

Table of experimentally determined aqueous-CO₂ solubilities evaluated in the study:

Diamond L.W. and Akinfiyev N.N. (2003):

"Solubility of CO₂ in water from 0 to 100 °C and from 0.1 to 100 MPa:

Evaluation of literature data and thermodynamic modelling"

Fluid Phase Equilibria, 208, 265-290.

See publication for list of numbered references.

T, °C	P total, MPa	xCO ₂ mol%	Reference
0.00	0.507	0.6951	[17]
0.00	1.013	1.2810	[17]
0.00	1.520	1.7456	[17]
0.00	2.027	2.1117	[17]
0.00	2.533	2.4128	[17]
0.00	3.040	2.6578	[17]
12.40	0.507	0.4158	[17]
12.40	1.013	0.7758	[17]
12.40	1.520	1.0932	[17]
12.40	2.027	1.3647	[17]
12.40	2.533	1.6189	[17]
12.40	3.040	1.8482	[17]
1.00	0.076	0.0993	[18]
1.00	0.251	0.3213	[18]
1.00	0.472	0.6060	[18]
1.00	0.775	0.9597	[18]
1.00	1.056	1.2760	[18]
1.00	1.362	1.6010	[18]
3.00	0.079	0.0965	[18]
3.00	0.262	0.3120	[18]
3.00	0.495	0.5860	[18]
3.00	0.809	0.9297	[18]
3.00	1.100	1.2390	[18]
3.00	1.420	1.5490	[18]
5.00	0.083	0.0936	[18]
5.00	0.274	0.3033	[18]
5.00	0.516	0.5696	[18]
5.00	0.842	0.9023	[18]
5.00	1.146	1.2000	[18]
5.00	1.479	1.4980	[18]
5.00	1.858	1.7720	[18]
7.00	0.086	0.0912	[18]
7.00	0.285	0.2944	[18]
7.00	0.538	0.5519	[18]
7.00	0.876	0.8730	[18]
7.00	1.194	1.1600	[18]
7.00	1.538	1.4470	[18]
7.00	1.924	1.7140	[18]
9.00	0.090	0.0883	[18]
9.00	0.297	0.2855	[18]
9.00	0.560	0.5349	[18]
9.00	0.906	0.8493	[18]
9.00	1.237	1.1250	[18]
9.00	1.589	1.4050	[18]
9.00	1.982	1.6660	[18]
11.00	0.094	0.0852	[18]
11.00	0.309	0.2770	[18]

11.00	0.580	0.5201	[18]
11.00	0.940	0.8215	[18]
11.00	1.289	1.0820	[18]
11.00	1.641	1.3630	[18]
11.00	2.051	1.6060	[18]
13.00	0.097	0.0829	[18]
13.00	0.320	0.2688	[18]
13.00	0.600	0.5052	[18]
13.00	0.971	0.7970	[18]
13.00	1.336	1.0450	[18]
13.00	1.696	1.3180	[18]
13.00	2.113	1.5540	[18]
15.00	0.101	0.0803	[18]
15.00	0.332	0.2604	[18]
15.00	0.620	0.4901	[18]
15.00	0.998	0.7771	[18]
15.00	1.376	1.0150	[18]
15.00	1.748	1.2780	[18]
15.00	2.179	1.5000	[18]
20.00	2.450	0.5470	[19]
20.00	2.940	0.6080	[19]
20.00	3.920	0.6490	[19]
20.00	4.900	0.8700	[19]
20.00	5.390	0.9620	[19]
35.00	2.940	0.8620	[19]
35.00	2.940	0.8270	[19]
35.00	3.920	1.0830	[19]
35.00	3.920	1.3060	[19]
35.00	4.900	1.3810	[19]
35.00	4.900	1.6040	[19]
35.00	5.880	1.6630	[19]
35.00	5.880	1.4300	[19]
35.00	6.860	1.9680	[19]
35.00	6.860	1.8240	[19]
35.00	7.850	2.1270	[19]
60.00	3.920	0.7400	[19]
60.00	3.920	0.5910	[19]
60.00	4.900	0.8310	[19]
60.00	4.900	0.8250	[19]
60.00	5.880	0.9810	[19]
60.00	5.880	0.9300	[19]
60.00	6.860	1.1380	[19]
60.00	6.860	1.0750	[19]
60.00	7.850	1.3570	[19]
60.00	7.850	1.3910	[19]
60.00	8.830	1.5350	[19]
60.00	8.830	1.3210	[19]
60.00	9.810	1.7640	[19]
60.00	9.810	1.7040	[19]
60.00	10.790	1.9730	[19]
60.00	10.790	1.7170	[19]
60.00	11.770	2.0270	[19]
60.00	11.770	2.0900	[19]
20.01	2.533	1.3000	[20]
20.01	3.040	1.4500	[20]
20.01	4.053	1.7400	[20]

