Thermophysical Behavior of n-Alkane + Alkylbenzoate Mixed Solvents. Measurements and Properties Modeling.

Santiago Aparicio, Begoña García, Rafael Alcalde, and José M. Leal*

Universidad de Burgos, Departamento de Química

09001 Burgos, Spain

Corresponding Author: jmleal@ubu.es

Supporting Information

Table I. Density, ρ / g cm^{-3} and dynamic viscosity, η / mPa s, for the x_1 n-alkane + $(1 - x_1)$ alkylbenzoate binary mixtures at different temperatures

T = 278.15 K														
x_1 HEX+ $(1 - x_1)$ MB			x_1 OCT + $(1 - x_1)$ MB			x_1 DEC+ $(1 - x_1)$ MB			x_1 DOD+ $(1 - x_1)$ MB			x_1 TET+ $(1 - x_1)$ MB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0339	1.08822	2.668	0.0374	1.08463	2.729	0.0230	1.09004	2.907	0.0200	1.09046	3.004	---	---	---
0.0890	1.06478	2.286	0.0683	1.06983	2.533	0.0421	1.07967	2.780	0.0492	1.07305	2.866	---	---	---
0.1355	1.04482	2.015	0.1050	1.05252	2.329	0.0847	1.05728	2.541	0.0778	1.05678	2.756	---	---	---
0.1810	1.02525	1.789	0.1488	1.03219	2.110	0.1204	1.03921	2.387	0.1110	1.03869	2.642	---	---	---
0.2294	1.00437	1.581	0.1858	1.01535	1.951	0.1558	1.02187	2.250	0.1416	1.02282	2.543	---	---	---
0.2773	0.98368	1.408	0.2307	0.99533	1.778	0.1958	1.00308	2.117	0.1757	1.00601	2.455	---	---	---
0.2907	0.97783	1.361	0.2723	0.97713	1.640	0.2311	0.98705	2.011	0.2117	0.98905	2.377	---	---	---
0.3431	0.95515	1.217	0.3201	0.95671	1.500	0.2755	0.96770	1.896	0.2521	0.97112	2.303	---	---	---
0.3910	0.93435	1.086	0.3620	0.93918	1.392	0.3165	0.95052	1.806	0.2851	0.95712	2.250	---	---	---
0.4415	0.91246	0.975	0.4112	0.91912	1.283	0.3639	0.93145	1.706	0.3338	0.93763	2.175	---	---	---
0.4883	0.89213	0.888	0.4559	0.90128	1.196	0.3910	0.92096	1.657	0.3751	0.92203	2.125	---	---	---
0.5682	0.85740	0.753	0.5078	0.88104	1.103	0.4492	0.89928	1.559	0.4300	0.90258	2.066	---	---	---
0.6121	0.83835	0.694	0.5555	0.86292	1.029	0.5053	0.87945	1.477	0.4763	0.88718	2.028	---	---	---
0.6627	0.81640	0.636	0.6090	0.84314	0.957	0.5620	0.86043	1.408	0.5320	0.86975	1.995	---	---	---
0.7131	0.79462	0.582	0.6606	0.82453	0.896	0.6311	0.83849	1.338	0.5849	0.85423	1.975	---	---	---
0.7649	0.77235	0.536	0.7026	0.80975	0.852	0.6781	0.82431	1.296	0.6479	0.83696	1.959	---	---	---
0.8113	0.75241	0.500	0.8197	0.77026	0.756	0.7362	0.80753	1.254	0.7095	0.82118	1.958	---	---	---
0.8716	0.72669	0.461	0.8355	0.76511	0.744	0.8016	0.78960	1.223	0.7924	0.80163	1.974	---	---	---
0.9465	0.69496	0.423	0.8947	0.74627	0.711	0.9298	0.75725	1.192	0.8536	0.78825	1.985	---	---	---
T = 288.15														
0.0539	1.07034	2.005	0.0497	1.06869	2.048	0.0358	1.07313	2.159	0.0316	1.07351	2.207	0.0363	1.06874	2.232
0.1066	1.04782	1.757	0.0830	1.05303	1.909	0.0676	1.05635	2.046	0.0548	1.05998	2.131	0.0524	1.05857	2.205
0.1487	1.02984	1.586	0.1242	1.03376	1.754	0.0944	1.04260	1.958	0.0860	1.04264	2.057	0.0773	1.04357	2.173
0.1865	1.01372	1.450	0.1626	1.01622	1.625	0.1298	1.02507	1.856	0.1151	1.02713	1.992	0.1033	1.02870	2.142
0.2201	0.99947	1.343	0.1886	1.00444	1.547	0.1700	1.00573	1.749	0.1440	1.01239	1.938	0.1270	1.01581	2.126
0.2744	0.97623	1.187	0.2348	0.98404	1.422	0.2074	0.98860	1.662	0.1794	0.99519	1.883	0.1567	1.00051	2.116
0.3188	0.95703	1.079	0.2758	0.96629	1.322	0.2463	0.97141	1.581	0.2158	0.97840	1.830	0.1961	0.98148	2.095
0.3742	0.93317	0.962	0.3190	0.94807	1.232	0.2800	0.95700	1.518	0.2592	0.95949	1.783	0.2301	0.96616	2.084
0.4568	0.89749	0.813	0.3695	0.92721	1.136	0.3240	0.93890	1.447	0.2925	0.94568	1.743	0.2634	0.95206	2.076
0.5598	0.85318	0.670	0.4150	0.90890	1.060	0.3676	0.92173	1.382	0.3332	0.92968	1.711	0.2930	0.94008	2.071
0.6099	0.83158	0.613	0.4492	0.89536	1.009	0.4132	0.90448	1.321	0.3773	0.91335	1.669	0.3477	0.91963	2.074
0.6526	0.81327	0.570	0.5012	0.87532	0.941	0.4561	0.88892	1.270	0.4165	0.89947	1.638	0.3827	0.90741	2.079
0.7026	0.79174	0.525	0.5538	0.85556	0.876	0.5078	0.87097	1.217	0.4647	0.88343	1.609	0.4402	0.88882	2.095
0.7416	0.77497	0.494	0.6056	0.83663	0.822	0.5578	0.85434	1.170	0.5207	0.86589	1.580	0.4912	0.87362	2.114
0.7892	0.75485	0.461	0.6460	0.82213	0.783	0.6126	0.83699	1.127	0.5770	0.84946	1.559	0.5372	0.86084	2.135
0.8416	0.73243	0.429	0.7102	0.79981	0.730	0.6633	0.82165	1.092	0.6341	0.83379	1.547	0.6031	0.84396	2.178
0.9015	0.70704	0.400	0.7652	0.78129	0.692	0.7813	0.78841	1.034	0.6942	0.81841	1.536	0.6704	0.82824	2.224
			0.8123	0.76587	0.664	0.8649	0.76686	1.010	0.7555	0.80370	1.534	0.7300	0.81546	2.275
			0.8675	0.74826	0.636				0.8794	0.77692	1.565	0.8414	0.79398	2.386

Table I. Continued

T = 298.15 K														
x_1 HEX+ $(1-x_1)$ MB			x_1 OCT + $(1-x_1)$ MB			x_1 DEC+ $(1-x_1)$ MB			x_1 DOD+ $(1-x_1)$ MB			x_1 TET+ $(1-x_1)$ MB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0743	1.05220	1.549	0.0356	1.06645	1.698	0.0262	1.06928	1.743	0.0820	1.03576	1.662	0.0359	1.05992	1.787
0.1072	1.03810	1.437	0.0736	1.04824	1.572	0.0672	1.04755	1.629	0.1173	1.01693	1.604	0.0603	1.04470	1.763
0.1557	1.01731	1.292	0.1081	1.03200	1.474	0.1282	1.01670	1.488	0.1440	1.00329	1.569	0.0869	1.02899	1.742
0.2038	0.99667	1.165	0.1549	1.01045	1.349	0.1720	0.99578	1.406	0.1894	0.98139	1.521	0.1140	1.01382	1.723
0.2487	0.97735	1.059	0.1926	0.99336	1.265	0.2455	0.96265	1.290	0.2155	0.96941	1.489	0.1429	0.99855	1.706
0.3060	0.95250	0.942	0.2388	0.97294	1.169	0.2831	0.94655	1.234	0.2495	0.95448	1.456	0.1751	0.98248	1.695
0.4327	0.89751	0.739	0.3669	0.91879	0.961	0.3238	0.92983	1.184	0.2908	0.93732	1.424	0.2075	0.96731	1.686
0.5799	0.83380	0.573	0.4093	0.90160	0.905	0.3645	0.91377	1.141	0.3295	0.92204	1.395	0.2786	0.93690	1.675
0.6269	0.81360	0.531	0.4513	0.88500	0.855	0.4095	0.89668	1.095	0.3708	0.90662	1.367	0.3166	0.92213	1.672
0.7731	0.75074	0.430	0.5041	0.86457	0.796	0.4580	0.87907	1.050	0.4625	0.87505	1.325	0.3592	0.90665	1.673
0.8687	0.71015	0.379	0.5500	0.84726	0.754	0.5093	0.86128	1.012	0.5803	0.83949	1.295	0.4082	0.89010	1.680
0.9288	0.68480	0.356	0.6034	0.82769	0.707	0.5630	0.84350	0.972	0.6336	0.82496	1.286	0.4539	0.87578	1.688
			0.6567	0.80866	0.669	0.6077	0.82932	0.946	0.6963	0.80898	1.278	0.5114	0.85910	1.700
			0.7105	0.79000	0.634	0.6694	0.81071	0.915	0.7551	0.79494	1.279	0.5687	0.84384	1.718
			0.7575	0.77410	0.606	0.7276	0.79398	0.891	0.8370	0.77686	1.291	0.6228	0.83048	1.743
			0.8645	0.73946	0.558	0.8044	0.77324	0.868	0.9197	0.76016	1.314	0.6938	0.81444	1.782
			0.9387	0.71664	0.533	0.8571	0.75972	0.855	0.0820	1.03576	1.662	0.7735	0.79811	1.842
						0.9293	0.74219	0.845	0.1173	1.01693	1.604	0.8501	0.78390	1.905
T = 308.15														
0.0711	1.04395	1.287	0.0548	1.04758	1.358	0.0467	1.04865	1.400	0.0354	1.05267	1.452	0.0334	1.05194	1.486
0.1099	1.02736	1.188	0.0935	1.02932	1.263	0.0764	1.03325	1.340	0.0681	1.03396	1.412	0.0663	1.03162	1.471
0.1560	1.00759	1.080	0.1329	1.01104	1.177	0.1148	1.01391	1.271	0.0984	1.01744	1.376	0.0869	1.01966	1.464
0.1971	0.98995	0.989	0.1743	0.99220	1.099	0.1464	0.99853	1.219	0.1260	1.00305	1.347	0.1156	1.00380	1.452
0.2501	0.96711	0.894	0.2160	0.97365	1.026	0.1853	0.98036	1.163	0.1623	0.98506	1.311	0.1423	0.98974	1.444
0.2967	0.94696	0.816	0.2531	0.95745	0.967	0.2147	0.96703	1.120	0.1958	0.96923	1.282	0.1737	0.97418	1.436
0.3441	0.92648	0.748	0.2946	0.93969	0.909	0.2537	0.95000	1.076	0.2384	0.95025	1.248	0.2082	0.95813	1.428
0.3888	0.90715	0.690	0.3410	0.92029	0.852	0.2939	0.93305	1.031	0.2693	0.93719	1.226	0.2405	0.94392	1.422
0.4383	0.88574	0.633	0.3823	0.90336	0.806	0.3391	0.91482	0.988	0.3062	0.92227	1.203	0.2806	0.92748	1.418
0.4943	0.86152	0.577	0.4247	0.88642	0.763	0.3803	0.89887	0.956	0.3476	0.90640	1.182	0.3218	0.91167	1.415
0.5292	0.84641	0.546	0.4738	0.86727	0.719	0.4290	0.88079	0.922	0.3895	0.89123	1.164	0.3558	0.89936	1.415
0.5797	0.82459	0.504	0.5182	0.85033	0.685	0.4756	0.86424	0.894	0.4361	0.87528	1.146	0.4082	0.88179	1.420
0.6228	0.80598	0.475	0.5728	0.83009	0.645	0.5274	0.84665	0.866	0.4850	0.85951	1.131	0.4482	0.86925	1.426
0.6692	0.78601	0.446	0.6245	0.81139	0.612	0.5750	0.83118	0.841	0.5382	0.84339	1.120	0.5073	0.85216	1.438
0.7253	0.76194	0.412	0.6742	0.79393	0.583	0.6318	0.81363	0.816	0.5886	0.82905	1.112	0.5627	0.83738	1.455
0.7670	0.74415	0.392	0.7274	0.77572	0.558	0.6926	0.79571	0.790	0.6500	0.81268	1.108	0.6200	0.82331	1.478
0.8162	0.72317	0.370	0.7740	0.76021	0.536	0.7434	0.78148	0.775	0.7204	0.79525	1.107	0.6846	0.80870	1.508
0.8731	0.69908	0.347	0.8351	0.74044	0.512	0.8116	0.76336	0.759	0.7849	0.78045	1.110	0.7661	0.79199	1.553
0.9205	0.67905	0.329	0.9135	0.71603	0.486	0.8870	0.74450	0.747	0.8845	0.75956	1.124	0.8624	0.77437	1.613

Table I. Continued

T = 318.15 K														
$x_{1.}$ HEX+ $(1 - x_{1.})$ MB			$x_{1.}$ OCT + $(1 - x_{1.})$ MB			$x_{1.}$ DEC+ $(1 - x_{1.})$ MB			$x_{1.}$ DOD+ $(1 - x_{1.})$ MB			$x_{1.}$ TET+ $(1 - x_{1.})$ MB		
$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η
0.0800	1.03037	1.087	0.0668	1.03230	1.147	0.0153	1.05596	1.249	0.0445	1.03674	1.219	0.0194	1.05149	1.263
0.0873	1.02728	1.072	0.0719	1.02988	1.139	0.0485	1.03831	1.196	0.0506	1.03313	1.213	0.0462	1.03451	1.250
0.1249	1.01139	1.000	0.1120	1.01122	1.068	0.0774	1.02337	1.151	0.0779	1.01744	1.183	0.0710	1.01965	1.242
0.1776	0.98895	0.906	0.1404	0.99819	1.022	0.1130	1.00554	1.101	0.1097	1.00005	1.152	0.1011	1.00256	1.231
0.2189	0.97129	0.839	0.1952	0.97351	0.940	0.1467	0.98926	1.058	0.1388	0.98492	1.126	0.1287	0.98776	1.223
0.2731	0.94798	0.757	0.2418	0.95309	0.876	0.1837	0.97199	1.015	0.1737	0.96767	1.097	0.1619	0.97102	1.213
0.3197	0.92787	0.696	0.2828	0.93553	0.823	0.2171	0.95698	0.977	0.2067	0.95218	1.072	0.1930	0.95627	1.205
0.3711	0.90565	0.634	0.3337	0.91422	0.764	0.2582	0.93912	0.936	0.2449	0.93525	1.048	0.2311	0.93932	1.198
0.4155	0.88649	0.586	0.3678	0.90022	0.729	0.2931	0.92452	0.903	0.2814	0.91994	1.025	0.2670	0.92439	1.193
0.4667	0.86436	0.537	0.4175	0.88033	0.682	0.3395	0.90595	0.863	0.3256	0.90253	1.001	0.3111	0.90733	1.189
0.5132	0.84432	0.499	0.4630	0.86259	0.644	0.3892	0.88692	0.826	0.3648	0.88797	0.983	0.3471	0.89417	1.186
0.5535	0.82692	0.471	0.5158	0.84248	0.605	0.4363	0.86965	0.795	0.4153	0.87040	0.964	0.3979	0.87708	1.187
0.6116	0.80185	0.436	0.5624	0.82521	0.576	0.4972	0.84850	0.760	0.4635	0.85472	0.950	0.4448	0.86239	1.189
0.6634	0.77961	0.410	0.6149	0.80626	0.548	0.5486	0.83150	0.734	0.5194	0.83774	0.938	0.5017	0.84594	1.196
0.7082	0.76042	0.388	0.6664	0.78825	0.525	0.6025	0.81455	0.713	0.5726	0.82269	0.931	0.5526	0.83236	1.206
0.7636	0.73678	0.365	0.7241	0.76858	0.502	0.6669	0.79530	0.692	0.6372	0.80575	0.926	0.6171	0.81655	1.222
0.8087	0.71758	0.350	0.7767	0.75118	0.485	0.7208	0.78002	0.678	0.7000	0.79051	0.924	0.6828	0.80180	1.244
0.8631	0.69446	0.333	0.8373	0.73177	0.468	0.7971	0.75957	0.663	0.7739	0.77396	0.929	0.7602	0.78601	1.276
0.9098	0.67471	0.317	0.8921	0.71475	0.453	0.8627	0.74302	0.655	0.8468	0.75898	0.938	0.8353	0.77213	1.314

