylbenzene	385.15	−5.7	63
	150000			Ethylbenzene	293.15	−34	49
			190000	Ethylbenzene	303.15	−15	51
			272000	Ethylbenzene	298.15	−18	14
			272000	Ethylbenzene	298.15	−18	19
			413000	Ethylbenzene	298.15	−24	39
				Ethylbenzene	293.15	−34	21

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
				Ethylbenzene	298.15	−17	11
				Ethylbenzene	298.15	−30	28
	1260			2-Propanone	298.15	−0.6	16
	1910			2-Propanone	298.15	−7.7	16
	3160			2-Propanone	298.15	−16	16
	3980			2-Propanone	298.15	−17	16
	5630			2-Propanone	298.15	−19	16
	9070			2-Propanone	298.15	−21	16
	20000			2-Propanone	296.15	−11	9
			190000	Propylbenzene	303.15	−14	51
	20000			Styrene	296.15	−18	9
				Styrene	296.15	−35	6
			413000	Tetrachloromethane	298.15	−22	39
	600			Toluene	296.15	−2.1	16
	600			Toluene	309.15	−1.8	16
	600			Toluene	318.15	−1.5	16
	1260			Toluene	296.15	−11	16
	1260			Toluene	303.15	−8.0	16
	1260			Toluene	309.15	−5.9	16
	1260			Toluene	318.15	−3.4	16
	1260			Toluene	328.15	−2.3	16
	1260			Toluene	338.15	−1.9	16
	1260			Toluene	346.65	−1.3	16
	1910			Toluene	298.15	−16	16
	1910			Toluene	318.15	−6.7	16
	1910			Toluene	338.15	−3.4	16
	1910			Toluene	348.15	−2.5	16
	3160			Toluene	298.15	−23	16
	3980			Toluene	298.15	−24	16
	3980			Toluene	318.15	−17	16
	3980			Toluene	338.15	−10	16
	5630			Toluene	298.15	−26	16
	9070			Toluene	298.15	−28	16
	270000			Toluene	298.15	−33	16
		600		Toluene	298.15	−1.4	54
		600		Toluene	313.15	−3.2	54
		900		Toluene	291.15	−7.3	54
		900		Toluene	318.15	−6.6	54
		2000		Toluene	291.15	−11	54
		2000		Toluene	318.15	−7.2	54
		5000		Toluene	291.15	−21	54
		5000		Toluene	318.15	−11	54
		10300		Toluene	291.15	−24	54
		10300		Toluene	318.15	−15	54
		97200		Toluene	318.15	−17	54
		9000		Toluene	310.15	−9.2	92
	20000			Toluene	296.15	−17	9

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
	20400			Toluene	298.15	−8.2	90
	20400			Toluene	310.15	−8.4	92
	20400			Toluene	333.15	−6.4	90
	47000			Toluene	310.15	−5.0	92
	50000			Toluene	333.15	−6.8	96
	60000			Toluene	303.15	−21	57
	113000	122000		Toluene	304.15	−29	63
	113000	122000		Toluene	306.15	−27	63
	113000	122000		Toluene	306.65	−26	63
	113000	122000		Toluene	316.15	−23	63
	113000	122000		Toluene	333.15	−15	63
	113000	122000		Toluene	337.15	−12	63
	113000	122000		Toluene	346.15	−8.3	63
	113000	122000		Toluene	347.15	−7.8	63
	113000	122000		Toluene	348.15	−8.2	63
	113000	122000		Toluene	350.65	−6.5	63
	113000	122000		Toluene	359.15	−4.3	63
	113000	122000		Toluene	362.15	−2.7	63
	113000	122000		Toluene	369.15	−3.3	63
	113000	122000		Toluene	372.15	−2.8	63
	115000			Toluene	310.15	−5.0	92
	150000			Toluene	293.15	−34	49
			190000	Toluene	303.15	−18	51
	214000			Toluene	300.15	−19	85
			250000	Toluene	303.15	−18	51
				Toluene	293.15	−34	21
				Toluene	298.65	−39	27
				Toluene	308.15	−34	27
				Toluene	318.15	−30	27
				Toluene	333.15	−23	27
				Toluene	343.15	−13	27
				Toluene	353.15	−13	27
		600		Trichloromethane	298.15	−13	54
		600		Trichloromethane	313.15	−9.9	54
		900		Trichloromethane	291.15	−22	54
		900		Trichloromethane	313.15	−15	54
		2000		Trichloromethane	291.15	−28	54
		2000		Trichloromethane	313.15	−16	54
		5000		Trichloromethane	291.15	−30	54
		5000		Trichloromethane	313.15	−18	54
		10300		Trichloromethane	291.15	−33	54
		10300		Trichloromethane	313.15	−23	54
	22400			Trichloromethane	298.15	−17	25
		97200		Trichloromethane	313.15	−25	54
	20000			1,3,5-Trimethylbenzene	296.15	−11	9
			190000	1,3,5-Trimethylbenzene	303.15	−13	51