20.01	4.560	1.8800	[20]
20.01	5.066	2.0400	[20]
25.01	3.546	1.2700	[20]
25.01	4.053	1.3400	[20]
25.01	4.458	1.5500	[20]
25.01	5.066	1.7200	[20]
25.01	5.573	1.8700	[20]
25.01	6.080	2.0300	[20]
35.01	3.546	0.8100	[20]
35.01	4.053	0.9900	[20]
35.01	4.560	1.1200	[20]
35.01	5.066	1.3100	[20]
35.01	5.573	1.4800	[20]
35.01	6.080	1.6300	[20]
35.01	6.586	1.8100	[20]
35.01	7.093	1.9600	[20]
35.01	7.599	2.1400	[20]
20.00	0.486	0.3223	[21]
20.00	0.750	0.5131	[21]
20.00	0.983	0.6264	[21]
20.00	1.469	0.9207	[21]
20.00	1.966	1.1852	[21]
20.00	2.938	1.6387	[21]
30.00	0.486	0.2776	[21]
30.00	1.469	0.7758	[21]
30.00	1.966	0.9929	[21]
30.00	2.938	1.4920	[21]
15.60	5.070	2.5971	[22]
25.00	5.070	2.1133	[22]
29.40	5.520	2.0435	[22]
31.10	0.690	0.3332	[22]
31.10	2.530	1.0632	[22]
31.10	5.070	1.8287	[22]
75.00	0.690	0.1500	[22]
75.00	2.530	0.5456	[22]
75.00	5.070	1.0125	[22]
75.00	10.140	1.6263	[22]
75.00	20.270	2.1040	[22]
93.30	0.690	0.0977	[22]
93.30	2.530	0.4379	[22]
93.30	5.070	0.8513	[22]
93.30	10.140	1.4592	[22]
93.30	20.270	2.0738	[22]
0.00	0.507	0.6992	[23]
0.00	1.013	1.2690	[23]
0.00	1.520	1.7377	[23]
0.00	2.027	2.1039	[23]
0.00	2.533	2.4050	[23]
0.00	3.040	2.6500	[23]
0.00	3.546	2.8861	[23]
0.00	3.850	2.9748	[23]
15.00	0.507	0.3711	[23]
15.00	1.013	0.6749	[23]
15.00	1.520	0.9488	[23]
15.00	2.027	1.2171	[23]
15.00	2.533	1.4085	[23]

