



**Westfalen**

## Dampfdrucktabelle R-454B

Temperatur (°C)	Druck (bar)		Dichte (kg/m <sup>3</sup> )		Enthalpie (kJ/kg)		Entropie (kJ/kg*K)	
	flüssig	gasförmig	flüssig	gasförmig	flüssig	gasförmig	flüssig	gasförmig
-70	0,341	0,323	1291,5	1,221	93,989	427,09	0,555	2,200
-69	0,363	0,343	1288,9	1,294	95,442	427,68	0,562	2,195
-68	0,386	0,365	1286,2	1,370	96,896	428,27	0,570	2,189
-67	0,410	0,388	1283,6	1,450	98,351	428,85	0,577	2,184
-66	0,435	0,412	1280,9	1,534	99,806	429,44	0,584	2,180
-65	0,461	0,437	1278,3	1,621	101,26	430,02	0,591	2,175
-64	0,489	0,463	1275,6	1,713	102,72	430,6	0,598	2,170
-63	0,518	0,491	1272,9	1,808	104,17	431,18	0,605	2,165
-62	0,548	0,520	1270,2	1,908	105,63	431,76	0,611	2,160
-61	0,580	0,550	1267,5	2,012	107,09	432,33	0,618	2,156
-60	0,613	0,582	1264,8	2,120	108,55	432,9	0,625	2,151
-59	0,648	0,615	1262,1	2,233	110,01	433,47	0,632	2,147
-58	0,685	0,650	1259,4	2,351	111,47	434,04	0,639	2,142
-57	0,723	0,686	1256,6	2,474	112,93	434,61	0,646	2,138
-56	0,762	0,724	1253,9	2,601	114,4	435,17	0,652	2,134
-55	0,804	0,764	1251,2	2,734	115,86	435,73	0,659	2,130
-54	0,847	0,805	1248,4	2,873	117,33	436,28	0,666	2,125
-53	0,892	0,848	1245,6	3,016	118,8	436,84	0,672	2,121
-52	0,939	0,893	1242,8	3,166	120,27	437,39	0,679	2,117
-51	0,988	0,939	1240,1	3,321	121,74	437,94	0,686	2,113
-50	1,039	0,988	1237,3	3,482	123,21	438,49	0,692	2,109
-49	1,092	1,038	1234,5	3,649	124,68	439,03	0,699	2,105
-48	1,147	1,091	1231,6	3,822	126,16	439,57	0,705	2,101
-47	1,204	1,146	1228,8	4,002	127,63	440,11	0,712	2,098
-46	1,263	1,203	1226	4,189	129,11	440,64	0,718	2,094
-45	1,325	1,262	1223,1	4,382	130,59	441,17	0,725	2,09
-44	1,389	1,323	1220,3	4,583	132,07	441,7	0,731	2,086
-43	1,456	1,386	1217,4	4,79	133,56	442,23	0,738	2,083
-42	1,525	1,452	1214,5	5,005	135,04	442,75	0,744	2,079
-41	1,596	1,521	1211,6	5,227	136,53	443,27	0,751	2,076
-40	1,670	1,592	1208,7	5,457	138,02	443,79	0,757	2,072
-39	1,747	1,665	1205,8	5,695	139,52	444,3	0,763	2,069
-38	1,827	1,742	1202,9	5,941	141,01	444,81	0,770	2,065
-37	1,909	1,820	1200	6,196	142,51	445,31	0,776	2,062
-36	1,994	1,902	1197	6,459	144,01	445,81	0,782	2,059
-35	2,083	1,987	1194,1	6,730	145,51	446,31	0,789	2,055
-34	2,174	2,074	1191,1	7,011	147,01	446,81	0,795	2,052
-33	2,268	2,164	1188,1	7,300	148,52	447,3	0,801	2,049
-32	2,365	2,258	1185,1	7,600	150,03	447,79	0,807	2,046
-31	2,466	2,354	1182,1	7,908	151,54	448,27	0,814	2,043
-30	2,57	2,454	1179,1	8,227	153,05	448,75	0,820	2,039
-29	2,677	2,557	1176,1	8,556	154,57	449,22	0,826	2,036
-28	2,788	2,663	1173	8,895	156,09	449,7	0,832	2,033
-27	2,902	2,773	1170	9,244	157,61	450,16	0,838	2,030
-26	3,020	2,886	1166,9	9,604	159,14	450,63	0,844	2,027
-25	3,142	3,002	1163,8	9,976	160,66	451,09	0,851	2,024
-24	3,267	3,122	1160,7	10,358	162,2	451,54	0,857	2,021
-23	3,396	3,246	1157,6	10,753	163,73	451,99	0,863	2,018
-22	3,529	3,374	1154,5	11,159	165,27	452,44	0,869	2,016
-21	3,666	3,505	1151,3	11,577	166,81	452,88	0,875	2,013
-20	3,807	3,641	1148,2	12,008	168,35	453,31	0,881	2,010
-19	3,952	3,780	1145	12,451	169,9	453,75	0,887	2,007
-18	4,101	3,924	1141,8	12,908	171,45	454,17	0,893	2,004