Table I. Continued

T = 278.15 K														
x_1 HEX+ $(1-x_1)$ EB			x_1 OCT + $(1-x_1)$ EB			x_1 DEC+ $(1-x_1)$ EB			x_1 DOD+ $(1-x_1)$ EB			x_1 TET+ $(1-x_1)$ EB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0867	1.03105	2.547	0.0337	1.04748	2.910	0.0335	1.04614	2.920	0.0225	1.04960	3.065	---	---	---
0.1017	1.02589	2.452	0.0765	1.03134	2.647	0.0622	1.03397	2.779	0.0567	1.03391	2.893	---	---	---
0.1540	1.00772	2.148	0.1140	1.01717	2.439	0.1003	1.01833	2.601	0.0887	1.01976	2.757	---	---	---
0.2062	0.98923	1.889	0.1648	0.99807	2.190	0.1422	1.00157	2.427	0.1253	1.00411	2.644	---	---	---
0.2549	0.97168	1.674	0.2061	0.98269	2.017	0.1797	0.98688	2.290	0.1575	0.99085	2.556	---	---	---
0.3071	0.95265	1.478	0.2551	0.96460	1.831	0.2232	0.97037	2.149	0.1984	0.97460	2.455	---	---	---
0.3557	0.93461	1.318	0.2985	0.94872	1.687	0.2629	0.95569	2.035	0.2349	0.96075	2.377	---	---	---
0.4060	0.91570	1.176	0.3487	0.93057	1.539	0.3099	0.93881	1.914	0.2781	0.94504	2.299	---	---	---
0.4540	0.89742	1.054	0.3882	0.91642	1.435	0.3509	0.92446	1.818	0.3178	0.93117	2.236	---	---	---
0.5031	0.87847	0.948	0.4367	0.89923	1.323	0.4011	0.90749	1.716	0.3639	0.91578	2.175	---	---	---
0.5381	0.86482	0.880	0.4829	0.88304	1.227	0.4447	0.89310	1.638	0.4070	0.90206	2.125	---	---	---
0.6124	0.83533	0.759	0.5413	0.86284	1.121	0.4975	0.87631	1.553	0.4588	0.88628	2.074	---	---	---
0.6431	0.82296	0.711	0.5881	0.84685	1.047	0.5746	0.85274	1.447	0.5054	0.87276	2.032	---	---	---
0.6923	0.80296	0.643	0.6407	0.82911	0.971	0.6212	0.83887	1.389	0.5624	0.85704	1.990	---	---	---
0.7351	0.78535	0.593	0.6885	0.81318	0.911	0.6498	0.83062	1.362	0.6145	0.84337	1.963	---	---	---
0.7855	0.76431	0.543	0.7445	0.79475	0.850	0.7088	0.81416	1.311	0.6768	0.82783	1.946	---	---	---
0.8319	0.74474	0.501	0.7929	0.77903	0.804	0.7620	0.79976	1.264	0.7322	0.81473	1.943	---	---	---
0.8763	0.72587	0.467	0.8759	0.75255	0.738	0.8607	0.77433	1.206	0.8011	0.79927	1.961	---	---	---
0.9229	0.70588	0.436	0.9402	0.73253	0.698	0.8829	0.76871	1.195	0.8657	0.78562	1.995	---	---	---
T = 288.15														
0.0562	1.03181	2.132	0.0399	1.0355	2.244	0.0400	1.03382	2.279	0.0318	1.03584	2.344	0.0265	1.03708	2.390
0.1080	1.01430	1.894	0.0856	1.0183	2.040	0.0804	1.01713	2.134	0.0681	1.01948	2.246	0.0569	1.02224	2.347
0.1648	0.99465	1.655	0.1309	1.0014	1.869	0.1149	1.00319	2.022	0.0983	1.00633	2.175	0.0848	1.00915	2.311
0.2073	0.97972	1.511	0.1716	0.9863	1.729	0.1623	0.98466	1.888	0.1361	0.99056	2.094	0.1152	0.99556	2.279
0.2522	0.96372	1.362	0.2187	0.9690	1.585	0.1905	0.97385	1.817	0.1618	0.98015	2.045	0.1449	0.98284	2.254
0.3032	0.94524	1.220	0.2644	0.9523	1.462	0.2275	0.95999	1.729	0.1992	0.96559	1.980	0.1779	0.96946	2.232
0.3488	0.92852	1.106	0.3038	0.9381	1.366	0.2731	0.94342	1.636	0.2360	0.95180	1.925	0.2103	0.95688	2.213
0.4049	0.90760	0.985	0.3498	0.9217	1.265	0.3102	0.93026	1.565	0.2740	0.93815	1.874	0.2462	0.94369	2.199
0.4435	0.89305	0.908	0.3994	0.9041	1.169	0.3553	0.91476	1.489	0.3153	0.92388	1.824	0.2937	0.92719	2.185
0.4883	0.87590	0.831	0.4472	0.8874	1.089	0.3986	0.90028	1.422	0.3626	0.90830	1.775	0.3266	0.91632	2.180
0.5522	0.85111	0.731	0.4888	0.8730	1.022	0.4419	0.88616	1.365	0.4090	0.89368	1.732	0.3752	0.90120	2.177
0.5905	0.83606	0.682	0.5356	0.8570	0.956	0.4667	0.87826	1.334	0.4518	0.88080	1.699	0.4177	0.88872	2.180
0.6340	0.81875	0.627	0.5860	0.8399	0.893	0.5407	0.85545	1.246	0.5036	0.86592	1.664	0.4651	0.87558	2.188
0.6926	0.79514	0.565	0.6366	0.8230	0.836	0.5893	0.84097	1.198	0.5575	0.85118	1.635	0.5206	0.86113	2.203
0.7326	0.77883	0.537	0.6849	0.8071	0.789	0.6403	0.82629	1.154	0.6112	0.83725	1.610	0.5742	0.84805	2.225
0.7814	0.75875	0.485	0.7304	0.7922	0.746	0.6992	0.80994	1.110	0.6641	0.82414	1.594	0.6265	0.83605	2.253
0.8190	0.74305	0.455	0.7871	0.7740	0.702	0.7514	0.79596	1.078	0.7263	0.80957	1.582	0.6935	0.82174	2.298
0.8675	0.72259	0.422	0.8363	0.7584	0.667	0.8145	0.77960	1.044	0.7790	0.79778	1.579	0.7533	0.80981	2.349
0.9339	0.69434	0.382	0.9176	0.7331	0.622	0.9002	0.75838	1.012	0.8614	0.78049	1.587	0.8514	0.79190	2.453

Table I. Continued

T = 298.15 K														
x_1 HEX+ $(1-x_1)$ EB			x_1 OCT + $(1-x_1)$ EB			x_1 DEC+ $(1-x_1)$ EB			x_1 DOD+ $(1-x_1)$ EB			x_1 TET+ $(1-x_1)$ EB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0271	1.03271	1.845	0.0634	1.01747	1.743	0.0396	1.02477	1.837	0.0310	1.02715	1.896	0.0376	1.02272	1.927
0.1115	1.00402	1.528	0.1034	1.00246	1.624	0.1121	0.99519	1.655	0.0620	1.01314	1.835	0.0653	1.00944	1.899
0.1588	0.98770	1.375	0.1463	0.98640	1.503	0.1510	0.97986	1.566	0.0893	1.00117	1.785	0.0970	0.99483	1.866
0.2058	0.97103	1.242	0.1843	0.97232	1.405	0.2285	0.95051	1.420	0.1261	0.98565	1.726	0.1285	0.98104	1.840
0.3029	0.93596	1.008	0.2315	0.95497	1.299	0.2637	0.93763	1.355	0.1680	0.96874	1.663	0.1619	0.96711	1.815
0.3991	0.90007	0.828	0.2774	0.93827	1.203	0.3109	0.92089	1.289	0.2378	0.94215	1.580	0.1952	0.95393	1.799
0.4898	0.86533	0.688	0.3224	0.92205	1.125	0.4026	0.88978	1.176	0.2782	0.92768	1.532	0.2290	0.94115	1.781
0.5921	0.82515	0.570	0.4189	0.88784	0.973	0.4449	0.87601	1.136	0.3577	0.90090	1.462	0.2690	0.92683	1.767
0.6377	0.80683	0.527	0.4608	0.87319	0.920	0.4949	0.86026	1.088	0.4064	0.88556	1.427	0.3084	0.91354	1.754
0.6782	0.79052	0.491	0.5113	0.85573	0.861	0.5326	0.84867	1.056	0.4557	0.87074	1.396	0.3521	0.89948	1.745
0.7316	0.76865	0.456	0.5549	0.84082	0.813	0.5928	0.83081	1.011	0.5044	0.85680	1.371	0.3928	0.88717	1.742
0.7730	0.75163	0.426	0.6028	0.82466	0.767	0.6401	0.81721	0.982	0.5519	0.84379	1.351	0.4877	0.86093	1.744
0.8227	0.73081	0.394	0.6476	0.80972	0.726	0.6988	0.80090	0.947	0.6714	0.81356	1.331	0.5485	0.84564	1.755
0.8654	0.71285	0.371	0.6978	0.79321	0.686	0.8120	0.77111	0.894	0.7194	0.80231	1.324	0.5924	0.83524	1.767
0.9101	0.69376	0.354	0.7588	0.77341	0.644	0.8703	0.75656	0.875	0.7886	0.78694	1.320	0.6572	0.82087	1.791
0.9517	0.67600	0.341	0.8037	0.75907	0.616	0.9276	0.74277	0.860	0.8626	0.77149	1.325	0.7238	0.80718	1.827
			0.8646	0.73986	0.583				0.9296	0.75834	1.335	0.7795	0.79647	1.867
			0.9214	0.72229	0.556							0.8695	0.78048	1.935
T = 308.15														
0.0828	1.00454	1.413	0.0649	1.00764	1.485	0.0574	1.00825	1.521	0.0462	1.01090	1.569	0.0358	1.01439	1.606
0.1328	0.98730	1.290	0.1092	0.99103	1.382	0.0864	0.99640	1.466	0.0741	0.99854	1.532	0.0727	0.99702	1.582
0.1710	0.97400	1.201	0.1488	0.97628	1.300	0.1337	0.97757	1.383	0.1171	0.98028	1.477	0.1009	0.98436	1.566
0.2301	0.95305	1.074	0.1930	0.95998	1.212	0.1677	0.96440	1.329	0.1439	0.96931	1.445	0.1305	0.97171	1.552
0.2802	0.93492	0.973	0.2347	0.94473	1.130	0.1997	0.95227	1.279	0.1806	0.95481	1.405	0.1614	0.95910	1.537
0.3274	0.91749	0.887	0.2789	0.92866	1.054	0.2471	0.93480	1.215	0.2481	0.92963	1.342	0.1980	0.94491	1.524
0.3722	0.90079	0.812	0.3252	0.91202	0.980	0.2846	0.92134	1.165	0.2629	0.92435	1.329	0.2316	0.93250	1.515
0.4224	0.88181	0.741	0.3696	0.89623	0.919	0.3332	0.90442	1.109	0.2950	0.91313	1.303	0.2666	0.92015	1.506
0.4708	0.86325	0.677	0.4206	0.87829	0.854	0.3766	0.88975	1.065	0.3388	0.89846	1.272	0.3094	0.90590	1.498
0.5165	0.84554	0.624	0.4626	0.86368	0.807	0.4181	0.87609	1.024	0.3769	0.88623	1.249	0.3501	0.89312	1.493
0.5609	0.82808	0.576	0.5118	0.84677	0.757	0.4647	0.86121	0.985	0.4331	0.86903	1.218	0.3905	0.88106	1.490
0.6066	0.80994	0.533	0.5624	0.82958	0.709	0.5144	0.84582	0.947	0.4765	0.85636	1.198	0.4393	0.86736	1.489
0.6587	0.78902	0.489	0.5958	0.81833	0.682	0.5655	0.83048	0.913	0.5270	0.84230	1.178	0.4794	0.85669	1.491
0.7033	0.77093	0.457	0.6528	0.79938	0.639	0.6123	0.81688	0.885	0.5759	0.82931	1.163	0.5373	0.84218	1.498
0.7489	0.75215	0.426	0.7049	0.78230	0.605	0.6663	0.80169	0.854	0.6373	0.81382	1.149	0.5983	0.82797	1.510
0.7953	0.73292	0.397	0.7560	0.76580	0.575	0.7228	0.78631	0.828	0.7278	0.79254	1.138	0.6573	0.81514	1.527
0.8419	0.71336	0.372	0.8027	0.75094	0.550	0.7857	0.76986	0.803	0.7527	0.78699	1.136	0.7193	0.80255	1.552
0.8794	0.69751	0.356	0.8565	0.73403	0.525	0.8405	0.75602	0.784	0.8209	0.77240	1.134	0.8442	0.77968	1.615
0.9354	0.67368	0.331	0.9175	0.71522	0.501	0.9073	0.73981	0.764	0.9374	0.74940	1.142	0.9249	0.76639	1.663

Table I. Continued

T = 318.15 K														
$x_{1.}$ HEX+ $(1 - x_{1.})$ EB			$x_{1.}$ OCT + $(1 - x_{1.})$ EB			$x_{1.}$ DEC+ $(1 - x_{1.})$ EB			$x_{1.}$ DOD+ $(1 - x_{1.})$ EB			$x_{1.}$ TET+ $(1 - x_{1.})$ EB		
$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η
0.0471	1.00723	1.244	0.0385	1.00841	1.272	0.0323	1.00935	1.298	0.0278	1.00944	1.314	0.0231	1.01123	1.332
0.1005	0.98911	1.133	0.0833	0.99162	1.188	0.0700	0.99388	1.235	0.0571	0.99574	1.276	0.0543	0.99610	1.310
0.1490	0.97238	1.036	0.1243	0.97636	1.117	0.1012	0.98136	1.188	0.0872	0.98223	1.241	0.0817	0.98344	1.291
0.2038	0.95308	0.939	0.1716	0.95890	1.038	0.1446	0.96432	1.128	0.1222	0.96713	1.203	0.1144	0.96901	1.274
0.2520	0.93586	0.861	0.2145	0.94320	0.972	0.1842	0.94922	1.078	0.1550	0.95358	1.173	0.1449	0.95623	1.259
0.3057	0.91629	0.781	0.2630	0.92562	0.905	0.2269	0.93337	1.027	0.1942	0.93811	1.140	0.1819	0.94148	1.245
0.3520	0.89914	0.718	0.3062	0.91011	0.850	0.2679	0.91860	0.984	0.2296	0.92471	1.113	0.2156	0.92869	1.233
0.4057	0.87901	0.652	0.3560	0.89240	0.793	0.3143	0.90234	0.939	0.2726	0.90919	1.084	0.2563	0.91413	1.225
0.4516	0.86157	0.602	0.4002	0.87684	0.747	0.3561	0.88815	0.903	0.3115	0.89581	1.061	0.2936	0.90147	1.219
0.5027	0.84186	0.550	0.4505	0.85936	0.698	0.4045	0.87215	0.866	0.3575	0.88075	1.037	0.3396	0.88677	1.213
0.5475	0.82438	0.510	0.4957	0.84385	0.662	0.4499	0.85762	0.835	0.3995	0.86765	1.019	0.3807	0.87435	1.212
0.5991	0.80402	0.470	0.5474	0.82627	0.622	0.5021	0.84146	0.803	0.4522	0.85207	0.999	0.4322	0.85971	1.213
0.6439	0.78612	0.439	0.5939	0.81070	0.592	0.5496	0.82718	0.777	0.4995	0.83882	0.984	0.4784	0.84738	1.216
0.6933	0.76611	0.410	0.6472	0.79307	0.560	0.6035	0.81153	0.752	0.5564	0.82372	0.970	0.5446	0.83090	1.226
0.7382	0.74777	0.387	0.6945	0.77764	0.536	0.6545	0.79721	0.730	0.6085	0.81065	0.961	0.5958	0.81903	1.237
0.7869	0.72762	0.364	0.7483	0.76030	0.510	0.7126	0.78145	0.708	0.6725	0.79552	0.954	0.6468	0.80789	1.251
0.8296	0.70983	0.346	0.7987	0.74430	0.491	0.7674	0.76710	0.690	0.7324	0.78218	0.950	0.6941	0.79814	1.267
0.8780	0.68942	0.327	0.8549	0.72675	0.469	0.8289	0.75157	0.674	0.7851	0.77106	0.948	0.7925	0.77943	1.306
			0.9034	0.71183	0.452	0.8862	0.73764	0.661	0.8680	0.75471	0.953	0.8579	0.76805	1.336