15.00	3.546	1.7890	[23]
15.00	4.053	1.9388	[23]
15.00	4.560	2.0293	[23]
15.00	5.066	2.1431	[23]
15.00	5.269	2.1901	[23]
0.00	1.013	1.2670	[24]
0.00	2.533	2.3940	[24]
0.00	3.040	2.6370	[24]
5.00	1.013	1.0550	[24]
5.00	2.026	1.8060	[24]
5.00	3.850	2.5320	[24]
10.00	1.013	0.8535	[24]
10.00	2.026	1.5330	[24]
10.00	3.850	2.1850	[24]
12.40	4.560	2.2040	[24]
25.00	2.026	1.0260	[24]
25.00	4.560	1.6550	[24]
3.90	2.000	1.8100	[25]
4.90	2.000	1.8300	[25]
7.30	2.000	1.7000	[25]
8.40	3.000	2.2200	[25]
8.50	3.700	2.4500	[25]
9.10	2.000	1.5600	[25]
9.40	4.200	2.5600	[25]
9.90	3.000	2.1000	[25]
10.00	3.700	2.3400	[25]
8.00	3.300	0.3720	[26]
4.85	6.440	2.9300	[27]
4.85	9.870	3.0800	[27]
4.85	14.770	3.2000	[27]
4.85	19.680	3.3100	[27]
4.85	24.580	3.4100	[27]
4.85	29.490	3.4900	[27]
9.85	6.440	2.7900	[27]
9.85	9.870	2.9400	[27]
9.85	14.770	3.0500	[27]
9.85	19.680	3.1600	[27]
9.85	24.580	3.2600	[27]
9.85	29.490	3.3400	[27]
14.85	6.440	2.6900	[27]
14.85	9.870	2.8000	[27]
14.85	14.770	2.9600	[27]
14.85	19.680	3.0900	[27]
14.85	24.580	3.1900	[27]
14.85	29.490	3.2700	[27]
19.85	6.440	2.5000	[27]
19.85	9.870	2.5800	[27]
19.85	14.770	2.7500	[27]
19.85	19.680	2.9300	[27]
19.85	24.580	3.0400	[27]
19.85	29.490	3.1200	[27]
50.00	10.000	1.9990	[28]
50.00	20.000	2.2930	[28]
50.00	40.000	2.6550	[28]
50.00	60.000	2.8540	[28]
100.00	10.000	1.4440	[28]

100.00	20.000	2.0300	[28]
100.00	40.000	2.5090	[28]
100.00	60.000	2.9070	[28]
100.00	80.000	3.5210	[28]
10.00	1.000	0.8823	[29]
10.00	2.500	2.0070	[29]
10.00	3.500	2.5248	[29]
25.00	1.000	0.5272	[29]
25.00	2.500	1.2506	[29]
25.00	3.500	1.6553	[29]
25.00	5.000	2.1211	[29]
50.00	1.000	0.3234	[29]
50.00	2.500	0.7669	[29]
50.00	3.500	1.0291	[29]
50.00	5.000	1.3570	[29]
50.00	7.500	1.7725	[29]
50.00	10.000	2.0140	[29]
50.00	13.000	2.1304	[29]
50.00	16.000	2.2156	[29]
70.00	1.000	0.2422	[29]
70.00	2.500	0.5672	[29]
70.00	3.500	0.7732	[29]
70.00	5.000	1.0370	[29]
70.00	7.500	1.4042	[29]
70.00	10.000	1.6733	[29]
70.00	13.000	1.8848	[29]
70.00	16.000	2.0140	[29]
25.14	7.690	2.5000	[31]
25.16	2.170	1.2400	[31]
25.16	3.050	1.5700	[31]
25.16	3.080	1.6500	[31]
25.17	4.120	1.9700	[31]
25.17	4.150	2.0200	[31]
25.17	7.200	2.5400	[31]
25.29	5.260	2.2600	[31]
25.42	5.330	2.2000	[31]
0.00	1.084	1.3320	[32]
0.00	1.595	1.8100	[32]
0.00	2.986	2.6390	[32]
25.00	1.110	0.6386	[32]
25.00	1.113	0.6106	[32]
25.00	1.113	0.6226	[32]
25.00	1.118	0.6234	[32]
25.00	2.204	1.1830	[32]
25.00	2.322	1.2399	[32]
25.00	2.498	1.2714	[32]
25.00	2.500	1.2714	[32]
25.00	2.510	1.2849	[32]
25.00	2.634	1.3427	[32]
25.00	3.182	1.5570	[32]
25.00	3.482	1.6604	[32]
25.00	3.492	1.6643	[32]
25.00	3.934	1.8541	[32]
25.00	3.970	1.8635	[32]
25.00	4.468	2.0348	[32]
25.00	4.565	2.0378	[32]