Poly(tetramethylene oxide)

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
	650			Benzene	313.15	4.0	86
	1000			Benzene	313.15	2.0	86
	2000			Benzene	313.15	1.1	86
	650			1,2-Dichloroethane	313.35	3.1	88
	2000			1,2-Dichloroethane	313.35	0.3	88
	650			1,2-Dimethylbenzene	313.15	5.9	87
	1000			1,2-Dimethylbenzene	313.15	1.8	87
	2000			1,2-Dimethylbenzene	313.15	0.9	87
	650			1,3-Dimethylbenzene	313.15	6.4	87
	1000			1,3-Dimethylbenzene	313.15	0.6	87
	2000			1,3-Dimethylbenzene	313.15	0.8	87
	650			1,4-Dimethylbenzene	313.15	4.3	87
	1000			1,4-Dimethylbenzene	313.15	1.8	87
	2000			1,4-Dimethylbenzene	313.15	0.7	87
	650			1,4-Dioxane	321.35	4.0	81
	1000			1,4-Dioxane	321.35	2.3	81
	2000			1,4-Dioxane	321.35	1.0	81
	650			Ethylbenzene	313.15	6.9	86
	1000			Ethylbenzene	313.15	3.4	86
	2000			Ethylbenzene	313.15	−0.05	86
	650			Propylbenzene	313.15	5.8	86
	1000			Propylbenzene	313.15	1.3	86
	2000			Propylbenzene	313.15	0.9	86
	650			Tetrachloromethane	313.15	3.3	88
	1000			Tetrachloromethane	313.15	1.4	88
	2000			Tetrachloromethane	321.35	0.7	82
	650			Toluene	313.15	4.3	86
	1000			Toluene	313.15	2.0	86
	2000			Toluene	313.15	0.9	86
	650			1,3,5-Trimethylbenzene	313.15	6.1	87
	1000			1,3,5-Trimethylbenzene	313.15	2.7	87
	2000			1,3,5-Trimethylbenzene	313.15	0.6	87
Poly(vinyl acetate)							
			140000	Benzene	298.15	2.3	13
			350000	2-Butanone	303.15	−1.7	51
			350000	Butyl acetate	303.15	1.0	51
			135000	Chlorobenzene	298.15	5.0	34
			350000	Ethyl acetate	303.15	−6.7	51
				Ethyl acetate	303.15	0.0	11
			26000	3-Heptanone	303.15	7.0	44
			350000	3-Heptanone	303.15	4.9	51
			140000	Methanol	298.15	−45	13
			350000	Methyl acetate	303.15	−9.7	51
			350000	2-Pentanone	303.15	0.0	51
			93000	2-Propanone	303.15	−0.4	32
			350000	2-Propanone	303.15	−3.9	51
				2-Propanone	303.15	−2.9	25

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
			350000	Propyl acetate	303.15	−2.7	51
		150000		Tetrahydrofuran	304.65	4.5	93
			140000	Trichloromethane	298.15	28	13
Poly(vinyl alcohol)							
				Ethanol	298.15	3.8	11
				Ethanol	298.15	9.6	31
	7260			Water	303.15	−34	15
	17000			Water	303.15	−18	32
	61600			Water	303.15	−41	15
				Water	303.15	−8.4	11
Poly(vinyl chloride)							
				Chlorobenzene	298.15	−17	36
Glass	23200			Cyclohexanone	303.15	−27	59
Liquid	23200			Cyclohexanone	303.15	−7.5	59
Glass	38700			Cyclohexanone	303.15	−29	59
Liquid	38700			Cyclohexanone	303.15	−6.6	59
Glass	53500			Cyclohexanone	303.15	−28	59
Liquid	53500			Cyclohexanone	303.15	−6.3	59
Glass	66700			Cyclohexanone	303.15	−29	59
Liquid	66700			Cyclohexanone	303.15	−6.1	59
Glass	136000			Cyclohexanone	303.15	−31	59
Liquid	136000			Cyclohexanone	303.15	−5.8	59
Glass	155400			Cyclohexanone	303.15	−32	59
Liquid	155400			Cyclohexanone	303.15	−5.8	59
	48000			Cyclopentanone	298.15	−28	104
				1,2-Dichloroethane	323.65	24	27
				1,2-Dichloroethane	328.15	34	27
				1,2-Dichloroethane	333.15	38	27
				1,2-Dichloroethane	368.15	44	27
				1,2-Dichloroethane	373.15	46	27
				1,2-Dichloroethane	378.15	46	27
				N,N-Dimethylformamide	293.15	−28	35
				N,N-Dimethylformamide	308.15	−19	35
				N,N-Dimethylformamide	323.15	−14	35
				N,N-Dimethylformamide	338.15	−7.5	35
				N,N-Dimethylformamide	353.15	2.4	35
Glass	23200			Tetrahydrofuran	303.15	−34	59
Liquid	23200			Tetrahydrofuran	303.15	−14	59
Glass	38700			Tetrahydrofuran	303.15	−35	59
Liquid	38700			Tetrahydrofuran	303.15	−14	59
Glass	53500			Tetrahydrofuran	303.15	−39	59
Liquid	53500			Tetrahydrofuran	303.15	−14	59
Glass	66700			Tetrahydrofuran	303.15	−36	59
Liquid	66700			Tetrahydrofuran	303.15	−14	59
Glass	136000			Tetrahydrofuran	303.15	−39	59
Liquid	136000			Tetrahydrofuran	303.15	−14	59
Glass	155400			Tetrahydrofuran	303.15	−39	59