Table I. Continued

T = 278.15 K														
$x_{1.}$ HEX+ (1 – $x_{1.}$) PB			$x_{1.}$ OCT + (1 – $x_{1.}$) PB			$x_{1.}$ DEC+ (1 – $x_{1.}$) PB			$x_{1.}$ DOD+ (1 – $x_{1.}$) PB			$x_{1.}$ TET+ (1 – $x_{1.}$) PB		
$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η	$x_{1.}$	ρ	η
0.0544	1.02079	3.431	0.0346	1.02520	3.757	0.0363	1.02328	3.764	0.0610	1.01255	3.685	---	---	---
0.1130	1.00377	2.923	0.0867	1.00858	3.316	0.0708	1.01121	3.517	0.0962	0.99952	3.505	---	---	---
0.1687	0.98711	2.523	0.1316	0.99419	2.984	0.1105	0.99752	3.259	0.1308	0.98703	3.347	---	---	---
0.2244	0.96993	2.179	0.1827	0.97776	2.655	0.1562	0.98202	3.007	0.1676	0.97414	3.188	---	---	---
0.2774	0.95316	1.900	0.2284	0.96304	2.400	0.1966	0.96853	2.794	0.1763	0.97115	3.150	---	---	---
0.3299	0.93605	1.662	0.2797	0.94649	2.150	0.2437	0.95302	2.581	0.2182	0.95705	2.998	---	---	---
0.3814	0.91887	1.463	0.3242	0.93210	1.960	0.2841	0.94001	2.421	0.2571	0.94431	2.872	---	---	---
0.4341	0.90078	1.289	0.3761	0.91532	1.765	0.3337	0.92428	2.247	0.3031	0.92977	2.741	---	---	---
0.4813	0.88415	1.146	0.4220	0.90050	1.612	0.3772	0.91072	2.113	0.3341	0.92022	2.655	---	---	---
0.5319	0.86585	1.020	0.4733	0.88390	1.465	0.4278	0.89530	1.968	0.3930	0.90274	2.527	---	---	---
0.5772	0.84911	0.913	0.5190	0.86914	1.346	0.4729	0.88177	1.855	0.4377	0.88993	2.439	---	---	---
0.6323	0.82820	0.805	0.5714	0.85218	1.228	0.5221	0.86733	1.749	0.4897	0.87559	2.346	---	---	---
0.6750	0.81155	0.732	0.6289	0.83357	1.114	0.5735	0.85253	1.647	0.5428	0.86147	2.267	---	---	---
0.7159	0.79521	0.669	0.6647	0.82201	1.050	0.6270	0.83741	1.546	0.5924	0.84877	2.204	---	---	---
0.7550	0.77938	0.616	0.7621	0.79057	0.905	0.6758	0.82393	1.479	0.6430	0.83628	2.149	---	---	---
0.8452	0.74145	0.516	0.7997	0.77847	0.857	0.7317	0.80882	1.406	0.7019	0.82228	2.096	---	---	---
0.8440	0.74191	0.517	0.8117	0.77460	0.841	0.8396	0.78057	1.287	0.7602	0.80896	2.055	---	---	---
0.8871	0.72328	0.478	0.8637	0.75788	0.788	0.8406	0.78032	1.285	0.8409	0.79141	2.019	---	---	---
0.9498	0.69537	0.430	0.9140	0.74175	0.745	0.9178	0.76091	1.225	0.8795	0.78336	2.010	---	---	---
T = 288.15														
0.0771	1.00537	2.484	0.0586	1.00855	2.651	0.0374	1.01394	2.807	0.0362	1.01315	2.868	0.0271	1.01567	2.960
0.1175	0.99366	2.253	0.1040	0.99419	2.406	0.0831	0.99821	2.591	0.0733	0.99932	2.731	0.0608	1.00206	2.902
0.1650	0.97954	2.009	0.1350	0.98433	2.255	0.1190	0.98599	2.438	0.1118	0.98537	2.605	0.0961	0.98837	2.824
0.2193	0.96293	1.767	0.2005	0.96347	1.976	0.1627	0.97135	2.271	0.1466	0.97308	2.505	0.1246	0.97767	2.768
0.2793	0.94408	1.535	0.2379	0.95153	1.836	0.2009	0.95875	2.141	0.1823	0.96079	2.410	0.1626	0.96404	2.703
0.3304	0.92756	1.363	0.2846	0.93661	1.681	0.2461	0.94406	2.002	0.2186	0.94868	2.323	0.2012	0.95076	2.647
0.3865	0.90890	1.200	0.3318	0.92148	1.537	0.2885	0.93054	1.886	0.2532	0.93746	2.246	0.2358	0.93934	2.600
0.4247	0.89588	1.101	0.3774	0.90687	1.415	0.3320	0.91692	1.778	0.2989	0.92315	2.155	0.2712	0.92810	2.556
0.4791	0.87687	0.973	0.4233	0.89216	1.305	0.3727	0.90436	1.686	0.3405	0.91052	2.081	0.3166	0.91440	2.511
0.5292	0.85891	0.874	0.4656	0.87860	1.214	0.4259	0.88827	1.578	0.3887	0.89642	2.005	0.3526	0.90395	2.477
0.5800	0.84022	0.781	0.5219	0.86055	1.105	0.4662	0.87631	1.506	0.4342	0.88350	1.942	0.4021	0.89024	2.446
0.6195	0.82530	0.718	0.5656	0.84654	1.030	0.5179	0.86124	1.421	0.4803	0.87090	1.886	0.4507	0.87745	2.417
0.6617	0.80907	0.658	0.6115	0.83185	0.959	0.5732	0.84549	1.341	0.5305	0.85764	1.831	0.4912	0.86728	2.403
0.7060	0.79162	0.601	0.6630	0.81534	0.886	0.6219	0.83190	1.281	0.5757	0.84611	1.789	0.5489	0.85351	2.387
0.7486	0.77448	0.553	0.7095	0.80046	0.828	0.6661	0.81980	1.228	0.6380	0.83082	1.740	0.6037	0.84112	2.382
0.7962	0.75499	0.503	0.7574	0.78516	0.775	0.7291	0.80292	1.163	0.6920	0.81809	1.704	0.6602	0.82901	2.388
0.8369	0.73793	0.464	0.8040	0.77027	0.728	0.7739	0.79116	1.125	0.7433	0.80643	1.676	0.7142	0.81800	2.400
0.8874	0.71617	0.423	0.8535	0.75453	0.684	0.8190	0.77957	1.088	0.7995	0.79413	1.653	0.7826	0.80487	2.424
0.9349	0.69530	0.392	0.9285	0.73074	0.630	0.9116	0.75638	1.031	0.8976	0.77384	1.632	0.8786	0.78779	2.483

Table I. Continued

T = 298.15 K														
x_1 HEX+ (1 – x_1) PB			x_1 OCT + (1 – x_1) PB			x_1 DEC+ (1 – x_1) PB			x_1 DOD+ (1 – x_1) PB			x_1 TET+ (1 – x_1) PB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0545	1.00259	2.090	0.0773	0.99364	2.082	0.0819	0.98961	2.098	0.0304	1.00643	2.294	0.0348	1.00360	2.302
0.1249	0.98242	1.794	0.1026	0.98556	1.998	0.1156	0.97816	2.012	0.0721	0.99098	2.175	0.0666	0.99095	2.257
0.1605	0.97162	1.659	0.1613	0.96694	1.792	0.1582	0.96384	1.889	0.1434	0.96548	2.021	0.0955	0.97981	2.215
0.2369	0.94811	1.409	0.2565	0.93646	1.512	0.2027	0.94915	1.779	0.1817	0.95233	1.949	0.1309	0.96659	2.171
0.2765	0.93546	1.298	0.3067	0.92034	1.381	0.2437	0.93581	1.682	0.2145	0.94136	1.892	0.1608	0.95588	2.137
0.3300	0.91806	1.155	0.3482	0.90698	1.286	0.2875	0.92181	1.589	0.3444	0.90064	1.688	0.1965	0.94361	2.099
0.3772	0.90230	1.043	0.3951	0.89190	1.187	0.3302	0.90839	1.501	0.3881	0.88784	1.634	0.2367	0.93033	2.060
0.4847	0.86492	0.827	0.4424	0.87669	1.094	0.3837	0.89196	1.407	0.4343	0.87476	1.583	0.2722	0.91905	2.029
0.5259	0.85003	0.756	0.4882	0.86195	1.018	0.4284	0.87843	1.338	0.4851	0.86089	1.537	0.3070	0.90853	2.003
0.5689	0.83418	0.690	0.5342	0.84718	0.948	0.4707	0.86588	1.277	0.5395	0.84657	1.494	0.3527	0.89523	1.974
0.6152	0.81663	0.627	0.5836	0.83128	0.882	0.5198	0.85162	1.213	0.5883	0.83422	1.458	0.4010	0.88193	1.948
0.6632	0.79822	0.569	0.6253	0.81787	0.828	0.5700	0.83728	1.156	0.6355	0.82268	1.431	0.4477	0.86963	1.928
0.7031	0.78245	0.525	0.6796	0.80048	0.769	0.6127	0.82532	1.112	0.6936	0.80901	1.402	0.4973	0.85722	1.916
0.7496	0.76357	0.479	0.7270	0.78530	0.723	0.7143	0.79769	1.020	0.7544	0.79527	1.380	0.5490	0.84491	1.906
0.7954	0.74468	0.448	0.8351	0.75079	0.633	0.7730	0.78227	0.977	0.8162	0.78189	1.368	0.5955	0.83437	1.905
0.8308	0.72992	0.420	0.9429	0.71654	0.558	0.8262	0.76858	0.940	0.8809	0.76848	1.358	0.6516	0.82228	1.908
0.8752	0.71075	0.399				0.8749	0.75633	0.914	0.9435	0.75606	1.354	0.7159	0.80917	1.921
0.9201	0.69113	0.371				0.9333	0.74199	0.887				0.7647	0.79974	1.934
0.9574	0.67439	0.351										0.8531	0.78371	1.970
T = 308.15														
0.0876	0.98440	1.620	0.0816	0.98336	1.645	0.0562	0.98963	1.757	0.0462	0.99164	1.805	0.0488	0.98909	1.840
0.1454	0.96728	1.451	0.1300	0.96796	1.512	0.1002	0.97459	1.658	0.0938	0.97413	1.716	0.0735	0.97934	1.808
0.1923	0.95301	1.320	0.1656	0.95662	1.421	0.1418	0.96054	1.569	0.1234	0.96360	1.663	0.1091	0.96584	1.770
0.2499	0.93501	1.174	0.2095	0.94260	1.318	0.1788	0.94828	1.495	0.1581	0.95157	1.608	0.1480	0.95171	1.734
0.3064	0.91686	1.046	0.2541	0.92835	1.225	0.2302	0.93150	1.400	0.1951	0.93908	1.553	0.1734	0.94282	1.714
0.3543	0.90103	0.950	0.2993	0.91389	1.136	0.2640	0.92066	1.343	0.2370	0.92537	1.499	0.2150	0.92887	1.682
0.4116	0.88154	0.845	0.3584	0.89493	1.034	0.3167	0.90403	1.256	0.2799	0.91183	1.449	0.2514	0.91718	1.659
0.4488	0.86859	0.785	0.3968	0.88261	0.972	0.3560	0.89188	1.198	0.3153	0.90095	1.411	0.2896	0.90541	1.639
0.5082	0.84738	0.698	0.4503	0.86545	0.897	0.3966	0.87954	1.142	0.3590	0.88795	1.370	0.3376	0.89132	1.620
0.5509	0.83173	0.643	0.4892	0.85294	0.846	0.4436	0.86548	1.087	0.4106	0.87315	1.326	0.3703	0.88209	1.608
0.5926	0.81614	0.594	0.5375	0.83744	0.790	0.4971	0.84982	1.029	0.4473	0.86297	1.299	0.4154	0.86994	1.596
0.6346	0.80011	0.550	0.5822	0.82312	0.743	0.5403	0.83744	0.990	0.4959	0.84989	1.267	0.4616	0.85805	1.587
0.6803	0.78226	0.507	0.6192	0.81126	0.707	0.5866	0.82440	0.952	0.5498	0.83594	1.236	0.5232	0.84306	1.580
0.7241	0.76478	0.468	0.6824	0.79104	0.653	0.6432	0.80878	0.908	0.6007	0.82325	1.210	0.5720	0.83183	1.580
0.7719	0.74532	0.433	0.7188	0.77941	0.625	0.6916	0.79571	0.875	0.6592	0.80923	1.191	0.6124	0.82290	1.582
0.8096	0.72961	0.406	0.7692	0.76332	0.588	0.7401	0.78289	0.847	0.7183	0.79564	1.172	0.6769	0.80939	1.588
0.8570	0.70947	0.376	0.8292	0.74425	0.550	0.7945	0.76879	0.816	0.7624	0.78586	1.163	0.7367	0.79756	1.601
0.8946	0.69313	0.354	0.8674	0.73211	0.527	0.8513	0.75442	0.789	0.8324	0.77093	1.153	0.8128	0.78342	1.623
0.9406	0.67270	0.334	0.9303	0.71226	0.497	0.9295	0.73518	0.759	0.9146	0.75431	1.146	0.8907	0.76994	1.652

