

SUPPLEMENTARY MATERIAL

Table S1: Experimental Densities, ρ , and Calculated Excess Volumes, V^E , for the Binary Mixtures 3-Methylpentane (1) with Isomeric Chlorobutanes (2)

x_1	$T = 283.15 \text{ K}$		$T = 298.15 \text{ K}$		$T = 313.15 \text{ K}$	
	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$
3-methylpentane (1) + 1-chlorobutane (2)						
0.0000	0.897339		0.880785		0.863882	
0.0518	0.883063	0.0062	0.866668	0.0068	0.849913	0.0088
0.0940	0.871693	0.0110	0.855423	0.0127	0.838789	0.0161
0.2038	0.843104	0.0291	0.827163	0.0329	0.810879	0.0356
0.3040	0.818239	0.0472	0.802599	0.0525	0.786617	0.0567
0.4059	0.794060	0.0686	0.778725	0.0752	0.763049	0.0805
0.5021	0.772260	0.0817	0.757203	0.0900	0.741812	0.0963
0.5999	0.751046	0.0886	0.736271	0.0981	0.721169	0.1045
0.7043	0.729403	0.0865	0.714939	0.0942	0.700132	0.1018
0.8049	0.709472	0.0734	0.695295	0.0801	0.680781	0.0859
0.9038	0.690744	0.0428	0.676852	0.0461	0.662621	0.0493
0.9492	0.682404	0.0256	0.668655	0.0246	0.654552	0.0262
1.0000	0.673277		0.659654		0.645693	
3-methylpentane (1) + 2-chlorobutane (2)						
0.0000	0.884340		0.867474		0.850266	
0.0518	0.870869	0.0310	0.854172	0.0346	0.837140	0.0376
0.1010	0.858359	0.0608	0.841844	0.0651	0.824987	0.0694
0.2014	0.833832	0.0999	0.817647	0.1092	0.801112	0.1198
0.3025	0.810165	0.1424	0.794307	0.1568	0.778072	0.1769
0.4027	0.787753	0.1755	0.772237	0.1908	0.756322	0.2156
0.4998	0.766965	0.1983	0.751793	0.2109	0.736173	0.2412
0.6043	0.745604	0.2039	0.730718	0.2249	0.715487	0.2476
0.7008	0.726732	0.1943	0.712155	0.2140	0.697237	0.2348
0.8004	0.708113	0.1597	0.693876	0.1716	0.679280	0.1879
0.8981	0.690678	0.0946	0.676735	0.1034	0.662447	0.1138
0.9481	0.682055	0.0494	0.668257	0.0564	0.654137	0.0608
1.0000	0.673277		0.659654		0.645693	
3-methylpentane (1) + 1-chloro-2-methylpropane (2)						
0.0000	0.888845		0.871533		0.853902	
0.0522	0.875002	0.0213	0.857910	0.0227	0.840505	0.0229
0.1013	0.862213	0.0497	0.845326	0.0525	0.828140	0.0522
0.2024	0.836886	0.0926	0.820426	0.0957	0.803617	0.1019
0.3032	0.812724	0.1380	0.796664	0.1431	0.780245	0.1526
0.4028	0.789955	0.1708	0.774279	0.1770	0.758223	0.1908
0.5056	0.767500	0.1958	0.752210	0.2026	0.736526	0.2193
0.6040	0.747010	0.1996	0.732061	0.2088	0.716749	0.2229
0.7018	0.727552	0.1838	0.712953	0.1908	0.697973	0.2061
0.8002	0.708804	0.1517	0.694555	0.1544	0.679911	0.1679
0.8980	0.691013	0.0911	0.677084	0.0913	0.662759	0.1029
0.9486	0.682123	0.0476	0.668357	0.0459	0.654213	0.0520
1.0000	0.673277		0.659654		0.645693	

(Table S1). Continued.

x_1	$T = 283.15 \text{ K}$		$T = 298.15 \text{ K}$		$T = 313.15 \text{ K}$	
	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$
3-methylpentane (1) + 2-chloro-2-methylpropane (2)						
0.0000	0.855249		0.837096		0.818536	
0.0496	0.844163	0.0657	0.826249	0.0732	0.807960	0.0774
0.0995	0.833286	0.1234	0.815626	0.1355	0.797592	0.1451
0.2046	0.811193	0.2232	0.794046	0.2449	0.776531	0.2649
0.3023	0.791465	0.3078	0.774815	0.3319	0.757762	0.3612
0.4050	0.771635	0.3707	0.755464	0.3996	0.738913	0.4316
0.5064	0.753007	0.3909	0.737302	0.4207	0.721220	0.4543
0.6033	0.735976	0.3799	0.720652	0.4172	0.705059	0.4408
0.7038	0.719041	0.3396	0.704203	0.3647	0.689003	0.3930
0.8012	0.703364	0.2597	0.688927	0.2806	0.674142	0.3029
0.9018	0.687856	0.1401	0.673833	0.1521	0.659469	0.1645
0.9514	0.680462	0.0654	0.666658	0.0681	0.652482	0.0775
1.0000	0.673277		0.659654		0.645693	