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	flüssig	gasförmig	flüssig	gasförmig	flüssig	gasförmig	flüssig	gasförmig
-17	4,255	4,071	1138,6	13,377	173	454,59	0,899	2,002
-16	4,413	4,223	1135,4	13,861	174,56	455,01	0,905	1,999
-15	4,575	4,379	1132,2	14,358	176,12	455,42	0,911	1,996
-14	4,742	4,540	1128,9	14,869	177,68	455,83	0,917	1,994
-13	4,913	4,705	1125,6	15,395	179,25	456,23	0,923	1,991
-12	5,089	4,874	1122,4	15,936	180,82	456,63	0,929	1,988
-11	5,270	5,048	1119,1	16,493	182,4	457,02	0,935	1,986
-10	5,456	5,227	1115,7	17,065	183,98	457,4	0,941	1,983
-9	5,647	5,411	1112,4	17,653	185,56	457,78	0,947	1,980
-8	5,842	5,600	1109	18,257	187,15	458,15	0,953	1,978
-7	6,043	5,793	1105,7	18,878	188,74	458,52	0,959	1,975
-6	6,249	5,992	1102,3	19,517	190,33	458,88	0,965	1,973
-5	6,461	6,195	1098,9	20,173	191,93	459,24	0,971	1,970
-4	6,677	6,404	1095,4	20,847	193,54	459,59	0,976	1,968
-3	6,899	6,619	1092	21,539	195,15	459,93	0,982	1,965
-2	7,127	6,838	1088,5	22,25	196,76	460,27	0,988	1,963
-1	7,360	7,063	1085	22,981	198,38	460,59	0,994	1,960
0	7,599	7,294	1081,5	23,732	200	460,92	1	1,958
1	7,844	7,531	1077,9	24,502	201,63	461,23	1,006	1,956
2	8,095	7,773	1074,4	25,294	203,26	461,54	1,012	1,953
3	8,352	8,021	1070,8	26,107	204,9	461,84	1,018	1,951
4	8,614	8,275	1067,2	26,942	206,54	462,13	1,023	1,948
5	8,883	8,535	1063,5	27,8	208,19	462,42	1,029	1,946
6	9,159	8,801	1059,9	28,68	209,84	462,7	1,035	1,944
7	9,440	9,074	1056,2	29,584	211,5	462,97	1,041	1,941
8	9,728	9,352	1052,5	30,512	213,16	463,23	1,047	1,939
9	10,023	9,638	1048,7	31,465	214,83	463,48	1,053	1,936
10	10,324	9,929	1045	32,444	216,5	463,73	1,058	1,934
11	10,632	10,228	1041,2	33,449	218,18	463,96	1,064	1,932
12	10,947	10,533	1037,3	34,481	219,87	464,19	1,07	1,929
13	11,269	10,845	1033,5	35,54	221,56	464,41	1,076	1,927
14	11,598	11,164	1029,6	36,628	223,26	464,61	1,082	1,925
15	11,934	11,49	1025,7	37,745	224,97	464,81	1,088	1,922
16	12,277	11,823	1021,7	38,893	226,68	465	1,093	1,920
17	12,627	12,163	1017,8	40,071	228,39	465,18	1,099	1,918
18	12,985	12,511	1013,7	41,281	230,12	465,35	1,105	1,915
19	13,351	12,866	1009,7	42,523	231,85	465,51	1,111	1,913
20	13,724	13,228	1005,6	43,8	233,59	465,65	1,117	1,910
21	14,105	13,599	1001,5	45,111	235,34	465,79	1,122	1,908
22	14,494	13,977	997,33	46,458	237,09	465,92	1,128	1,906
23	14,89	14,363	993,14	47,841	238,85	466,03	1,134	1,903
24	15,295	14,757	988,9	49,263	240,62	466,13	1,140	1,901
25	15,708	15,159	984,63	50,724	242,4	466,22	1,146	1,899
26	16,129	15,57	980,31	52,226	244,19	466,29	1,152	1,896
27	16,559	15,989	975,94	53,769	245,98	466,36	1,157	1,894
28	16,997	16,416	971,53	55,356	247,79	466,4	1,163	1,891
29	17,444	16,852	967,08	56,988	249,6	466,44	1,169	1,889
30	17,899	17,297	962,58	58,665	251,42	466,46	1,175	1,886
31	18,363	17,75	958,02	60,391	253,25	466,47	1,181	1,884
32	18,836	18,213	953,42	62,167	255,1	466,46	1,187	1,881
33	19,319	18,684	948,76	63,994	256,95	466,43	1,193	1,879
34	19,81	19,165	944,04	65,874	258,81	466,39	1,199	1,876
35	20,311	19,656	939,27	67,81	260,69	466,33	1,204	1,874