Table I. Continued

T = 318.15 K														
x_1 HEX+ (1 – x_1) PB			x_1 OCT + (1 – x_1) PB			x_1 DEC+ (1 – x_1) PB			x_1 DOD+ (1 – x_1) PB			x_1 TET+ (1 – x_1) PB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0693	0.98070	1.388	0.0629	0.98047	1.422	0.0529	0.98198	1.466	0.0260	0.98992	1.532	0.0558	0.97762	1.521
0.1096	0.96904	1.288	0.0900	0.97191	1.361	0.0776	0.97354	1.417	0.0634	0.97551	1.473	0.0578	0.97680	1.517
0.1613	0.95364	1.172	0.1362	0.95729	1.261	0.1165	0.96040	1.349	0.0967	0.96307	1.423	0.0908	0.96415	1.491
0.2210	0.93531	1.048	0.1878	0.94090	1.163	0.1610	0.94562	1.273	0.1355	0.94903	1.371	0.1258	0.95124	1.464
0.2711	0.91954	0.954	0.2330	0.92650	1.081	0.2024	0.93207	1.211	0.1705	0.93677	1.328	0.1590	0.93952	1.442
0.3284	0.90099	0.856	0.2525	0.92027	1.047	0.2495	0.91692	1.144	0.2119	0.92275	1.280	0.1985	0.92611	1.418
0.3767	0.88489	0.781	0.3300	0.89551	0.926	0.2905	0.90396	1.092	0.2499	0.91032	1.242	0.2344	0.91447	1.399
0.4320	0.86598	0.705	0.3813	0.87911	0.856	0.3397	0.88870	1.034	0.2955	0.89597	1.201	0.2777	0.90104	1.379
0.4801	0.84906	0.644	0.4267	0.86459	0.801	0.3834	0.87541	0.987	0.3358	0.88374	1.168	0.3162	0.88960	1.364
0.5314	0.83058	0.586	0.4776	0.84827	0.744	0.4320	0.86091	0.940	0.4031	0.86427	1.120	0.3637	0.87615	1.348
0.5757	0.81415	0.540	0.5373	0.82920	0.686	0.4779	0.84747	0.899	0.4279	0.85737	1.105	0.4065	0.86460	1.337
0.6264	0.79492	0.494	0.5751	0.81710	0.653	0.5308	0.83228	0.857	0.4800	0.84332	1.077	0.4576	0.85149	1.328
0.6694	0.77821	0.457	0.6208	0.80253	0.616	0.5771	0.81930	0.824	0.5272	0.83113	1.055	0.5191	0.83659	1.321
0.7292	0.75436	0.411	0.6710	0.78653	0.581	0.6312	0.80439	0.790	0.5827	0.81740	1.033	0.5622	0.82668	1.319
0.7600	0.74173	0.391	0.7073	0.77500	0.556	0.6794	0.79142	0.763	0.6342	0.80517	1.015	0.6149	0.81513	1.320
0.8056	0.72282	0.362	0.7545	0.76003	0.530	0.7616	0.76987	0.722	0.6953	0.79134	0.997	0.6800	0.80164	1.325
0.8466	0.70537	0.340	0.8156	0.74070	0.497	0.8328	0.75177	0.693	0.7509	0.77931	0.985	0.7358	0.79072	1.332
0.8920	0.68566	0.320	0.8667	0.72460	0.472	0.8708	0.74234	0.679	0.8169	0.76567	0.975	0.8096	0.77713	1.347
0.9292	0.66917	0.304	0.9127	0.71012	0.453	0.9060	0.73374	0.668	0.8761	0.75402	0.968	0.9298	0.75679	1.382

Table I. Continued

T = 278.15 K														
x_1 HEX+ (1 – x_1) BB			x_1 OCT + (1 – x_1) BB			x_1 DEC+ (1 – x_1) BB			x_1 DOD+ (1 – x_1) BB			x_1 TET+ (1 – x_1) BB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0397	1.00904	4.342	0.0455	1.00629	4.305	0.0435	1.00569	4.365	0.0435	1.00569	4.365	---	---	---
0.1236	0.98790	3.498	0.0948	0.99273	3.833	0.0826	0.99384	4.026	0.0826	0.99384	4.026	---	---	---
0.1844	0.97176	2.968	0.1446	0.97879	3.401	0.1255	0.98101	3.700	0.1255	0.98101	3.700	---	---	---
0.2428	0.95565	2.536	0.1995	0.96321	2.991	0.1730	0.96691	3.379	0.1730	0.96691	3.379	---	---	---
0.2725	0.94721	2.347	0.2469	0.94957	2.684	0.2175	0.95383	3.118	0.2175	0.95383	3.118	---	---	---
0.3538	0.92316	1.890	0.3011	0.93379	2.381	0.2655	0.93975	2.866	0.2655	0.93975	2.866	---	---	---
0.4050	0.90733	1.653	0.3468	0.92036	2.155	0.3094	0.92707	2.664	0.3094	0.92707	2.664	---	---	---
0.4595	0.88982	1.441	0.4009	0.90426	1.920	0.3600	0.91252	2.455	0.3600	0.91252	2.455	---	---	---
0.5231	0.86854	1.230	0.4477	0.89023	1.742	0.4045	0.89986	2.292	0.4045	0.89986	2.292	---	---	---
0.5609	0.85539	1.118	0.4995	0.87454	1.569	0.4557	0.88544	2.122	0.4557	0.88544	2.122	---	---	---
0.6024	0.84058	1.011	0.5446	0.86070	1.434	0.4996	0.87313	2.000	0.4996	0.87313	2.000	---	---	---
0.6491	0.82338	0.908	0.5962	0.84475	1.296	0.5515	0.85886	1.854	0.5515	0.85886	1.854	---	---	---
0.6925	0.80680	0.823	0.6629	0.82385	1.141	0.5915	0.84781	1.756	0.5915	0.84781	1.756	---	---	---
0.7079	0.80077	0.787	0.6983	0.81262	1.072	0.6515	0.83152	1.627	0.6515	0.83152	1.627	---	---	---
0.7772	0.77284	0.670	0.7360	0.80060	1.000	0.6993	0.81867	1.543	0.6993	0.81867	1.543	---	---	---
0.8172	0.75603	0.623	0.7840	0.78519	0.921	0.7526	0.80450	1.446	0.7526	0.80450	1.446	---	---	---
0.8947	0.72202	0.515	0.8267	0.77134	0.858	0.8007	0.79183	1.374	0.8007	0.79183	1.374	---	---	---
0.9304	0.70564	0.469	0.8758	0.75532	0.794	0.8547	0.77777	1.305	0.8547	0.77777	1.305	---	---	---
0.9610	0.69129	0.424	0.9187	0.74124	0.744	0.9228	0.76032	1.233	0.9228	0.76032	1.233	---	---	---
T = 288.15														
0.0759	0.99013	2.966	0.0616	0.99179	3.192	0.0479	0.99424	3.341	0.0341	0.99683	3.463	0.0200	1.00135	3.549
0.1298	0.97643	2.600	0.1002	0.98127	2.938	0.0951	0.98038	3.079	0.0702	0.98488	3.289	0.0603	0.98759	3.399
0.1874	0.96127	2.263	0.1529	0.96674	2.621	0.1453	0.96569	2.825	0.1053	0.97348	3.131	0.0941	0.97636	3.295
0.2545	0.94281	1.921	0.2034	0.95262	2.353	0.1777	0.95627	2.671	0.1470	0.96027	2.952	0.1336	0.96367	3.188
0.3019	0.92926	1.716	0.2569	0.93747	2.108	0.2233	0.94308	2.481	0.1851	0.94852	2.806	0.1695	0.95253	3.100
0.3522	0.91436	1.522	0.3030	0.92424	1.921	0.2706	0.92949	2.302	0.2274	0.93582	2.656	0.2130	0.93947	3.015
0.4063	0.89773	1.336	0.3560	0.90888	1.732	0.3156	0.91669	2.150	0.2670	0.92420	2.538	0.2488	0.92909	2.942
0.4622	0.88000	1.170	0.4071	0.89390	1.567	0.3592	0.90439	2.017	0.3131	0.91108	2.410	0.2940	0.91642	2.873
0.5039	0.86622	1.063	0.4516	0.88069	1.439	0.3975	0.89364	1.905	0.3562	0.89916	2.308	0.3355	0.90521	2.809
0.5512	0.85010	0.948	0.4959	0.86742	1.324	0.4464	0.88007	1.779	0.4036	0.88642	2.208	0.3833	0.89280	2.750
0.5984	0.83348	0.848	0.5380	0.85471	1.225	0.4935	0.86708	1.671	0.4479	0.87486	2.126	0.4272	0.88178	2.699
0.6447	0.81664	0.759	0.5911	0.83853	1.114	0.5487	0.85204	1.560	0.4988	0.86196	2.043	0.4692	0.87166	2.658
0.6856	0.80124	0.693	0.6368	0.82444	1.029	0.5736	0.84528	1.513	0.5459	0.85037	1.973	0.5275	0.85810	2.607
0.7293	0.78431	0.628	0.6860	0.80915	0.946	0.6269	0.83098	1.421	0.6005	0.83733	1.903	0.5811	0.84621	2.575
0.7720	0.76718	0.572	0.7230	0.79756	0.890	0.6954	0.81279	1.318	0.6507	0.82573	1.848	0.6374	0.83425	2.544
0.8088	0.75192	0.528	0.7870	0.77731	0.803	0.7355	0.80227	1.263	0.6969	0.81536	1.807	0.6715	0.82723	2.535
0.8542	0.73263	0.478	0.8225	0.76598	0.760	0.7889	0.78837	1.199	0.7609	0.80145	1.757	0.7519	0.81137	2.515
0.8876	0.71798	0.446	0.8658	0.75205	0.714	0.8435	0.77434	1.138	0.8816	0.77662	1.686	0.8118	0.80016	2.515
0.9200	0.70343	0.419	0.9319	0.73058	0.652	0.8914	0.76218	1.096	0.9548	0.76240	1.655	0.9298	0.77946	2.551

Table I. Continued

T = 298.15 K														
x_1 HEX+ (1 – x_1) BB			x_1 OCT + (1 – x_1) BB			x_1 DEC+ (1 – x_1) BB			x_1 DOD+ (1 – x_1) BB			x_1 TET+ (1 – x_1) BB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0788	0.98080	2.272	0.0819	0.97753	2.313	0.0918	0.97264	2.334	0.0369	0.98801	2.578	0.0346	0.98775	2.623
0.1269	0.96865	2.042	0.1257	0.96547	2.139	0.1358	0.95971	2.183	0.0748	0.97591	2.463	0.0683	0.97625	2.562
0.1801	0.95453	1.810	0.1681	0.95364	1.973	0.1792	0.94701	2.041	0.1143	0.96352	2.347	0.1072	0.96341	2.490
0.2539	0.93424	1.536	0.2263	0.93721	1.771	0.2262	0.93336	1.896	0.1505	0.95239	2.251	0.1432	0.95189	2.436
0.3020	0.92023	1.377	0.2749	0.92329	1.610	0.2664	0.92178	1.788	0.1939	0.93935	2.149	0.1795	0.94070	2.380
0.3485	0.90643	1.244	0.3195	0.91037	1.476	0.3097	0.90943	1.678	0.2329	0.92787	2.064	0.2175	0.92934	2.328
0.4084	0.88789	1.088	0.3719	0.89507	1.339	0.3591	0.89545	1.567	0.2775	0.91507	1.977	0.2506	0.91971	2.282
0.4955	0.85954	0.896	0.4121	0.88320	1.246	0.4089	0.88145	1.470	0.3263	0.90146	1.893	0.2944	0.90748	2.226
0.5498	0.84107	0.796	0.4730	0.86503	1.117	0.4486	0.87042	1.401	0.3672	0.89030	1.834	0.3362	0.89619	2.186
0.6402	0.80839	0.654	0.5153	0.85228	1.038	0.4948	0.85770	1.329	0.4144	0.87773	1.759	0.3761	0.88579	2.154
0.6861	0.79100	0.594	0.5596	0.83877	0.971	0.5503	0.84253	1.250	0.4576	0.86650	1.702	0.4036	0.87884	2.128
0.7746	0.75585	0.495	0.6051	0.82479	0.900	0.5873	0.83254	1.204	0.5085	0.85362	1.649	0.4720	0.86219	2.080
0.8136	0.73947	0.458	0.6559	0.80907	0.827	0.6281	0.82156	1.153	0.5525	0.84275	1.594	0.5203	0.85101	2.055
0.8494	0.72426	0.427	0.7053	0.79359	0.772	0.6957	0.80362	1.077	0.6026	0.83071	1.549	0.5754	0.83875	2.030
0.8868	0.70787	0.399	0.7427	0.78179	0.729	0.7410	0.79174	1.032	0.6499	0.81961	1.506	0.6238	0.82841	2.015
0.9265	0.68988	0.370	0.7940	0.76548	0.674	0.7899	0.77905	0.988	0.7176	0.80421	1.457	0.6833	0.81622	1.995
0.9610	0.67378	0.348	0.8349	0.75234	0.635	0.8403	0.76610	0.946	0.7662	0.79349	1.428	0.7394	0.80521	1.989
			0.8859	0.73585	0.591	0.8939	0.75247	0.908	0.8184	0.78224	1.399	0.8084	0.79230	1.990
			0.9357	0.71960	0.552	0.9566	0.73678	0.870	0.8852	0.76828	1.372	0.8738	0.78065	2.005
T = 308.15														
0.0668	0.97513	1.923	0.0945	0.96554	1.866	0.0669	0.97139	1.981	0.0565	0.97310	2.041	0.0474	0.97476	2.117
0.1277	0.95964	1.700	0.1325	0.95506	1.737	0.1091	0.95899	1.855	0.0869	0.96354	1.968	0.0876	0.96136	2.049
0.1875	0.94372	1.500	0.1853	0.94027	1.579	0.1542	0.94580	1.738	0.1399	0.94725	1.857	0.1255	0.94912	1.995
0.2458	0.92765	1.331	0.2276	0.92831	1.465	0.1965	0.93350	1.637	0.1662	0.93933	1.807	0.1576	0.93912	1.956
0.2926	0.91424	1.211	0.2687	0.91658	1.364	0.2450	0.91955	1.534	0.2145	0.92508	1.722	0.1932	0.92830	1.916
0.3554	0.89560	1.063	0.3288	0.89922	1.233	0.2934	0.90572	1.443	0.2546	0.91350	1.662	0.2315	0.91706	1.876
0.4013	0.88143	0.966	0.3769	0.88516	1.139	0.3293	0.89554	1.381	0.3019	0.90019	1.596	0.2692	0.90635	1.842
0.4549	0.86430	0.863	0.4139	0.87423	1.073	0.3765	0.88227	1.306	0.3408	0.88948	1.548	0.3166	0.89336	1.806
0.5013	0.84890	0.785	0.4741	0.85628	0.975	0.4326	0.86666	1.224	0.3915	0.87587	1.490	0.3536	0.88362	1.783
0.5515	0.83165	0.707	0.5134	0.84444	0.916	0.4647	0.85777	1.182	0.4297	0.86584	1.451	0.3967	0.87261	1.758
0.5967	0.81560	0.644	0.5651	0.82869	0.848	0.5148	0.84406	1.120	0.4845	0.85182	1.400	0.4455	0.86064	1.735
0.6407	0.79941	0.590	0.6054	0.81633	0.797	0.5630	0.83096	1.063	0.5231	0.84220	1.367	0.4967	0.84857	1.714
0.6896	0.78083	0.536	0.6525	0.80175	0.743	0.6162	0.81670	1.008	0.5719	0.83030	1.328	0.5574	0.83490	1.696
0.7280	0.76570	0.497	0.7052	0.78526	0.688	0.6547	0.80645	0.972	0.6276	0.81711	1.287	0.5991	0.82588	1.684
0.7727	0.74758	0.457	0.7478	0.77184	0.649	0.7081	0.79238	0.924	0.6800	0.80506	1.256	0.6454	0.81621	1.675
0.8106	0.73177	0.427	0.7925	0.75765	0.610	0.7512	0.78117	0.891	0.7278	0.79432	1.229	0.7094	0.80343	1.667
0.8512	0.71429	0.396	0.8351	0.74401	0.577	0.8136	0.76508	0.846	0.7842	0.78201	1.202	0.7691	0.79204	1.664
0.8888	0.69767	0.370	0.8734	0.73167	0.549	0.8573	0.75396	0.818	0.8501	0.76809	1.176	0.8229	0.78222	1.665
0.9482	0.67039	0.337	0.9291	0.71357	0.514	0.9215	0.73783	0.783	0.9392	0.74994	1.151	0.9132	0.76658	1.680