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
Liquid	155400			Tetrahydrofuran	303.15	−14	59
Poly(1-vinyl-3,5-dimethyl-1,2,4-triazole)							
				N,N-Dimethylformamide	298.15	−28	94
				Water	298.15	−139	94
Poly(1-vinylimidazole)							
	20700			Acetic acid	298.15	−393	94
	20700			Butanoic acid	298.15	−322	94
	20700			*N,N*-Dimethylacetamide	298.15	−48	94
	20700			*N,N*-Dimethylformamide	298.15	−48	94
	20700			1-Methyl-2-pyrrolidinone	298.15	−54	91
	20700			Pentanoic acid	298.15	−325	94
	20700			Propanoic acid	298.15	−278	94
	20700			Water	298.15	−119	91
Poly(1-vinylpyrazole)							
	18900			Acetic acid	298.15	−88	94
	18900			Butanoic acid	298.15	−60	94
	18900			*N,N*-Dimethylacetamide	298.15	−26	94
	18900			*N,N*-Dimethylformamide	298.15	−28	94
	18900			Pentanoic acid	298.15	−52	94
	18900			Propanoic acid	298.15	−36	94
Poly(1-vinyl-2-pyrrolidone)							
			32000	Trichloromethane	298.15	−75	48
			32000	Water	298.15	−150	48
Poly(1-vinyl-1,2,4-triazole)							
	69500			Acetic acid	298.15	−85	94
	69500			Butanoic acid	298.15	−74	94
	69500			*N,N*-Dimethylacetamide	298.15	−49	94
	69500			*N,N*-Dimethylformamide	298.15	−47	94
	69500			1-Methyl-2-pyrrolidinone	298.15	−55	91
	69500			Pentanoic acid	298.15	−75	94
	69500			Propanoic acid	298.15	−72	94
	69500			Water	298.15	−68	91
Vinyl acetate/vinyl alcohol copolymer							
(9 wt% Vinyl acetate)				2-Propanone	298.15	6.3	33
(44 wt% Vinyl acetate)				2-Propanone	298.15	4.6	33
(57 wt% Vinyl acetate)				2-Propanone	298.15	0.0	33
(67 wt% Vinyl acetate)				2-Propanone	298.15	−1.3	33
(4.2 mol% Vinyl acetate) 7560				Water	303.15	−41	15
(4.3 mol% Vinyl acetate) 64300				Water	303.15	−49	15
(9.0 mol% Vinyl acetate) 66900				Water	303.15	−55	15
(10.3 mol% Vinyl acetate) 7970				Water	303.15	−41	15
(15.3 mol% Vinyl acetate) 8300				Water	303.15	−60	15

Polymer	M_n/ g/mol	M_w/ g/mol	M_η/ g/mol	Solvent	T/K	ΔH_B^∞/ J/g	Ref.
(15.4 mol% Vinyl acetate) 70700				Water	303.15	–65	15
(19.5 mol% Vinyl acetate) 73100				Water	303.15	–66	15
(22.1 mol% Vinyl acetate) 8800				Water	303.15	–60	15
(26.2 mol% Vinyl acetate) 77000				Water	303.15	–64	15
(30.6 mol% Vinyl acetate) 9370				Water	303.15	–53	15
(34.0 mol% Vinyl acetate) 81600				Water	303.15	–60	15
(34.7 mol% Vinyl acetate) 9670				Water	303.15	–44	15
Vinyl acetate/vinyl chloride copolymer (90 wt% Vinyl chloride)							
Glass	12400	26000		Cyclohexanone	304.15	–37	101
Liquid	12400	26000		Cyclohexanone	304.15	–16	101
Vinyl chloride/vinylidene chloride copolymer							
				Trichloromethane	297.15	–17	2

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