Supplementary Material for PCCP

Electronic Supplementary Information

Density differences and apparent molar volumes of SDS, differences in volumic heat capacities and apparent molar heat capacities of SDS, molar volumes and heat capacities of transfer of pluronics in the water/pluronic/SDS solutions at 298.15 and 318.15 K.

m_{SDS}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^3\times\delta\sigma/\sigma$	$C_{\phi,SDS}$	ΔC_{PLU}
mol kg^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}		J K^{-1} mol^{-1}	J K^{-1} mol^{-1}
		298.15 K			**318.15 K**			**298.15 K**	
L31		*m_P =.01832 mol kg^{-1}*							
		ρ_P = 0.999019			ρ_P = 0.991586			$c_{p,P}$ = 4.1675	
0.002330	90	249.94	1.68	107	244.24	-0.32	0.406	1758	90.2
0.002854	105	251.77	2.31	128	245.30	-0.24			
0.004143	157	250.65	2.97	191	243.97	-0.72			
0.004963	165	255.31	4.74	239	241.86	-1.49	0.342	1345	93.8
0.007576	230	258.19	7.96	368	241.34	-2.70	0.133	1139	79.4
0.009899	302	258.02	9.73	452	244.31	-2.16	-0.064	1045	72.4
0.01483	466	257.06	12.19	613	248.66	-0.38	-0.694	873	79.1
0.02029	652	256.30	14.17	784	251.35	1.55	-1.59	741	42.5
0.02475	815	255.46	14.75	930	252.39	2.46	-2.34	666	-1.8
0.03499	1168	254.92	16.52	1276	253.42	3.25	-4.32	543	-152.1
0.04965	1702	253.88	18.17	1791	253.69	3.44	-7.21	445	-385.6
0.06499	2268	253.12	19.34	2337	253.66	2.81	-10.12	394	-606.0
0.08005	2837	252.44	20.42	2884	253.45	1.86	-12.74	374	-763.0
0.09943	3567	251.82	21.42	3593	253.16	-0.24	-15.87	367	-905.8
0.1247	4485	251.38		4470	253.23	-1.97	-19.30	382	-934.4
0.1506	5461	250.86	22.40	5316	253.14	-3.12	-22.52	398	-956.2

m_{SDS}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^3\times\delta\sigma/\sigma$	$C_{\phi,SDS}$	ΔC_{PLU}
mol kg^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}		J K^{-1} mol^{-1}	J K^{-1} mol^{-1}
		298.15 K			**318.15 K**			**298.15 K**	
L 35		*m_P = 0.01061 mol kg^{-1}*							
		ρ_P = 0.999572			ρ_P =0.992485			$C_{p,P}$ = 4.1627	
0.002041	81	248.76	2.32	41	270.16	4.58	0.307	1662	115.5
0.006420	226	253.21	8.83	138	268.70	12.96	-0.036	1031	34.0
0.008004	276	253.92	11.01	180	267.68	15.14	-0.181	962	16.2
0.009797	332	254.50	13.27	224	267.29	17.84	-0.389	893	-9.0
0.01604	550	254.05	17.46	411	264.44	23.16	-1.29	720	-55.7
0.02047	706	253.81	19.55	549	263.19	25.77	-2.01	644	-111.3
0.02641	918	253.48	21.14	755	261.34	26.54	-3.03	574	-211.4
0.02988	1045	253.24	21.45	856	261.26	28.60	-3.64	542	-279.2
0.03464	1222	252.89	21.45	1034	259.99	27.35	-4.50	507	-380.4
0.04041	1427	252.80	22.47	1238	259.14	26.77	-5.54	476	-498.1
0.05016	1797	252.19	23.39	1581	258.16	25.94	-7.31	435	-707.4
0.07549	2746	251.41	25.76	2475	256.64	26.31	-11.44	403	-1057
0.1016	3728	250.84	27.96	3379	255.93	26.25	-15.21	405	-1208
0.1442	5424	249.50		4934	254.56		-20.93	412	-1224
10 R 5		*m_P = 0.009625 mol kg^{-1}*							
		ρ_P = 0.999531			ρ_P = 0.99247			$C_{p,P}$ = 4.1621	
0.002317	110	240.97	0.98	79	255.93	2.26	0.163	1295	57.0
256.99	0.039	246.62	4.10	147		4.63		1062	21.3
0.007776	305	249.18	8.05	252	257.60	8.05	-0.427	807	-114.2
0.009659	374	249.67	9.64	310	257.90	9.94	-0.684	743	-166.1
0.01479	556	250.75	13.26	463	258.67	14.98	-1.31	673	-165.0
0.01846	688	251.04	15.15	572	258.96	18.12	-1.84	629	-184.3
0.02423	896	251.28	17.01	767	258.23	19.77	-2.64	590	-208.7
0.02985	1099	251.39	17.97				-3.48	557	-263.3
0.03469	1271	251.52	18.82	1113	257.71	21.99	-4.18	540	-299.7
0.0421	1544	251.42	19.31	1359	257.44	22.87	-5.34	512	-394.7
0.05096	1870	251.32	21.68	1655	257.17	23.88	-6.60	499	-444.1
0.07705	2832	251.01	25.92	2542	256.42	27.88	-10.65	458	-738.4
0.09809	3608	250.79	29.00	3265	255.93	28.48	-13.80	443	-916.8
0.1465	5439	249.99	28.28	4933	255.11	23.85	-20.52	436	-1214