Table I. Continued

T = 318.15 K														
x_1 HEX+ (1 – x_1) BB			x_1 OCT + (1 – x_1) BB			x_1 DEC+ (1 – x_1) BB			x_1 DOD+ (1 – x_1) BB			x_1 TET+ (1 – x_1) BB		
x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η	x_1	ρ	η
0.0337	0.97647	1.707	0.0361	0.97467	1.714	0.0724	0.96294	1.636	0.0245	0.97612	1.764	0.0221	0.97660	1.779
0.1077	0.95818	1.480	0.0929	0.95918	1.554	0.0793	0.96093	1.618	0.0618	0.96373	1.688	0.0602	0.96359	1.728
0.1661	0.94285	1.326	0.1407	0.94592	1.438	0.1214	0.94852	1.527	0.1010	0.95098	1.612	0.0938	0.95246	1.687
0.2310	0.92509	1.166	0.1960	0.93037	1.309	0.1698	0.93438	1.430	0.1422	0.93791	1.543	0.1331	0.93988	1.646
0.2845	0.90979	1.050	0.2419	0.91731	1.215	0.2143	0.92144	1.349	0.1810	0.92590	1.487	0.1693	0.92868	1.612
0.3438	0.89199	0.934	0.2984	0.90101	1.108	0.2625	0.90755	1.268	0.2247	0.91275	1.427	0.2101	0.91644	1.576
0.3951	0.87611	0.846	0.3460	0.88713	1.027	0.3071	0.89480	1.201	0.2652	0.90090	1.376	0.2490	0.90521	1.546
0.4512	0.85795	0.757	0.4006	0.87099	0.943	0.3576	0.88050	1.129	0.3117	0.88769	1.325	0.2933	0.89285	1.516
0.4998	0.84171	0.691	0.4467	0.85724	0.878	0.4024	0.86795	1.073	0.3550	0.87576	1.282	0.3356	0.88148	1.491
0.5518	0.82369	0.625	0.4990	0.84147	0.812	0.4543	0.85352	1.013	0.4033	0.86282	1.238	0.3836	0.86906	1.467
0.5513	0.82382	0.624	0.5446	0.82762	0.759	0.4998	0.84099	0.966	0.4479	0.85122	1.202	0.4273	0.85820	1.448
0.6460	0.78929	0.523	0.5955	0.81196	0.706	0.5510	0.82705	0.917	0.5006	0.83794	1.163	0.4797	0.84567	1.428
0.6884	0.77304	0.486	0.6382	0.79874	0.665	0.5985	0.81427	0.876	0.5557	0.82451	1.127	0.5267	0.83489	1.413
0.7317	0.75594	0.447	0.6905	0.78242	0.619	0.6498	0.80059	0.834	0.6040	0.81310	1.099	0.5825	0.82259	1.399
0.7749	0.73837	0.412	0.7358	0.76814	0.584	0.6927	0.78927	0.804	0.6185	0.80974	1.091	0.6341	0.81172	1.388
0.8206	0.71913	0.383	0.7849	0.75255	0.546	0.7509	0.77408	0.764	0.7124	0.78868	1.045	0.6948	0.79948	1.380
0.8608	0.70166	0.360	0.8274	0.73896	0.518	0.8026	0.76077	0.733	0.7679	0.77678	1.024	0.7506	0.78874	1.377
0.9115	0.67889	0.327	0.8768	0.72304	0.488	0.9010	0.73583	0.682	0.8278	0.76439	1.006	0.8156	0.77677	1.375
0.9342	0.66842	0.317	0.9193	0.70926	0.464	0.9265	0.72946	0.673	0.9612	0.73837	0.974	0.8778	0.76588	1.381

Table II. Refractive index, n_D, for the x_1 n-alkane + $(1 - x_1)$ alkylbenzoate binary mixtures at 298.15 K

x_1 HEX+ $(1 - x_1)$ MB		x_1 OCT+ $(1 - x_1)$ MB		x_1 DEC+ $(1 - x_1)$ MB		x_1 DOD + $(1 - x_1)$ MB		x_1 TET + $(1 - x_1)$ MB	
x_1	n_D	x_1	n_D	x_1	n_D	x_1	n_D	x_1	n_D
0.0339	1.51139	0.0374	1.50941	0.0230	1.51112	0.0200	1.51133	0.0334	1.50810
0.0890	1.50537	0.0683	1.50507	0.0421	1.50810	0.0492	1.50645	0.0663	1.50240
0.1355	1.50026	0.1050	1.49995	0.0847	1.50150	0.0778	1.50185	0.0869	1.49920
0.1810	1.49443	0.1488	1.49395	0.1204	1.49622	0.1110	1.49675	0.1156	1.49450
0.2294	1.48858	0.1858	1.48874	0.1558	1.49122	0.1416	1.49223	0.1423	1.49030
0.2773	1.48229	0.2307	1.48278	0.1958	1.48559	0.1757	1.48740	0.1737	1.48580
0.2907	1.48044	0.2723	1.47724	0.2311	1.48101	0.2117	1.48262	0.2082	1.48120
0.3431	1.47336	0.3201	1.47089	0.2755	1.47518	0.2521	1.47753	0.2405	1.47700
0.3910	1.46667	0.3620	1.46547	0.3165	1.47009	0.2851	1.47372	0.2806	1.47226
0.4415	1.45938	0.4112	1.45923	0.3639	1.46449	0.3338	1.46825	0.3218	1.46790
0.4883	1.45250	0.4559	1.45368	0.3910	1.46142	0.3751	1.46380	0.3558	1.46440
0.5682	1.44047	0.5078	1.44729	0.4492	1.45505	0.4300	1.45832	0.4082	1.45970
0.6121	1.43373	0.5555	1.44160	0.5053	1.44934	0.4763	1.45415	0.4482	1.45640
0.6627	1.42610	0.6090	1.43532	0.5620	1.44369	0.5320	1.44932	0.5073	1.45203
0.7131	1.41817	0.6606	1.42954	0.6311	1.43748	0.5849	1.44498	0.5627	1.44840
0.7649	1.41013	0.7026	1.42487	0.6781	1.43342	0.6479	1.44028	0.6200	1.44490
0.8113	1.40246	0.8197	1.41254	0.7362	1.42864	0.7095	1.43577	0.6846	1.44090
0.8716	1.39318	0.8355	1.41077	0.8016	1.42354	0.7924	1.43058	0.7664	1.43599
0.9465	1.38118	0.8947	1.40498	0.9298	1.41418	0.8536	1.42682	0.8624	1.43110

x_1 HEX+ $(1 - x_1)$ EB		x_1 OCT+ $(1 - x_1)$ EB		x_1 DEC+ $(1 - x_1)$ EB		x_1 DOD + $(1 - x_1)$ EB		x_1 TET + $(1 - x_1)$ EB	
x_1	n_D	x_1	n_D	x_1	n_D	x_1	n_D	x_1	n_D
0.0867	1.49724	0.0337	1.49951	0.0335	1.49898	0.0225	1.50024	0.0611	1.49500
0.1017	1.49604	0.0765	1.49460	0.0622	1.49543	0.0567	1.49565	0.1123	1.48846
0.1540	1.49081	0.1140	1.49027	0.1003	1.49091	0.0887	1.49174	0.1475	1.48421
0.2062	1.48512	0.1648	1.48435	0.1422	1.48599	0.1253	1.48728	0.2214	1.47590
0.2549	1.47932	0.2061	1.47956	0.1797	1.48147	0.1575	1.48346	0.2630	1.47157
0.3071	1.47271	0.2551	1.47388	0.2232	1.47661	0.1984	1.47889	0.3241	1.46563
0.3557	1.46632	0.2985	1.46886	0.2629	1.47223	0.2349	1.47493	0.3712	1.46137
0.4060	1.45954	0.3487	1.46308	0.3099	1.46727	0.2781	1.47047	0.4136	1.45776
0.4540	1.45292	0.3882	1.45855	0.3509	1.46293	0.3178	1.46661	0.4413	1.45552
0.5031	1.44599	0.4367	1.45309	0.4011	1.45789	0.3639	1.46224	0.5213	1.44949
0.5381	1.44107	0.4829	1.44792	0.4447	1.45364	0.4070	1.45842	0.5723	1.44599
0.6124	1.43049	0.5413	1.44152	0.4975	1.44868	0.4588	1.45396	0.6114	1.44349
0.6431	1.42609	0.5881	1.43650	0.5746	1.44182	0.5054	1.45019	0.6523	1.44105
0.6923	1.41888	0.6407	1.43093	0.6212	1.43779	0.5624	1.44596	0.7239	1.43717
0.7351	1.41250	0.6885	1.42594	0.6498	1.43533	0.6145	1.44204	0.7789	1.43454
0.7855	1.40507	0.7445	1.42024	0.7088	1.43067	0.6768	1.43780	0.8129	1.43306
0.8319	1.39814	0.7929	1.41540	0.7620	1.42643	0.7322	1.43380	0.8687	1.43082
0.8763	1.39135	0.8759	1.40718	0.8607	1.41901	0.8011	1.42978	0.9123	1.42923
0.9229	1.38431	0.9402	1.40100	0.8829	1.41730	0.8657	1.42643	0.9712	1.42719

Table II. Continued

$x_{1.}$ HEX+ (1 – $x_{1.}$) PB		$x_{1.}$ OCT+ (1 – $x_{1.}$) PB		$x_{1.}$ DEC+ (1 – $x_{1.}$) PB		$x_{1.}$ DOD + (1 – $x_{1.}$) PB		$x_{1.}$ TET + (1 – $x_{1.}$) PB	
$x_{1.}$	n_D	$x_{1.}$	n_D	$x_{1.}$	n_D	$x_{1.}$	n_D	$x_{1.}$	n_D
0.0544	1.49521	0.0346	1.49508	0.0363	1.49465	0.0610	1.49166	0.0751	1.48978
0.1130	1.49194	0.0867	1.48993	0.0708	1.49093	0.0962	1.48783	0.1263	1.48418
0.1687	1.48745	0.1316	1.48540	0.1105	1.48680	0.1308	1.48430	0.1405	1.48268
0.2244	1.48223	0.1827	1.48020	0.1562	1.48210	0.1676	1.48042	0.2144	1.47528
0.2774	1.47641	0.2284	1.47552	0.1966	1.47792	0.1763	1.47951	0.2560	1.47138
0.3299	1.47042	0.2797	1.47023	0.2437	1.47323	0.2182	1.47550	0.3171	1.46600
0.3814	1.46402	0.3242	1.46562	0.2841	1.46930	0.2571	1.47180	0.3636	1.46214
0.4341	1.45706	0.3761	1.46023	0.3337	1.46452	0.3031	1.46749	0.4029	1.45902
0.4813	1.45053	0.4220	1.45545	0.3772	1.46039	0.3341	1.46481	0.4584	1.45483
0.5319	1.44341	0.4733	1.45011	0.4278	1.45577	0.3930	1.45977	0.5139	1.45086
0.5772	1.43676	0.5190	1.44535	0.4729	1.45170	0.4377	1.45609	0.5853	1.44610
0.6323	1.42848	0.5714	1.43989	0.5221	1.44734	0.4897	1.45197	0.6284	1.44342
0.6750	1.42206	0.6289	1.43388	0.5735	1.44291	0.5428	1.44792	0.6631	1.44138
0.7159	1.41573	0.6647	1.43015	0.6270	1.43835	0.5924	1.44433	0.7425	1.43711
0.7550	1.40975	0.7621	1.41998	0.6758	1.43430	0.6430	1.44077	0.7852	1.43504
0.8452	1.39596	0.7997	1.41607	0.7317	1.42978	0.7019	1.43680	0.8240	1.43331
0.8440	1.39604	0.8117	1.41481	0.8396	1.42125	0.7602	1.43312	0.8759	1.43116
0.8871	1.38956	0.8637	1.40939	0.8406	1.42117	0.8409	1.42821	0.9324	1.42894
0.9498	1.37989	0.9140	1.40414	0.9178	1.41525	0.8795	1.42607	0.9681	1.42754

$x_{1.}$ HEX+ (1 – $x_{1.}$) BB		$x_{1.}$ OCT+ (1 – $x_{1.}$) BB		$x_{1.}$ DEC+ (1 – $x_{1.}$) BB		$x_{1.}$ DOD + (1 – $x_{1.}$) BB		$x_{1.}$ TET + (1 – $x_{1.}$) BB	
$x_{1.}$	n_D	$x_{1.}$	n_D	$x_{1.}$	n_D	$x_{1.}$	n_D	$x_{1.}$	n_D
0.0397	1.49436	0.0455	1.49117	0.0435	1.49118	0.0402	1.49137	0.0523	1.48989
0.1236	1.48977	0.0948	1.48690	0.0826	1.48754	0.0708	1.48837	0.1141	1.48380
0.1844	1.48509	0.1446	1.48261	0.1255	1.48357	0.1084	1.48474	0.1532	1.48012
0.2428	1.48022	0.1995	1.47798	0.1730	1.47921	0.1500	1.48088	0.2296	1.47330
0.2725	1.47734	0.2469	1.47400	0.2175	1.47516	0.1905	1.47722	0.2671	1.47013
0.3538	1.46915	0.3011	1.46949	0.2655	1.47082	0.2355	1.47326	0.3485	1.46364
0.4050	1.46334	0.3468	1.46560	0.3094	1.46691	0.2752	1.46985	0.3927	1.46035
0.4595	1.45688	0.4009	1.46063	0.3600	1.46241	0.3245	1.46570	0.4391	1.45705
0.5231	1.44880	0.4477	1.45627	0.4045	1.45847	0.3668	1.46222	0.4833	1.45406
0.5609	1.44369	0.4995	1.45121	0.4557	1.45399	0.4156	1.45836	0.5287	1.45112
0.6024	1.43788	0.5446	1.44664	0.4996	1.45017	0.4616	1.45482	0.5764	1.44819
0.6491	1.43098	0.5962	1.44121	0.5515	1.44571	0.5144	1.45081	0.6112	1.44613
0.6925	1.42426	0.6629	1.43403	0.5915	1.44232	0.5612	1.44740	0.6495	1.44394
0.7079	1.42183	0.6983	1.42996	0.6515	1.43730	0.6167	1.44349	0.7027	1.44102
0.7772	1.41083	0.7360	1.42559	0.6993	1.43335	0.6648	1.44022	0.7692	1.43752
0.8172	1.40415	0.7840	1.41990	0.7526	1.42897	0.7220	1.43644	0.8156	1.43517
0.8947	1.39107	0.8267	1.41493	0.8007	1.42509	0.7741	1.43303	0.8639	1.43277
0.9304	1.38481	0.8758	1.40916	0.8547	1.42072	0.8350	1.42915	0.9128	1.43039
0.9610	1.37952	0.9187	1.40427	0.9228	1.41525	0.9095	1.42447	0.9538	1.42841

Table III. Least squares fitting coefficients, A_i, and standard deviations, σ, of density, $\rho(\mathrm{g\,cm^{-3}})$, for the x_1 n-alkane + (1-x_1) alkylbenzoate binary solvents at different temperatures. Data for MB containing mixtures obtained from Ref. 7