Table S2: Experimental Densities, ρ , and Calculated Excess Volumes, V^E , for the Binary Mixtures 2,2-Dimethylbutane (1) with Isomeric Chlorobutanes (2)

x_1	$T = 283.15 \text{ K}$		$T = 298.15 \text{ K}$		$T = 313.15 \text{ K}$	
	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$
2,2-dimethylbutane (1) + 1-chlorobutane (2)						
0.0000	0.897339		0.880785		0.863882	
0.0524	0.882162	-0.0572	0.865756	-0.0628	0.849045	-0.0749
0.1010	0.868422	-0.1077	0.852176	-0.1211	0.835629	-0.1429
0.1995	0.841308	-0.1748	0.825390	-0.2036	0.809165	-0.2424
0.3081	0.812589	-0.2038	0.797012	-0.2459	0.781108	-0.2970
0.3985	0.789642	-0.2011	0.774318	-0.2489	0.758647	-0.3038
0.4990	0.765162	-0.1789	0.750078	-0.2259	0.734631	-0.2775
0.5984	0.742011	-0.1456	0.727126	-0.1843	0.711868	-0.2255
0.7015	0.719089	-0.1071	0.704383	-0.1313	0.689306	-0.1565
0.7986	0.698479	-0.0724	0.683941	-0.0813	0.669048	-0.0927
0.9002	0.677861	-0.0377	0.663549	-0.0390	0.648875	-0.0402
0.9487	0.668352	-0.0237	0.654168	-0.0253	0.639619	-0.0261
1.0000	0.658465		0.644407		0.629991	
2,2-dimethylbutane (1) + 2-chlorobutane (2)						
0.0000	0.884340		0.867474		0.850266	
0.0448	0.871894	-0.0080	0.855165	-0.0094	0.838093	-0.0112
0.0993	0.857081	-0.0131	0.840513	-0.0153	0.823599	-0.0182
0.2003	0.830566	-0.0123	0.814290	-0.0149	0.797658	-0.0173
0.3010	0.805310	-0.0029	0.789314	-0.0039	0.772963	-0.0052
0.3993	0.781747	0.0105	0.766032	0.0102	0.749959	0.0094
0.4989	0.758908	0.0274	0.743478	0.0275	0.727689	0.0270
0.6039	0.735931	0.0416	0.720789	0.0436	0.705287	0.0451
0.7002	0.715813	0.0465	0.700928	0.0507	0.685674	0.0564
0.8033	0.695210	0.0445	0.680598	0.0509	0.665607	0.0611
0.9028	0.676225	0.0281	0.661870	0.0366	0.647146	0.0476
0.9518	0.667178	0.0155	0.652964	0.0216	0.638384	0.0299
1.0000	0.658465		0.644407		0.629991	

(Table S2). Continued.

x_1	$T = 283.15 \text{ K}$		$T = 298.15 \text{ K}$		$T = 313.15 \text{ K}$	
	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$	$\rho / \text{g}\cdot\text{cm}^{-3}$	$V^E / \text{cm}^3\cdot\text{mol}^{-1}$
2,2-dimethylbutane (1) + 1-chloro-2-methylpropane (2)						
0.0000	0.888845		0.871533		0.853902	
0.0487	0.874991	-0.0086	0.858004	-0.0281	0.840737	-0.0550
0.0994	0.860936	-0.0190	0.844208	-0.0500	0.827206	-0.0910
0.1995	0.834186	-0.0375	0.817846	-0.0766	0.801229	-0.1275
0.2985	0.808932	-0.0495	0.792883	-0.0844	0.776524	-0.1274
0.3993	0.784339	-0.0513	0.768569	-0.0791	0.752432	-0.1066
0.5018	0.760418	-0.0425	0.744915	-0.0600	0.729024	-0.0733
0.6011	0.738249	-0.0276	0.723010	-0.0359	0.707402	-0.0425
0.6985	0.717427	-0.0108	0.702477	-0.0153	0.687165	-0.0193
0.7995	0.696785	0.0010	0.682131	0.0001	0.667114	-0.0001
0.8988	0.677390	0.0036	0.663018	0.0065	0.648290	0.0091
0.9479	0.668106	0.0024	0.653880	0.0055	0.639301	0.0077
1.0000	0.658465		0.644407		0.629991	
2,2-dimethylbutane (1) + 2-chloro-2-methylpropane (2)						
0.0000	0.855249		0.837096		0.818536	
0.0499	0.843255	0.0315	0.825301	0.0389	0.806950	0.0458
0.1017	0.831027	0.0700	0.813290	0.0835	0.795154	0.0977
0.1983	0.809035	0.1265	0.791691	0.1509	0.773955	0.1767
0.3004	0.786769	0.1793	0.769847	0.2121	0.752494	0.2540
0.3990	0.766151	0.2250	0.749642	0.2627	0.732739	0.3049
0.4989	0.746168	0.2541	0.730068	0.2952	0.713597	0.3378
0.6017	0.726542	0.2582	0.710869	0.2978	0.694772	0.3494
0.7034	0.707984	0.2386	0.692728	0.2738	0.677086	0.3148
0.8000	0.691096	0.1981	0.676218	0.2288	0.661002	0.2563
0.8967	0.674960	0.1185	0.660485	0.1353	0.645654	0.1523
0.9504	0.666306	0.0586	0.652046	0.0676	0.637407	0.0814
1.0000	0.658465		0.644407		0.629991	