m_{SDS}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^3\times\delta\sigma/\sigma$	$C_{\phi,SDS}$	ΔC_{PLU}
mol kg^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}		J K^{-1} mol^{-1}	J K^{-1} mol^{-1}
		298.15 K			**318.15 K**			**298.15 K**	
L 64		*m_P = 0.0035 mol kg^{-1}*							
		ρ_P = 0.998268			ρ_P = 0.991039			$C_{p,P}$ = 4.1721	
0.001016	12	248.38	3.64	22	268.93	5.78	0.601	3504	691.6
0.001986	34	257.04	11.80	56	262.26	8.17	0.844	2845	980.9
0.002999	91	258.41	15.63				0.956	2407	928.8
0.003959	90	258.69	24.36	144	253.92	7.05	0.866	1992	1017.1
0.004969	143	259.96	28.58				0.795	1751	772.6
0.007969	238	258.85	41.80				0.036	1097	-10.6
0.009966	300	258.60	49.67				-0.645	806	-681.2
0.01231	376	255.77	51.39	531	246.94	-7.05			
0.01241	406	255.95	48.81						
0.01497	482	256.45	58.28	665	245.59	-12.01	-2.06	492	-1397
0.01997	650	254.59	64.08	828	248.56	-8.66	-3.14	400	-1795
0.02457	840	254.36	62.90						
0.03675	1370	249.95	39.24	1480	249.39	-26.01	-6.00	353	-2869
0.05226	1943	250.26	48.69	2026	250.85	-28.37	-8.12	386	-3001
0.079254	2984	249.81	48.76	2990	251.71	-29.37	-11.57	419	-2997
0.10626	4038	249.33	45.46	3944	252.12		-14.90	438	-2799
0.1377	5229	249.12	42.49	5025	252.46	-34.50	-18.34	463	-2247
0.15755	5942	249.28	52.35			-42.08	-20.86	464	-2275
0.1938	7216	249.46	43.20	6838	253.25	-34.85	-24.77	480	-1910
L64		*m_P = 0.007 mol.kg^{-1}*							
		ρ_P = 0.999445			ρ_P = 0.991795			$c_{p,P}$ =4.16613	
0.00316	5	285.05	21.65	45	276.28	13.28	2.60	4636	1692
0.005146	80	271.79	24.70	162	258.72	8.21	3.01	3582	1946
0.007346	153	268.74	29.30	281	251.81	4.14	2.86	2744	1898
0.009957	241	263.64	32.98	416	248.19	-0.67	2.41	2116	1715
0.01475	379	263.26	42.34	636	246.77	-5.55	0.667	1285	1154
0.02153	564	261.89	54.51	879	249.04	-4.66	-1.76	751	248.1
0.03121	919	258.63	55.87	1278	248.82	-13.21	-4.75	440	-828.9
0.04114	1362	254.90	47.03	1717	247.91	-28.05	-7.12	334	-1562
0.05481	1881	253.85	47.91	2226	248.92	-33.39	-9.46	328	-1925
0.06984	2435	253.13	48.32	2746	250.10	-32.10	-11.72	336	-2115
0.0847	3005	252.36	48.53	3204	251.50	-23.53	-13.87	358	-2248
0.1005	3605	251.80	48.71	3787	251.26	-33.12	-15.98	369	-2357
0.1505	5406	251.27	47.53	5510	252.15	-39.18	-22.26	406	-2391