25.00	5.680	2.2943	[32]
25.00	5.689	2.3004	[32]
25.00	6.373	2.4032	[32]
50.00	1.939	0.6226	[32]
50.00	1.939	0.6322	[32]
50.00	1.941	0.6146	[32]
50.00	3.300	0.9961	[32]
50.00	3.301	0.9770	[32]
50.00	3.321	1.0160	[32]
50.00	3.323	0.9858	[32]
50.00	4.742	1.2730	[32]
50.00	4.750	1.2817	[32]
50.00	4.750	1.3258	[32]
50.00	5.776	1.5233	[32]
50.00	6.110	1.5970	[32]
50.00	6.173	1.6166	[32]
50.00	6.191	1.6236	[32]
50.00	6.282	1.6338	[32]
50.00	7.419	1.7957	[32]
50.00	7.480	1.8487	[32]
50.00	7.549	1.8277	[32]
50.00	9.079	2.0611	[32]
50.00	9.271	2.0363	[32]
50.00	9.322	2.0503	[32]
75.00	1.907	0.4456	[32]
75.00	1.911	0.4368	[32]
75.00	1.925	0.4296	[32]
75.00	1.925	0.4384	[32]
75.00	3.263	0.7168	[32]
75.00	3.271	0.7232	[32]
75.00	3.311	0.7272	[32]
75.00	4.722	0.9850	[32]
75.00	4.724	0.9710	[32]
75.00	6.107	1.2185	[32]
75.00	6.173	1.2043	[32]
75.00	6.184	1.2083	[32]
75.00	6.203	1.2193	[32]
75.00	7.670	1.4062	[32]
75.00	7.694	1.4360	[32]
75.00	7.736	1.4227	[32]
75.00	9.327	1.6064	[32]
75.00	9.446	1.6111	[32]
100.00	1.934	0.3477	[32]
100.00	1.936	0.3460	[32]
100.00	1.953	0.3460	[32]
100.00	3.249	0.5738	[32]
100.00	3.301	0.5898	[32]
100.00	3.310	0.5826	[32]
100.00	3.313	0.5810	[32]
100.00	3.321	0.5778	[32]
100.00	4.671	0.8013	[32]
100.00	4.736	0.8117	[32]
100.00	4.739	0.8149	[32]
100.00	4.751	0.7942	[32]
100.00	6.171	1.0833	[32]
100.00	6.176	0.9810	[32]