MB +	A_0	A_1	A_2	A_3	A_4	σ	EB +	A_0	A_1	A_2	A_3	A_4	σ
						$T = 278.15\,\mathrm{K}$							
n-Hexane	1.10268	-0.42403	-0.02323	0.01701		0.00004	n-Hexane	1.06047	-0.33495	-0.05336			0.00011
n-Octane	1.10246	-0.48608	0.09836			0.00022	n-Octane	1.06062	-0.38733	0.04076			0.00015
n-Decane	1.10262	-0.55586	0.25782	-0.06385		0.00012	n-Decane	1.05940	-0.41874	0.10138			0.00053
n-Dodecane	1.10210	-0.60854	0.38512	-0.11959		0.00043	n-Dodecane	1.06003	-0.47398	0.23541	-0.06204		0.00015
						$T = 288.15\,\mathrm{K}$							
n-Hexane	1.09358	-0.42997	0.00136			0.00043	n-Hexane	1.05078	-0.33238	-0.05282			0.00011
n-Octane	1.09220	-0.48250	0.09910			0.00029	n-Octane	1.05082	-0.38378	0.04092			0.00010
n-Decane	1.09242	-0.55030	0.25675	-0.06400		0.00016	n-Decane	1.04962	-0.41423	0.10084			0.00056
n-Dodecane	1.09190	-0.60148	0.38240	-0.11939		0.00041	n-Dodecane	1.05038	-0.46925	0.23540	-0.06279		0.00016
n-Tetradecane	1.09116	-0.64724	0.49936	-0.17607		0.00023	n-Tetradecane	1.04996	-0.50493	0.32539	-0.10282		0.00038
						$T = 298.15\,\mathrm{K}$							
n-Hexane	1.08446	-0.43365	0.00352			0.00046	n-Hexane	1.04167	-0.33015	-0.06509	0.00863		0.00005
n-Octane	1.08324	-0.48404	0.09971			0.00028	n-Octane	1.04181	-0.38519	0.04164			0.00010
n-Decane	1.08346	-0.55096	0.25709	-0.06380		0.00015	n-Decane	1.04060	-0.41445	0.10087			0.00057
n-Dodecane	1.08286	-0.60219	0.38312	-0.11909		0.00043	n-Dodecane	1.04136	-0.46905	0.23532	-0.06260		0.00017
n-Tetradecane	1.08208	-0.64587	0.49684	-0.17433		0.00080	n-Tetradecane	1.04163	-0.51827	0.39300	-0.21176	0.05507	0.00004
						$T = 308.15\,\mathrm{K}$							
n-Hexane	1.07488	-0.43352	0.00363			0.00039	n-Hexane	1.03274	-0.33568	-0.05168			0.00022
n-Octane	1.07348	-0.48261	0.10006			0.00029	n-Octane	1.03247	-0.38426	0.04190			0.00011
n-Decane	1.07370	-0.54834	0.26636	-0.06355		0.00016	n-Decane	1.03224	-0.42661	0.13726	-0.02453		0.00003
n-Dodecane	1.07319	-0.59924	0.38340	-0.11997		0.00043	n-Dodecane	1.03194	-0.46637	0.23428	-0.06210		0.00016
n-Tetradecane	1.07372	-0.67362	0.65080	-0.42731	0.12899	0.00016	n-Tetradecane	1.03159	-0.49605	0.32118	-0.10226		0.00035
						$T = 318.15\,\mathrm{K}$							
n-Hexane	1.06425	-0.42050	-0.02509	0.01837	0.08289	0.00005	n-Hexane	1.02293	-0.33034	-0.06291	0.00738		0.00003
n-Octane	1.06436	-0.48819	0.11884	-0.01220		0.00003	n-Octane	1.02295	-0.37947	0.03404	0.00530		0.00003
n-Decane	1.06416	-0.54586	0.25632	-0.06345		0.00014	n-Decane	1.02290	-0.42442	0.13809	-0.02523		0.00003
n-Dodecane	1.06415	-0.63751	0.52179	-0.30010		0.00006	n-Dodecane	1.02286	-0.49185	0.31279	-0.15052	0.03791	0.00002
n-Tetradecane	1.06414	-0.66917	0.64592	-0.42838	0.12982	0.00013	n-Tetradecane	1.02282	-0.51244	0.39730	-0.22310	0.06132	0.00005

Table III. Continued

PB +	A_0	A_1	A_2	A_3	A_4	σ	BB +	A_0	A_1	A_2	A_3	A_4	σ
						$T = 278.15\,\mathrm{K}$							
n-Hexane	1.03548	-0.26959	-0.09286			0.00032	n-Hexane	1.01871	-0.24114	-0.06839	-0.03665		0.00006
n-Octane	1.03645	-0.32211	-0.00041			0.00017	n-Octane	1.01883	-0.27310	-0.03166			0.00009
n-Decane	1.03591	-0.35382	0.05909			0.00013	n-Decane	1.01881	-0.30498	0.02694			0.00013
n-Dodecane	1.03452	-0.37405	0.10055			0.00068	n-Dodecane	1.01822	-0.32690	0.06887			0.00025
						$T = 288.15\,\mathrm{K}$							
n-Hexane	1.02642	-0.26789	-0.09211			0.00027	n-Hexane	1.00698	-0.21797	-0.12136			0.00017
n-Octane	1.02736	-0.31955				0.00018	n-Octane	1.00851	-0.26877	-0.03168			0.00007
n-Decane	1.02681	-0.35006	0.05864			0.00013	n-Decane	1.00856	-0.29936	0.02574			0.00007
n-Dodecane	1.02569	-0.37064	0.10036			0.00072	n-Dodecane	1.00759	-0.33125	0.07832			0.00045
n-Tetradecane	1.02674	-0.41904	0.22182	-0.06168		0.00015	n-Tetradecane	1.00831	-0.35255	0.14639	-0.03421		0.00007
						$T = 298.15\,\mathrm{K}$							
n-Hexane	1.01749	-0.26998	-0.09205			0.00025	n-Hexane	1.00002	-0.23868	-0.07415	-0.03199		0.00012
n-Octane	1.01836	-0.32026				0.00021	n-Octane	0.99996	-0.27064	-0.03101			0.00006
n-Decane	1.01781	-0.35034	0.05878			0.00011	n-Decane	1.00001	-0.30088	0.02683			0.00006
n-Dodecane	1.01694	-0.36965	0.09915			0.00005	n-Dodecane	0.99999	-0.32965	0.08981	-0.01483		0.00048
n-Tetradecane	1.01777	-0.41765	0.22025	-0.06099		0.00015	n-Tetradecane	0.99978	-0.35479	0.15100	-0.03643		0.00006
						$T = 308.15\,\mathrm{K}$							
n-Hexane	1.00925	-0.27759	-0.07499	-0.01089		0.00002	n-Hexane	0.99132	-0.23840	-0.07668	-0.02723	-0.00331	0.00005
n-Octane	1.00922	-0.31597	-0.01110	0.00817		0.00000	n-Octane	0.99124	-0.26844	-0.03591	0.00342		0.00009
n-Decane	1.00927	-0.35338	0.06883	-0.00630		0.00002	n-Decane	0.99127	-0.29867	0.02350	0.00234		0.00009
n-Dodecane	1.00915	-0.38636	0.14175	-0.03203		0.00005	n-Dodecane	0.99129	-0.32674	0.08682	-0.01336		0.00002
n-Tetradecane	1.00919	-0.42415	0.25995	-0.12340	0.03091	0.00003	n-Tetradecane	0.99124	-0.35493	0.16127	-0.05556	0.01047	0.00001
						$T = 318.15\,\mathrm{K}$							
n-Hexane	1.00024	-0.27666	-0.07336	-0.01327		0.00003	n-Hexane	0.98440	-0.23208	-0.10874	0.01391	-0.02050	0.00002
n-Octane	1.00030	-0.31443	-0.01254	0.00951		0.00002	n-Octane	0.98440	-0.26832	-0.03914	0.00589		0.00002
n-Decane	1.00033	-0.35080	0.06756	-0.00569		0.00003	n-Decane	0.98446	-0.29919	0.02271	0.00342		0.00003
n-Dodecane	1.00017	-0.39946	0.17040	-0.04002		0.00006	n-Dodecane	0.98442	-0.34227	0.10916	-0.02017		0.00004
n-Tetradecane	1.00023	-0.41908	0.25229	-0.11466	0.02710	0.00002	n-Tetradecane	0.98437	-0.35456	0.15995	-0.05392	0.01003	0.00000

Table IV. Least squares fitting coefficients, A_i, and standard deviations, σ, of dynamic viscosity, $\eta(\mathrm{mPa\ s})$, for the x_1 n-alkane + (1-x_1) alkylbenzoate binary solvents at different temperatures. Data for MB containing mixtures obtained from from Ref. 7

MB +	A_0	A_1	A_2	A_3	A_4	A_5	A_6	σ	EB +	A_0	A_1	A_2	A_3	A_4	A_5	A_6	σ
								$T = 278.15\ \mathrm{K}$									
n-Hexane	3.059	-11.310	34.940	-82.710	118.400	-87.950	25.970	0.015	n-Hexane	3.181	-8.169	10.650	-7.587	2.331			0.002
n-Octane	3.070	-9.348	26.410	-60.860	87.680	-66.230	19.950	0.009	n-Octane	3.164	-7.393	10.360	-8.301	2.849			0.007
n-Decane	3.073	-7.472	17.770	-28.570	24.620	-8.235		0.006	n-Decane	3.169	-7.383	20.620	-50.110	75.993	-59.750	18.640	0.008
n-Dodecane	3.091	-5.052	10.480	-14.070	11.290	-3.671		0.005	n-Dodecane	3.184	-5.879	15.430	-26.790	24.910	-8.789		0.004
								$T = 288.15\ \mathrm{K}$									
n-Hexane	2.301	-5.869	8.146	-6.248	2.032			0.003	n-Hexane	2.439	-5.789	7.205	-5.043	1.546			0.003
n-Octane	2.295	-5.181	7.510	-6.215	2.182			0.004	n-Octane	2.438	-5.126	6.594	-4.959	1.643			0.002
n-Decane	2.300	-4.110	5.946	-4.975	1.844			0.002	n-Decane	2.438	-4.203	5.776	-4.806	1.798			0.002
n-Dodecane	2.304	-3.491	8.337	-13.049	11.065	-3.532		0.004	n-Dodecane	2.437	-3.067	4.599	-3.856	1.524			0.002
n-Tetradecane	2.299	-2.035	6.654	-10.397	9.116	-3.041		0.004	n-Tetradecane	2.440	-2.046	5.844	-9.865	10.040	-3.907		0.001
								$T = 298.15\ \mathrm{K}$									
n-Hexane	1.825	-4.102	4.844	-3.050	0.813			0.002	n-Hexane	1.966	-4.472	5.267	-3.478	1.046			0.003
n-Octane	1.822	-3.711	4.913	-3.791	1.285			0.002	n-Octane	1.968	-3.765	4.400	-2.934	0.851			0.002
n-Decane	1.819	-3.057	4.442	-3.771	1.417			0.003	n-Decane	1.966	-3.233	4.343	-3.393	1.168			0.003
n-Dodecane	1.820	-2.181	3.572	-3.078	1.217			0.003	n-Dodecane	1.965	-2.208	2.733	-1.554	0.413			0.003
n-Tetradecane	1.826	-1.299	4.255	-7.380	7.491	-2.862		0.002	n-Tetradecane	1.968	-1.179	1.689	-0.434				0.003
								$T = 308.15\ \mathrm{K}$									
n-Hexane	1.503	-3.281	3.971	-2.655	0.770			0.001	n-Hexane	1.640	-2.956	2.231	-0.604				0.003
n-Octane	1.505	-2.916	3.801	-2.867	0.947			0.001	n-Octane	1.641	-2.624	2.059	-0.604				0.004
n-Decane	1.505	-2.420	3.543	-2.960	1.075			0.002	n-Decane	1.634	-2.098	1.770	-0.564				0.001
n-Dodecane	1.503	-1.460	1.875	-1.054	0.286			0.001	n-Dodecane	1.634	-1.505	1.426	-0.406				0.001
n-Tetradecane	1.505	-0.574	0.980	-0.201				0.002	n-Tetradecane	1.630	-0.719	0.980	-0.180				0.002
								$T = 318.15\ \mathrm{K}$									
n-Hexane	1.271	-2.442	2.246	-0.789				0.003	n-Hexane	1.353	-2.394	1.866	-0.539				0.002
n-Octane	1.276	-2.060	1.773	-0.561				0.003	n-Octane	1.352	-2.115	1.730	-0.543				0.001
n-Decane	1.271	-1.654	1.483	-0.457				0.001	n-Decane	1.350	-1.740	1.548	-0.518				0.002
n-Dodecane	1.269	-1.198	1.272	-0.377				0.001	n-Dodecane	1.350	-1.400	1.839	-1.188	0.366			0.001
n-Tetradecane	1.269	-0.434	0.578					0.002	n-Tetradecane	1.349	-0.805	1.416	-0.752	0.200			0.002

Table IV. Continued

PB +	A_0	A_1	A_2	A_3	A_4	A_5	σ	BB +	A_0	A_1	A_2	A_3	A_4	A_5	σ
							$T = 278.15\,\mathrm{K}$								
n-Hexane	4.064	-12.340	23.060	-30.170	22.990		0.009	n-Hexane	4.811	-12.220	12.990	-4.395	-2.430	1.641	0.005
n-Octane	4.077	-9.804	12.720	-9.078	2.759		0.003	n-Octane	4.811	-11.660	14.760	-10.440	3.195		0.003
n-Decane	4.070	-8.647	13.490	-14.770	9.678	-2.638	0.005	n-Decane	4.800	-10.657	14.374	-11.884	4.257		0.004
n-Dodecane	4.071	-6.738	10.090	-8.906	3.545		0.004	n-Dodecane	4.808	-8.304	11.950	-10.520	4.129		0.004
							$T = 288.15\,\mathrm{K}$								
n-Hexane	3.009	-7.422	9.335	-6.648	2.086		0.003	n-Hexane	3.621	-9.524	14.720	-16.910	12.220	-3.772	0.004
n-Octane	3.010	-6.575	8.173	-5.901	1.882		0.002	n-Octane	3.631	-7.768	8.399	-4.877	1.204		0.004
n-Decane	3.008	-5.556	7.201	-5.622	1.974		0.002	n-Decane	3.621	-6.205	5.496	-1.917			0.006
n-Dodecane	3.011	-4.151	5.374	-4.034	1.438		0.002	n-Dodecane	3.637	-5.466	5.863	-2.941	0.543		0.005
n-Tetradecane	3.020	-2.291	2.310	-0.446			0.004	n-Tetradecane	3.621	-3.924	5.965	-5.210	2.148		0.004
							$T = 298.15\,\mathrm{K}$								
n-Hexane	2.352	-5.028	5.032	-2.737	0.716	2.352	0.004	n-Hexane	2.693	-5.836	5.748	-2.931	0.653		0.002
n-Octane	2.364	-3.888	2.107	0.876	-0.945	2.364	0.005	n-Octane	2.694	-4.938	3.937	-1.071	-0.110		0.005
n-Decane	2.361	-3.403	2.737	-0.843		2.361	0.003	n-Decane	2.693	-4.277	3.675	-1.250			0.005
n-Dodecane	2.362	-2.677	2.329	-0.664		2.362	0.004	n-Dodecane	2.696	-3.473	3.876	-2.665	0.913		0.003
n-Tetradecane	2.360	-1.677	1.811	-0.456		2.360	0.003	n-Tetradecane	2.692	-2.060	1.809	-0.410			0.003
							$T = 308.15\,\mathrm{K}$								
n-Hexane	1.910	-3.587	2.765	-0.780			0.003	n-Hexane	2.206	-4.469	4.210	-2.157	0.521		0.002
n-Octane	1.905	-3.438	3.445	-1.963	0.522		0.001	n-Octane	2.211	-4.078	4.070	-2.335	0.604		0.002
n-Decane	1.903	-2.644	2.096	-0.615			0.003	n-Decane	2.206	-3.623	4.352	-3.337	1.148		0.002
n-Dodecane	1.904	-2.246	2.623	-1.631	0.500		0.001	n-Dodecane	2.203	-2.997	4.270	-3.832	1.505		0.003
n-Tetradecane	1.905	-1.454	2.257	-1.556	0.558		0.001	n-Tetradecane	2.207	-2.040	3.208	-2.751	1.085		0.001
							$T = 318.15\,\mathrm{K}$								
n-Hexane	1.572	-2.789	2.041	-0.546			0.002	n-Hexane	1.818	-3.397	2.692	-0.832			0.002
n-Octane	1.575	-2.559	2.005	-0.599			0.001	n-Octane	1.820	-3.082	2.691	-1.247	0.241		0.001
n-Decane	1.571	-2.099	1.695	-0.527			0.002	n-Decane	1.818	-2.696	2.686	-1.642	0.478		0.001
n-Dodecane	1.576	-1.766	2.007	-1.190	0.340		0.001	n-Dodecane	1.818	-2.277	2.807	-2.101	0.722		0.001
n-Tetradecane	1.572	-0.978	1.102	-0.290			0.001	n-Tetradecane	1.815	-1.536	2.236	-1.844	0.736		0.002

Table V. Least squares fitting coefficients, A_i, and standard deviations, σ, of refractive index for the x_1 n-alkane + (1-x_1) alkylbenzoate binary solvents at 298.15 K. Data for MB containing mixtures obtained from from Ref. 7