m_{SDS}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^3\times\delta\sigma/\sigma$	$C_{\phi,SDS}$	ΔC_{PLU}
mol kg^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}		J K^{-1} mol^{-1}	J K^{-1} mol^{-1}
		298.15 K			**318.15 K**			**298.15 K**	
F 68		*m_P = 0.00024 mol kg^{-1}*							
		ρ_P = 1.000003			ρ_P = 0.992913			$c_{p,P}$ = 4.1581	
0.002043	79	249.68	11.2	33	274.28	23.1	0.304	1658	513.6
0.003120	96	257.58	29.0	64	276.32	37.7	0.209	1350	404.9
0.004119	146	252.89	26.5	89	268.80	36.1	0.071	1123	173.7
0.005217	183	253.24	35.4	126	266.25	39.5	-0.131	949	-115.5
0.006369	211	255.18	44.5	162	264.95	44.0	-0.314	856	-326.2
0.008254	281	254.24	51.5	223	263.35	50.1	-0.711	698	-835.3
0.01066	381	252.51	53.8	292	262.95	60.9	-1.30	543	-1557
0.01331	479	252.24	59.1	406	259.80	55.4	-1.81	481	-1862
0.01797	657	251.55	64.6	574	258.31	57.5	-2.69	422	-2352
0.02113	780	251.21	65.9	687	257.70	58.0	-3.07	438	-2318
0.02628	974	251.00	69.3	869	257.09	57.7	-3.79	440	-2449
0.03112	1167	250.50	62.1	1043	256.58	54.4	-4.34	457	-2360
0.03396	1255	251.02	69.4	1127	257.21	64.5	-4.82	449	-2538
0.04229	1593	250.19	57.9	1432	256.11		-5.83	462	-2495
0.04860	1830	250.13	61.3	1648	256.22	64.8	-6.66	464	-2535
0.07422	2795	249.81	69.5	2520	255.82	80.0	-9.99	470	-2576
0.09890	3704	249.72	86.6	3357	255.52	86.9	-13.56	455	-3193
0.1475	5477	249.47		4980	255.14	88.4	-19.68	464	-3140

m_{SDS}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^6\times\delta\rho$	$V_{\phi,SDS}$	ΔV_{PLU}	$10^3\times\delta\sigma/\sigma$	$C_{\phi,SDS}$	ΔC_{PLU}
mol kg^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}	g cm^{-3}	cm^3 mol^{-1}	cm^3 mol^{-1}		J K^{-1} mol^{-1}	J K^{-1} mol^{-1}
		298.15 K			**318.15 K**			**298.15 K**	
P 123		*m_P = 0.001731 mol kg^{-1}*							
	ρ_P = 0.997869			ρ_P = 0.990823				$c_{p,P}$ = 4.2098	
0.002662	131	239.54	3.75	122	244.34	-3.79	-5.63	-7906	-13919
0.005065	300	229.44	-25.83	234	243.93	-9.88	-5.18	-3343	-12851
0.007154	428	228.82	-42.95				-5.52	-2342	-13581
0.009881	576	230.32	-57.58	482	241.25	-40.2	-8.82	-2798	-21336
0.01482	791	235.21	-60.91	730	240.70	-72.5	-10.96	-2137	-25230
0.01945	984	237.95	-62.92	947	241.23	-97.6	-12.02	-1614	-26415
0.02476	1196	240.20	-65.21	1171	242.59	-115.3	-13.09	-1230	-27441
0.03559	1633	242.52	-82.07	1589	245.18	-137	-14.40	-699	-27407
0.04991	2214	243.91	-99.20	2123	247.19	-160.3	-16.39	-374	-27930
0.06493	2801	244.98	-105.70	2661	248.64	-160.7	-18.16	-167	-27649
0.07980	3375	245.69	-100.49	3185	249.59	-159.6	-20.03	-45	-27547
0.1001	4146	246.38	-91.79	3895	250.43	-161.8	-22.56	63	-27335
0.1316	5312	247.14		4928	251.66	-138.4	-25.97	181	-25792
0.1879	7404	247.59	-83.52	6817	252.36	-161.7	-32.41	280	-25357