100.00	6.181	1.0460	[32]
100.00	6.211	1.0825	[32]
100.00	7.599	1.2400	[32]
100.00	9.119	1.4480	[32]
25.00	4.955	2.2252	[33]
25.00	4.955	2.2327	[33]
25.00	4.955	2.2374	[33]
50.00	4.955	1.3662	[33]
50.00	4.955	1.3717	[33]
50.00	4.955	1.3719	[33]
50.00	4.955	1.3734	[33]
75.00	4.955	0.9877	[33]
75.00	4.955	0.9936	[33]
75.00	4.955	0.9961	[33]
75.00	4.955	0.9970	[33]
25.00	4.955	2.2078	[34]
25.00	4.955	2.2100	[34]
25.00	4.955	2.2104	[34]
25.00	4.955	2.2209	[34]
100.00	4.955	0.8012	[34]
100.00	4.955	0.8046	[34]
100.00	4.955	0.8050	[34]
12.00	5.066	2.7955	[35, 36]
12.00	7.599	2.8940	[35, 36]
12.00	10.133	2.8895	[35, 36]
12.00	15.199	3.0129	[35, 36]
12.00	20.265	3.1179	[35, 36]
12.00	30.398	3.2165	[35, 36]
18.00	2.533	1.5542	[35, 36]
18.00	5.066	2.5264	[35, 36]
18.00	7.599	2.6661	[35, 36]
18.00	10.133	2.6761	[35, 36]
18.00	15.199	2.6585	[35, 36]
18.00	20.265	2.9200	[35, 36]
18.00	30.398	3.0829	[35, 36]
25.00	5.066	2.1560	[35, 36]
25.00	7.599	2.4602	[35, 36]
25.00	10.133	2.5049	[35, 36]
25.00	40.530	3.0304	[35, 36]
25.00	50.663	3.1156	[35, 36]
31.04	2.533	1.1344	[35, 36]
31.04	5.066	1.9168	[35, 36]
31.04	7.599	2.3184	[35, 36]
31.04	10.133	2.3832	[35, 36]
31.04	15.199	2.4926	[35, 36]
31.04	20.265	2.5840	[35, 36]
31.04	40.530	2.8902	[35, 36]
31.04	50.663	3.0342	[35, 36]
35.00	2.533	1.0371	[35, 36]
35.00	5.066	1.7655	[35, 36]
35.00	7.599	2.2032	[35, 36]
35.00	10.133	2.3029	[35, 36]
35.00	15.199	2.4102	[35, 36]
35.00	20.265	2.4702	[35, 36]
35.00	40.530	2.8100	[35, 36]
35.00	50.663	2.9825	[35, 36]

40.00	2.533	0.9315	[35, 36]
40.00	5.066	1.6201	[35, 36]
40.00	7.599	2.0458	[35, 36]
40.00	10.133	2.2009	[35, 36]
40.00	12.666	2.2705	[35, 36]
40.00	15.199	2.3230	[35, 36]
40.00	20.265	2.4271	[35, 36]
40.00	40.530	2.7443	[35, 36]
40.00	50.663	2.8864	[35, 36]
50.00	2.533	0.7796	[35, 36]
50.00	5.066	1.3767	[35, 36]
50.00	7.599	1.7905	[35, 36]
50.00	10.133	2.0318	[35, 36]
50.00	12.666	2.1203	[35, 36]
50.00	15.199	2.1877	[35, 36]
50.00	20.265	2.3037	[35, 36]
50.00	30.398	2.4733	[35, 36]
50.00	40.530	2.6232	[35, 36]
50.00	70.928	3.0091	[35, 36]
75.00	2.533	0.5488	[35, 36]
75.00	5.066	1.0085	[35, 36]
75.00	7.599	1.3601	[35, 36]
75.00	10.133	1.6404	[35, 36]
75.00	15.199	1.9502	[35, 36]
75.00	20.265	2.1118	[35, 36]
75.00	30.398	2.3323	[35, 36]
75.00	40.530	2.5149	[35, 36]
75.00	70.928	2.9520	[35, 36]
100.00	2.533	0.4327	[35, 36]
100.00	5.066	0.8170	[35, 36]
100.00	7.599	1.1431	[35, 36]
100.00	10.133	1.3861	[35, 36]
100.00	15.199	1.8061	[35, 36]
100.00	20.265	2.0365	[35, 36]
100.00	30.398	2.3338	[35, 36]
100.00	40.530	2.5541	[35, 36]
100.00	70.928	3.0213	[35, 36]
10.00	0.101	0.0966	[37]
10.00	0.507	0.4676	[37]
10.00	1.013	0.8972	[37]
10.00	1.520	1.2911	[37]
10.00	2.027	1.6527	[37]
20.00	0.101	0.0707	[37]
20.00	0.507	0.3417	[37]
20.00	1.013	0.6585	[37]
20.00	1.520	0.9533	[37]
20.00	2.027	1.2320	[37]
30.00	0.101	0.0540	[37]
30.00	0.507	0.2634	[37]
30.00	1.013	0.5108	[37]
30.00	1.520	0.7437	[37]
30.00	2.027	0.9619	[37]
30.00	0.993	0.4975	[38]
30.00	1.925	0.9309	[38]
30.00	2.999	1.3650	[38]
30.00	3.891	1.7329	[38]