MB +	A_0	A_1	A_2	A_3	A_4	A_5	σ
n-Hexane	1.51472	-0.09761	-0.08270	0.04945	-0.00985	-0.00152	0.00010
n-Octane	1.51467	-0.14100	0.00540	0.03204	-0.02473	0.00881	0.00005
n-Decane	1.51471	-0.16035	0.05950	0.01115	-0.01595		0.00006
n-Dodecane	1.51476	-0.17634	0.13017	-0.06435	0.01468		0.00007
n-Tetradecane	1.51445	-0.18674	0.10361	0.17336	-0.33401	0.15552	0.00013
EB +							
n-Hexane	1.50334	-0.05137	-0.23774	0.32805	-0.23790	0.06807	0.00004
n-Octane	1.50332	-0.11254	-0.02173	0.04467	-0.01851		0.00002
n-Decane	1.50328	-0.12701	0.03196	0.01055	-0.00980		0.00006
n-Dodecane	1.50333	-0.13948	0.09481	-0.07817	0.06058	-0.02214	0.00013
n-Tetradecane	1.50332	-0.14121	0.08346	-0.02199	0.00274		0.00006
PB +							
n-Hexane	1.49829	-0.04102	-0.15192	0.05262	0.03583	-0.02141	0.00014
n-Octane	1.49848	-0.09769	-0.01573	0.01588	-0.00577		0.00001
n-Decane	1.49850	-0.10802	0.01638	0.00886	-0.00673		0.00003
n-Dodecane	1.49844	-0.11370	0.03847	0.00321	-0.00748		0.00007
n-Tetradecane	1.49842	-0.12002	0.06017	-0.01484	0.00263		0.00009
BB +							
n-Hexane	1.49548	-0.02613	-0.19633	0.23585	-0.21878	0.08250	0.00013
n-Octane	1.49536	-0.09540	0.06836	0.14384	0.07070		0.00006
n-Decane	1.49526	-0.09344	0.00307	0.00928	-0.00513		0.00004
n-Dodecane	1.49531	-0.09989	0.02577	0.00387	-0.00616		0.00003
n-Tetradecane	1.49530	-0.10530	0.04023	0.00807	-0.01211		0.00003

Table VI. Parameters of pure compounds used in the correlative models for excess molar volume and dynamic viscosity. Temperature dependent parameters are reported at 298.15 K

	Cubic EOS			*Modified ERAS*					*PFP*	
Compound	ω	T_c (K)	p_c (MPa)	$10^4\alpha$ (K^{-1})	$10^4\kappa_T$ (MPa^{-1})	K	Δv^* ($cm^3\ mol^{-1}$)	Δh^* ($J\ mol^{-1}$)	P^* (MPa^{-1})	V^* ($cm^3\ mol^{-1}$)
MB	0.43 [a]	692 [a]	3.64 [a]	8.82 [b]	5.99 [b]	0.303 [b]	-4.713 [b]	-20353 [b]	656.64 [c]	102.74 [c]
EB	0.48 [a]	668.7 [a]	2.32 [a]	8.92 [b]	6.49 [b]	0.262 [b]	-3.739 [b]	-17423 [b]	615.07 [c]	117.69 [c]
PB	0.559 [d]	710.7 [e]	2.95 [e]	8.78 [b]	6.56 [b]	0.399 [b]	-0.257 [b]	-10175 [b]	596.03 [c]	131.99 [c]
BB	0.58 [a]	723 [a]	2.6 [a]	8.56 [b]	6.55 [b]	0.117 [b]	-0.002 [b]	-6195 [b]	577.49 [c]	146.21 [c]
n-Hexane	0.299 [d]	507.5 [d]	3.01 [d]	13.89 [f]	17.06 [g]	0 [h]	0 [h]	0 [h]	424.49 [c]	99.50 [c]
n-Octane	0.398 [d]	568.8 [d]	2.49 [d]	11.57 [f]	12.97 [i]	0 [h]	0 [h]	0 [h]	435.10 [c]	127.87 [c]
n-Decane	0.489 [d]	617.7 [d]	2.12 [d]	10.43 [f]	11.04 [j]	0 [h]	0 [h]	0 [h]	444.68 [c]	155.98 [c]
n-Dodecane	0.575 [d]	658.2 [d]	1.82 [d]	9.58 [f]	9.91 [i]	0 [h]	0 [h]	0 [h]	442.48 [c]	184.47 [c]
n-Tetradecane	0.581 [d]	693.0 [d]	1.44 [d]	9.07 [f]	9.19 [k]	0 [h]	0 [h]	0 [h]	443.97 [c]	212.62 [c]

[a] Ref. 39. [b] Ref. 10. [c] Calculated according to the procedure reported by Francesconi et al. (Ref. 40). [d] Calculated according to the Lee – Kesler method. (Ref. 41). [e] Calculated according to the Joback method (In Ref. 39). [f] Values obtained in this work. [g] Ref. 21. [h] Ref. 18. [i] Ref. 42. [j] Ref. 43. [k] Ref.44.

Table VII. Average absolute percentage deviation, *AAD*, between experimental and calculated excess molar volume, using *SRK* and *PR* equations of state coupled with the *R1* – *R10* mixing rules, for the x_1 n-alkane + (1-x_1) alkylbenzoate binary mixtures

	SRK										*PR*									
MB+	*R1*	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*	*R1*	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*
									$T = 278.15\,\mathrm{K}$											
n-Hexane	19.70	1.39	1.39	1.38	3.43	2.79	13.42	14.84	7.90	11.30	2.99	1.39	1.39	1.39	2.99	3.21	10.64	16.55	9.83	12.45
n-Octane	10.56	9.16	9.16	9.16	10.19	17.43	33.47	13.15	16.89	18.25	10.69	9.29	9.29	9.29	10.69	18.11	23.29	10.50	11.20	9.47
n-Decane	10.05	17.94	17.94	17.94	8.61	5.16	35.83	19.20	13.88	10.69	9.87	18.46	18.46	18.46	9.87	4.94	24.96	16.90	19.08	13.18
n-Dodecane	11.52	9.70	9.70	9.70	10.08	8.97	11.09	13.97	11.72	5.95	11.28	9.57	9.57	9.57	11.28	9.07	15.40	15.00	12.56	5.89
									$T = 288.15\,\mathrm{K}$											
n-Hexane	5.78	4.22	4.22	4.22	5.09	11.91	10.52	10.32	9.57	8.07	4.71	4.21	4.21	4.21	4.71	12.61	8.29	11.58	11.12	8.84
n-Octane	13.20	13.67	13.67	13.67	12.54	18.81	27.04	14.40	12.52	7.75	13.03	13.74	13.74	13.74	13.03	18.93	18.69	19.57	16.07	10.20
n-Decane	11.60	38.58	38.59	38.59	13.01	5.51	44.15	16.01	14.14	4.75	11.49	39.12	39.13	39.13	11.49	5.71	43.16	22.23	18.23	17.93
n-Dodecane	22.85	4.30	4.30	4.30	20.13	5.39	25.93	5.33	4.62	4.50	21.72	4.27	4.27	4.27	21.72	5.01	21.94	5.80	4.80	4.51
n-Tetradecane	4.15	3.42	3.42	3.42	3.22	8.12	19.21	3.57	3.66	3.30	3.21	3.41	3.41	3.41	3.21	5.22	16.35	3.62	3.65	3.26
									$T = 298.15\,\mathrm{K}$											
n-Hexane	16.11	1.23	1.23	1.23	6.70	3.78	13.41	10.39	10.51	7.19	6.21	1.23	1.23	1.23	6.21	3.68	10.97	11.77	12.05	8.25
n-Octane	10.50	12.90	12.90	12.90	9.27	13.25	17.85	13.37	13.44	10.16	10.44	13.14	13.14	13.14	10.44	12.26	17.63	13.16	14.00	12.17
n-Decane	13.00	20.31	20.31	20.31	12.99	10.22	25.61	19.35	12.12	9.81	12.54	20.61	20.61	20.61	12.54	10.05	25.16	23.12	24.65	11.15
n-Dodecane	21.15	1.49	1.49	1.49	20.06	26.67	37.05	1.86	1.58	4.33	20.71	1.47	1.47	1.47	20.71	13.35	31.71	2.23	1.56	4.39
n-Tetradecane	2.56	1.63	1.63	1.63	2.04	19.73	20.30	1.68	1.70	2.78	2.14	1.62	1.62	1.62	2.14	2.31	17.15	1.67	1.70	2.73
									$T = 308.15\,\mathrm{K}$											
n-Hexane	10.25	0.87	0.87	0.87	4.87	3.47	10.58	11.65	7.03	6.28	4.50	0.86	0.86	0.86	4.50	3.12	8.77	12.65	8.28	7.10
n-Octane	6.65	6.84	6.84	6.84	6.56	8.54	9.23	10.51	7.71	5.48	6.56	6.95	6.95	6.95	6.56	8.05	9.02	7.64	11.04	7.58
n-Decane	16.52	9.76	9.76	9.76	14.41	10.01	11.05	14.60	16.26	7.47	16.04	9.97	9.97	9.97	16.04	10.92	10.86	9.05	19.12	9.42
n-Dodecane	19.45	1.81	1.81	1.81	18.37	11.26	24.40	2.07	2.14	4.76	19.24	1.79	1.79	1.79	19.24	8.06	21.25	2.24	2.12	4.82
n-Tetradecane	2.96	1.03	1.03	1.03	2.30	1.17	4.36	1.04	1.03	3.65	2.45	1.03	1.03	1.03	2.45	1.15	4.03	1.04	1.03	3.58
									$T = 318.15\,\mathrm{K}$											
n-Hexane	7.09	1.22	1.22	1.22	3.89	2.15	8.63	9.70	5.74	7.28	3.54	1.21	1.21	1.21	3.54	2.00	7.42	11.48	6.92	8.08
n-Octane	7.69	5.80	5.80	5.80	8.26	3.64	9.36	9.82	6.02	5.11	7.56	5.93	5.93	5.93	7.56	3.45	9.02	6.82	5.92	7.09
n-Decane	23.56	52.11	52.11	52.11	25.76	10.42	54.63	69.31	58.82	17.91	22.67	53.02	53.02	53.02	22.67	10.24	53.69	69.90	56.34	21.78
n-Dodecane	23.85	0.96	0.96	0.96	21.77	98.86	20.06	5.33	3.98	2.87	23.18	1.01	1.01	1.01	23.18	0.72	17.95	5.92	4.49	2.99
n-Tetradecane	3.96	4.42	4.42	4.42	3.81	6.18	21.69	4.73	4.77	4.07	3.81	4.40	4.40	4.40	3.81	6.27	18.36	4.82	4.75	4.02

Table VII. Continued

EB+	SRK										PR									
	R1	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*	*R1*	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*
									$T = 278.15\,\mathrm{K}$											
n-Hexane	7.74	2.07	2.07	2.07	1.80	27.35	4.86	3.79	2.99	2.96	1.82	2.07	2.07	2.07	1.82	24.63	3.49	4.17	3.17	3.09
n-Octane	29.26	36.89	13.16	36.89	29.11	43.38	21.16	31.82	31.82	32.81	29.86	37.08	13.42	37.08	29.86	42.47	22.15	31.63	33.03	32.76
n-Decane	11.02	12.23	12.23	12.23	12.59	7.77	20.30	7.63	10.35	7.97	11.32	12.53	12.53	12.53	11.32	7.55	17.99	7.20	13.00	7.92
n-Dodecane	14.96	10.92	8.36	10.92	12.12	6.30	16.02	4.82	15.28	7.24	14.30	11.03	8.23	11.03	14.30	6.40	15.91	4.19	15.81	6.80
									$T = 288.15\,\mathrm{K}$											
n-Hexane	6.32	1.33	1.33	1.33	1.64	29.27	7.20	3.93	2.79	2.77	1.50	1.33	1.33	1.33	1.50	25.47	5.70	4.37	3.12	3.01
n-Octane	10.69	6.07	6.07	6.07	11.82	18.95	18.69	9.28	7.78	16.46	10.16	6.12	6.12	6.12	10.16	17.77	17.64	4.08	6.37	10.23
n-Decane	14.96	16.06	12.27	16.06	14.80	18.99	22.75	11.84	17.84	13.16	14.41	16.21	12.13	16.21	14.41	18.85	14.10	11.05	18.88	13.18
n-Dodecane	9.96	6.70	5.88	6.70	8.19	8.07	16.05	5.23	8.96	5.59	9.28	6.73	5.84	6.73	9.28	8.13	15.96	5.15	9.24	5.61
n-Tetradecane	3.05	2.97	2.97	2.97	2.92	3.91	12.97	3.09	3.12	3.06	2.94	2.97	2.97	2.97	2.94	3.59	32.72	3.08	3.15	3.06
									$T = 298.15\,\mathrm{K}$											
n-Hexane	7.31	1.87	1.87	1.87	6.42	6.69	8.37	2.12	1.81	1.82	6.19	1.87	1.87	1.87	6.19	6.84	6.82	2.27	1.85	1.82
n-Octane	7.03	3.94	3.94	3.94	7.53	8.96	6.89	12.62	7.22	7.09	6.93	3.91	3.91	3.91	6.93	8.50	6.22	15.13	8.58	8.42
n-Decane	7.00	2.74	2.74	2.74	5.91	5.31	9.49	8.17	5.24	5.13	6.73	2.73	2.73	2.73	6.73	5.83	8.78	9.08	6.04	5.81
n-Dodecane	14.69	3.89	3.49	3.89	8.99	5.57	11.93	3.08	7.01	3.21	14.30	11.03	8.23	11.03	14.30	6.40	10.91	4.19	15.81	6.80
n-Tetradecane	7.56	5.02	4.33	5.02	7.37	4.44	7.69	5.09	8.72	3.50	7.20	5.03	4.31	5.03	7.20	4.98	6.20	5.16	8.93	3.57
									$T = 308.15\,\mathrm{K}$											
n-Hexane	5.98	0.78	0.78	0.78	3.90	3.56	6.28	2.54	1.27	1.18	3.70	0.77	0.77	0.77	3.70	3.25	5.09	3.01	1.60	1.41
n-Octane	3.96	3.07	3.06	3.06	3.95	8.96	7.96	13.01	14.03	13.91	3.51	3.01	3.01	3.01	3.51	8.21	7.54	17.10	16.51	16.32
n-Decane	24.69	39.51	25.21	39.51	26.18	11.40	56.69	11.91	11.06	21.31	23.90	39.99	24.65	39.99	23.90	11.04	53.55	8.82	10.58	19.53
n-Dodecane	7.98	0.53	0.53	0.53	7.27	2.12	3.56	3.18	1.60	1.89	7.77	0.53	0.53	0.53	7.77	1.73	2.98	3.42	1.87	2.13
n-Tetradecane	0.96	0.69	0.69	0.69	0.62	0.68	2.56	1.06	0.89	0.78	0.61	0.69	0.69	0.69	0.61	0.66	1.98	1.10	0.98	0.75
									$T = 318.15\,\mathrm{K}$											
n-Hexane	2.31	0.37	0.37	0.37	3.24	16.86	5.47	1.82	0.81	0.76	3.07	0.37	0.37	0.37	3.07	15.01	4.55	2.18	1.04	0.94
n-Octane	27.05	14.34	14.34	14.34	27.17	41.21	39.63	21.84	6.54	6.83	26.38	14.50	14.50	14.50	26.38	38.70	37.22	29.25	10.76	10.45
n-Decane	38.55	35.27	21.41	35.27	39.88	8.52	56.21	23.31	28.82	24.16	37.31	35.73	20.89	35.73	37.31	8.30	53.82	20.36	21.66	24.09
n-Dodecane	7.21	1.37	1.37	1.37	5.41	1.38	8.05	2.26	2.33	1.22	6.20	1.36	1.36	1.36	6.20	1.40	6.49	2.49	2.50	1.38
n-Tetradecane	1.60	1.24	1.24	1.24	1.20	1.64	7.55	1.39	1.37	1.34	1.21	1.24	1.24	1.24	1.21	1.59	6.21	1.38	1.45	1.35