50.00	0.993	0.3334	[38]
50.00	1.915	0.6088	[38]
50.00	2.989	0.9370	[38]
50.00	3.901	1.2097	[38]
80.00	0.882	0.1973	[38]
80.00	0.983	0.2183	[38]
80.00	1.885	0.4130	[38]
80.00	2.979	0.6244	[38]
80.00	3.881	0.7990	[38]
50.00	0.488	0.1600	[39]
50.00	0.762	0.2500	[39]
50.00	0.892	0.3000	[39]
50.00	1.441	0.4600	[39]
50.00	2.505	0.7600	[39]
75.00	2.100	0.4600	[39]
75.00	3.591	0.7600	[39]
100.00	2.710	0.4600	[39]
100.00	4.560	0.7600	[39]
100.00	0.325	0.0450	[40]
100.00	0.600	0.0980	[40]
100.00	0.920	0.1590	[40]
100.00	1.191	0.2080	[40]
100.00	1.452	0.2610	[40]
100.00	1.816	0.3280	[40]
100.00	2.307	0.4140	[40]
15.00	6.080	2.6580	[41]
15.00	7.090	2.7160	[41]
15.00	7.600	2.7290	[41]
15.00	10.130	2.7570	[41]
15.00	12.160	2.8280	[41]
15.00	13.170	2.8400	[41]
15.00	15.200	2.8860	[41]
15.00	15.710	2.9020	[41]
15.00	17.730	2.9600	[41]
15.00	20.270	3.0130	[41]
15.00	24.320	3.0700	[41]
20.00	6.590	2.5310	[41]
20.00	7.600	2.5630	[41]
20.00	9.630	2.5970	[41]
20.00	10.130	2.6250	[41]
20.00	13.680	2.6890	[41]
20.00	14.690	2.7270	[41]
20.00	15.200	2.7430	[41]
20.00	17.730	2.8070	[41]
20.00	20.270	2.8470	[41]
20.00	21.790	2.9450	[41]
25.00	7.600	2.4450	[41]
25.00	10.130	2.5100	[41]
25.00	13.680	2.5820	[41]
25.00	15.200	2.6030	[41]
25.00	17.730	2.6720	[41]
25.00	20.270	2.7340	[41]
50.05	4.050	1.0900	[42]
50.05	5.060	1.3700	[42]
50.05	6.060	1.6100	[42]
50.05	7.080	1.7600	[42]

50.05	8.080	1.9000	[42]
50.05	9.090	2.0000	[42]
50.05	10.090	2.0500	[42]
50.05	11.100	2.1000	[42]
50.05	12.200	2.1400	[42]
50.05	14.110	2.1700	[42]
60.05	4.050	0.9600	[42]
60.05	5.060	1.2100	[42]
60.05	6.060	1.3800	[42]
60.05	7.080	1.5700	[42]
60.05	8.080	1.6600	[42]
60.05	9.090	1.7900	[42]
60.05	10.090	1.8600	[42]
60.05	11.100	1.9500	[42]
60.05	12.100	2.0100	[42]
60.05	14.110	2.0800	[42]
79.95	4.050	0.8000	[42]
79.95	6.060	1.1400	[42]
79.95	7.080	1.2800	[42]
79.95	8.080	1.4000	[42]
79.95	9.090	1.5100	[42]
79.95	10.090	1.6000	[42]
79.95	11.100	1.7200	[42]
79.95	12.100	1.7600	[42]
79.95	13.100	1.8400	[42]