Table VII. Continued

PB+	SRK										PR									
	R1	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*	*R1*	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*
									$T = 278.15\,\mathrm{K}$											
n-Hexane	1.47	1.20	1.20	1.20	3.57	8.22	6.02	7.71	5.41	4.54	2.90	1.17	1.17	1.17	2.90	5.51	4.85	8.83	5.95	5.04
n-Octane	19.63	11.02	11.02	11.02	21.03	11.32	15.36	10.11	17.59	10.87	19.35	11.03	11.03	11.03	19.35	7.97	13.69	14.53	19.83	13.34
n-Decane	20.02	13.88	13.88	13.88	20.64	13.15	46.54	14.97	12.72	10.91	19.51	14.02	14.02	14.02	19.51	13.21	38.89	10.77	15.92	11.84
n-Dodecane	7.65	1.78	1.78	1.78	6.88	5.43	36.81	0.80	0.92	6.24	7.23	1.79	1.79	1.79	7.23	5.67	31.37	0.71	0.72	6.42
									$T = 288.15\,\mathrm{K}$											
n-Hexane	1.42	1.02	1.02	1.02	5.21	9.68	6.57	8.95	4.47	3.51	4.53	1.00	1.00	1.00	4.53	4.09	5.36	10.12	5.07	4.07
n-Octane	24.00	18.99	18.99	18.99	26.64	5.45	22.36	10.97	10.16	15.62	23.27	19.04	19.04	19.04	23.27	5.47	21.01	15.79	15.07	12.05
n-Decane	35.69	13.87	13.88	13.88	36.68	8.75	38.19	10.86	9.35	11.35	35.29	14.00	14.00	14.00	35.29	9.01	35.53	16.22	12.53	10.49
n-Dodecane	11.85	11.65	11.65	11.65	11.46	4.72	48.66	18.65	17.44	10.09	11.14	11.74	11.74	11.74	11.14	4.61	39.20	19.21	17.85	9.73
n-Tetradecane	9.06	3.95	3.95	3.95	8.48	6.90	33.46	7.29	6.58	4.27	8.97	3.97	3.97	3.97	8.97	3.01	28.18	7.48	6.77	3.23
									$T = 298.15\,\mathrm{K}$											
n-Hexane	1.94	1.91	1.91	1.91	6.28	5.57	8.26	10.74	4.91	3.99	5.55	1.90	1.90	1.90	5.55	5.04	7.21	11.62	5.54	4.49
n-Octane	15.03	2.24	2.24	2.24	14.70	12.52	16.87	3.22	7.47	2.01	14.09	2.20	2.20	2.20	14.09	12.49	11.32	5.31	8.57	1.92
n-Decane	26.25	33.84	33.85	33.84	24.99	14.04	41.25	57.99	36.73	29.54	25.94	33.95	33.96	33.96	25.94	14.20	39.50	68.09	42.18	30.31
n-Dodecane	16.05	15.30	15.30	15.30	16.03	9.73	45.92	18.75	15.23	14.73	15.45	15.50	15.50	15.50	15.45	9.44	40.98	20.33	16.38	13.33
n-Tetradecane	28.45	16.16	16.16	16.16	26.39	7.01	67.34	24.61	22.89	12.10	27.51	16.28	16.28	16.28	27.51	6.89	56.18	25.18	23.48	14.83
									$T = 308.15\,\mathrm{K}$											
n-Hexane	1.11	0.74	0.74	0.74	4.89	3.79	6.15	8.29	5.29	4.28	4.24	0.72	0.72	0.72	4.24	14.21	5.20	9.38	5.84	4.82
n-Octane	8.15	0.64	0.64	0.64	8.99	2.62	5.69	3.24	3.30	1.96	7.85	0.64	0.64	0.64	7.85	1.91	5.41	7.31	5.39	4.16
n-Decane	21.12	14.15	14.15	14.15	20.92	16.14	57.83	19.55	19.02	6.13	20.06	14.27	14.27	14.27	20.06	16.28	48.31	14.77	12.05	5.44
n-Dodecane	1.56	1.39	1.39	1.39	1.19	0.83	7.90	4.29	3.54	0.79	1.23	1.42	1.42	1.42	1.23	0.78	7.03	4.64	3.60	0.73
n-Tetradecane	3.69	0.70	0.70	0.70	3.15	0.92	4.56	0.71	0.69	1.25	3.35	0.70	0.70	0.70	3.35	0.89	4.23	0.71	0.69	1.26
									$T = 318.15\,\mathrm{K}$											
n-Hexane	4.50	0.39	0.39	0.39	3.10	43.10	4.96	6.53	6.59	5.69	2.51	0.37	0.37	0.37	2.51	36.66	4.12	8.21	7.04	6.11
n-Octane	13.96	1.40	1.40	1.40	14.37	7.64	8.25	6.09	7.94	5.12	13.41	1.38	1.38	1.38	13.41	7.41	7.95	9.20	9.72	7.15
n-Decane	18.59	7.62	7.62	7.62	19.32	16.07	16.78	15.31	15.38	4.44	18.39	7.70	7.70	7.70	18.39	16.29	15.29	10.20	18.19	4.58
n-Dodecane	2.53	0.59	0.59	0.59	3.01	1.41	9.56	13.37	11.69	1.43	2.14	0.61	0.61	0.61	2.14	1.45	9.10	14.15	12.26	1.57
n-Tetradecane	3.98	0.55	0.55	0.55	3.46	1.08	4.69	1.95	1.44	0.66	3.75	0.54	0.54	0.54	3.75	0.59	4.52	2.08	1.50	0.66

Table VII. Continued

BB+	SRK										PR									
	R1	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*	*R1*	*R2*	*R3*	*R4*	*R5*	*R6*	*R7*	*R8*	*R9*	*R10*
$T = 278.15\,\mathrm{K}$																				
n-Hexane	5.08	1.35	1.35	1.35	3.89	37.73	6.08	4.63	3.63	2.92	3.16	1.32	1.32	1.32	3.16	31.88	5.02	5.02	3.95	3.12
n-Octane	8.11	9.53	9.53	9.53	8.87	7.34	24.63	18.68	10.49	9.51	7.94	9.54	9.54	9.54	7.94	7.24	22.94	21.12	11.38	10.21
n-Decane	45.47	41.76	41.76	41.76	43.19	30.48	50.33	32.31	37.97	36.44	43.22	41.88	41.89	41.89	43.22	29.24	48.25	29.23	37.22	35.51
n-Dodecane	25.36	35.40	35.40	35.40	28.03	3.88	33.12	35.95	32.01	22.66	24.65	36.11	36.11	36.11	36.11	24.65	29.33	31.88	36.02	19.69
$T = 288.15\,\mathrm{K}$																				
n-Hexane	3.66	1.35	1.35	1.35	5.09	12.36	5.11	3.47	2.69	2.12	3.02	1.33	1.33	1.33	4.41	11.52	4.18	3.93	2.92	2.31
n-Octane	21.28	0.72	0.72	0.72	8.34	9.47	35.32	12.64	1.65	0.91	7.62	0.72	0.72	0.72	7.62	8.55	29.18	13.84	2.55	1.41
n-Decane	26.01	22.32	22.32	22.32	26.16	31.42	36.96	28.01	27.10	18.53	25.83	22.42	22.39	22.39	25.83	29.98	32.11	28.05	27.53	18.70
n-Dodecane	5.96	6.17	3.33	6.17	5.35	5.51	17.12	8.77	7.85	4.43	5.21	6.22	3.30	6.22	5.21	4.12	16.21	9.21	8.13	4.25
n-Tetradecane	4.25	4.35	4.35	4.35	3.59	5.02	8.52	5.86	5.10	2.88	3.95	4.40	4.40	4.40	3.95	3.91	8.12	6.12	5.35	2.79
$T = 298.15\,\mathrm{K}$																				
n-Hexane	4.90	1.82	1.82	1.82	7.68	42.18	7.37	2.97	1.65	1.49	6.99	1.82	1.82	1.82	6.99	36.01	6.39	3.57	1.98	1.35
n-Octane	5.49	1.16	1.16	1.16	5.34	3.94	19.25	8.93	3.45	2.63	4.70	1.16	1.16	1.16	4.70	3.37	18.74	10.08	4.22	3.26
n-Decane	22.48	17.55	17.55	17.55	21.98	43.85	25.36	24.83	23.35	14.38	21.58	17.60	17.60	17.60	21.58	41.91	24.42	25.06	23.90	14.51
n-Dodecane	52.91	24.08	24.08	24.08	52.36	15.59	32.36	23.45	21.38	23.15	51.36	24.25	24.25	24.25	51.36	15.41	30.25	27.56	22.02	21.44
n-Tetradecane	6.54	4.75	4.75	4.75	5.84	9.66	11.52	9.44	8.84	7.35	5.42	4.77	4.77	4.77	5.42	12.35	10.23	9.55	9.02	7.24
$T = 308.15\,\mathrm{K}$																				
n-Hexane	3.97	1.44	1.44	1.44	2.86	19.99	3.77	7.33	6.07	4.98	2.20	1.41	1.41	1.41	2.20	38.94	2.88	7.83	6.42	5.32
n-Octane	5.94	0.35	0.35	0.35	4.40	2.77	4.15	8.34	4.52	3.62	3.81	0.35	0.35	0.35	3.81	3.10	4.02	9.65	5.30	4.29
n-Decane	30.65	9.74	9.74	9.74	31.50	49.29	15.23	39.17	39.56	18.84	29.57	9.86	9.96	9.96	29.57	47.24	14.85	36.85	40.73	26.01
n-Dodecane	9.02	0.95	0.95	0.95	9.00	2.47	6.32	16.83	15.10	4.11	8.40	0.90	0.90	0.90	8.40	2.55	5.96	17.63	15.62	4.43
n-Tetradecane	2.96	0.41	0.41	0.41	2.20	1.37	3.20	2.53	1.91	0.52	2.62	0.41	0.41	0.41	2.62	1.21	2.58	2.75	2.10	0.50
$T = 318.15\,\mathrm{K}$																				
n-Hexane	8.74	1.76	1.76	1.76	7.98	44.87	5.01	11.40	2.45	1.75	7.34	1.72	1.72	1.72	7.34	7.05	4.41	12.77	2.92	1.86
n-Octane	8.12	0.89	0.89	0.89	8.17	6.56	11.85	13.26	1.91	0.82	7.60	0.87	0.87	0.87	7.60	6.04	10.42	14.66	2.84	1.56
n-Decane	37.96	17.27	17.27	17.27	37.57	39.67	28.36	20.26	16.14	12.66	36.59	17.30	17.30	17.30	36.59	38.02	26.36	21.47	17.40	11.33
n-Dodecane	8.96	0.96	0.96	0.96	4.25	4.36	9.63	11.25	10.99	3.18	8.21	0.81	0.81	0.81	3.96	4.02	8.96	11.03	10.86	3.00
n-Tetradecane	4.68	0.59	0.59	0.59	3.98	0.68	10.23	4.02	2.95	0.73	4.39	0.60	0.60	0.60	4.39	0.68	9.45	4.42	3.32	0.91

Table VIII. Average absolute percentage deviation, *AAD*, between experimental and calculated dynamic viscosity using *PR* equation of state coupled with the *R1*, *R6* and *R9* mixing rules, for the x_1 n-alkane + (1-x_1) alkylbenzoate binary mixtures

	R1	*R6*	*R9*	*R1*	*R6*	*R9*	*R1*	*R6*	*R9*	*R1*	*R6*	*R9*
	MB			EB			PB			BB		
						$T = 278.15\,\mathrm{K}$						
n-Hexane	1.57	1.57	1.63	0.29	4.32	0.40	1.05	0.95	1.15	0.84	1.64	0.76
n-Octane	0.95	1.18	1.00	0.43	0.44	0.38	0.13	0.13	0.13	0.23	0.24	0.30
n-Decane	0.74	0.91	0.83	0.77	0.75	0.82	0.32	3.89	0.31	0.53	1.88	0.51
n-Dodecane	0.16	0.15	0.17	0.59	0.59	0.63	0.42	1.55	0.51	0.49	0.86	0.46
						$T = 288.15\,\mathrm{K}$						
n-Hexane	0.21	0.69	0.13	0.44	4.09	0.51	0.47	1.55	0.71	0.63	0.44	0.77
n-Octane	0.36	0.98	0.36	0.21	0.31	0.22	0.23	0.23	0.17	0.25	0.26	0.19
n-Decane	0.25	1.07	0.26	0.32	0.34	0.35	0.29	0.31	0.27	0.19	1.27	0.21
n-Dodecane	0.52	0.52	0.52	0.29	0.27	0.28	0.29	0.31	0.27	0.34	0.26	0.32
n-Tetradecane	0.29	0.29	0.37	0.17	0.18	0.27	0.16	0.14	0.18	0.24	0.47	0.25
						$T = 298.15\,\mathrm{K}$						
n-Hexane	0.22	0.21	0.33	0.41	0.57	0.55	0.52	0.56	0.71	0.21	0.52	0.48
n-Octane	0.22	0.66	0.18	0.13	0.80	0.14	0.74	0.70	0.85	0.45	0.42	0.38
n-Decane	0.24	0.26	0.22	0.25	0.29	0.30	0.36	0.57	0.43	0.32	0.56	0.32
n-Dodecane	0.25	0.23	0.25	0.13	0.13	0.13	0.26	0.18	0.30	0.16	0.21	0.16
n-Tetradecane	0.17	0.16	0.18	0.15	0.15	0.14	0.26	0.24	0.27	0.13	0.75	0.14
						$T = 308.15\,\mathrm{K}$						
n-Hexane	0.15	0.15	0.20	0.53	1.45	0.22	0.41	0.13	0.19	0.19	0.19	0.43
n-Octane	0.19	0.60	0.18	0.54	0.59	0.44	0.11	0.12	0.11	0.11	0.12	0.12
n-Decane	0.26	0.24	0.27	0.19	0.16	0.19	0.21	0.48	0.25	0.22	0.64	0.25
n-Dodecane	0.10	0.11	0.06	0.14	0.17	0.15	0.04	0.14	0.04	0.38	0.43	0.41
n-Tetradecane	0.18	0.14	0.23	0.09	0.14	0.09	0.04	0.05	0.08	0.17	0.21	0.20
						$T = 318.15\,\mathrm{K}$						
n-Hexane	1.05	1.70	1.14	0.60	1.69	0.40	0.36	0.65	0.77	0.29	0.80	0.20
n-Octane	0.70	0.73	0.87	0.39	0.67	0.33	0.23	0.20	0.38	0.12	0.11	0.06
n-Decane	0.23	0.10	0.29	0.16	0.15	0.14	0.06	0.07	0.10	0.07	0.18	0.07
n-Dodecane	0.18	0.24	0.20	0.05	0.04	0.05	0.10	0.06	0.09	0.08	0.10	0.12
n-Tetradecane	0.13	0.17	0.22	0.07	0.06	0.06	0.06	0.05	0.05	0.18	0.21	0.20

Table IX. Parameters and average absolute percentage deviation, *AAD*, corresponding to the *PFP* model applied to the correlation of experimental excess molar volume, for the x_1 n-alkane + (1-x_1) alkylbenzoate binary mixtures at 298.15 K

	MB		EB		PB		BB	
	χ_{12} (J cm^{-3})	*AAD*	χ_{12} (J cm^{-3})	*AAD*	χ_{12} (J cm^{-3})	*AAD*	χ_{12} (J cm^{-3})	*AAD*
n-Hexane	43.946	13.37	31.275	11.92	27.385	9.97	25.760	8.50
n-Octane	35.053	60.75	27.973	85.39	22.265	30.18	21.958	14.76
n-Decane	30.792	78.90	24.933	28.23	20.409	89.31	19.468	86.11
n-Dodecane	26.793	15.10	21.934	12.16	17.068	97.31	17.779	55.52
n-Tetradecane	24.896	8.92	19.545	9.32	16.686	21.85	16.123	7.80

Table X. Parameters and average absolute percentage deviations, *AAD*, corresponding to the modified ERAS model applied to the correlation of experimental excess molar volume, for the x_1 n-alkane +(1-x_1) alkylbenzoate binary mixtures at 298.15 K

	MB		EB		PB		BB	
	X_{AB} (J cm^{-3})	*AAD*	X_{AB} (J cm^{-3})	*AAD*	X_{AB} (J cm^{-3})	*AAD*	X_{AB} (J cm^{-3})	*AAD*
n-Hexane	27.212	13.76	21.982	13.02	25.558	12.34	24.344	10.86
n-Octane	24.410	56.56	22.131	71.30	22.379	28.70	21.649	16.96
n-Decane	23.212	66.72	20.823	25.54	20.615	85.63	19.924	95.96
n-Dodecane	23.389	12.39	20.286	11.05	18.016	35.22	18.624	7.70
n-Tetradecane	23.764	6.89	19.563	8.45	17.859	22.49	17.862	22.49