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	flüssig	gasförmig	flüssig	gasförmig	flüssig	gasförmig	flüssig	gasförmig
36	20,821	20,155	934,44	69,804	262,57	466,26	1,210	1,871
37	21,34	20,665	929,54	71,857	264,47	466,16	1,216	1,868
38	21,87	21,184	924,58	73,973	266,38	466,05	1,222	1,866
39	22,409	21,713	919,55	76,154	268,3	465,92	1,228	1,863
40	22,958	22,252	914,45	78,403	270,24	465,77	1,234	1,860
41	23,517	22,802	909,28	80,723	272,19	465,6	1,240	1,858
42	24,086	23,361	904,02	83,117	274,15	465,4	1,246	1,855
43	24,665	23,932	898,69	85,587	276,13	465,18	1,252	1,852
44	25,255	24,513	893,27	88,139	278,12	464,94	1,259	1,849
45	25,855	25,104	887,76	90,776	280,13	464,68	1,265	1,846
46	26,466	25,707	882,16	93,503	282,16	464,39	1,271	1,843
47	27,088	26,321	876,45	96,323	284,2	464,07	1,277	1,840
48	27,721	26,947	870,64	99,242	286,27	463,73	1,283	1,837
49	28,365	27,583	864,73	102,27	288,35	463,35	1,289	1,834
50	29,02	28,232	858,69	105,4	290,46	462,94	1,296	1,831
51	29,687	28,893	852,53	108,65	292,58	462,51	1,302	1,828
52	30,365	29,565	846,23	112,02	294,73	462,03	1,308	1,824
53	31,055	30,25	839,8	115,53	296,91	461,52	1,315	1,821
54	31,757	30,947	833,21	119,18	299,11	460,97	1,321	1,817
55	32,471	31,657	826,47	122,97	301,33	460,38	1,328	1,814
56	33,197	32,381	819,55	126,93	303,59	459,75	1,334	1,81
57	33,935	33,117	812,45	131,06	305,88	459,07	1,341	1,806
58	34,686	33,867	805,15	135,38	308,2	458,34	1,348	1,802
59	35,45	34,63	797,64	139,9	310,56	457,55	1,355	1,798
60	36,226	35,407	789,89	144,64	312,96	456,71	1,362	1,794
61	37,016	36,199	781,89	149,61	315,4	455,8	1,369	1,790
62	37,819	37,005	773,62	154,85	317,89	454,82	1,376	1,785
63	38,635	37,827	765,04	160,38	320,43	453,77	1,383	1,781
64	39,465	38,663	756,12	166,23	323,02	452,64	1,390	1,776
65	40,309	39,515	746,82	172,44	325,68	451,41	1,398	1,771
66	41,167	40,383	737,11	179,06	328,41	450,08	1,406	1,765
67	42,04	41,268	726,92	186,14	331,22	448,63	1,414	1,759
68	42,927	42,17	716,18	193,75	334,12	447,04	1,422	1,753
69	43,829	43,09	704,81	201,98	337,12	445,3	1,430	1,747
70	44,746	44,029	692,7	210,94	340,25	443,38	1,439	1,74
71	45,679	44,987	679,7	220,8	343,53	441,24	1,448	1,733
72	46,628	45,965	665,6	231,77	346,99	438,83	1,458	1,724
73	47,592	46,965	650,09	244,17	350,68	436,07	1,468	1,715
74	48,573	47,989	632,71	258,5	354,69	432,84	1,479	1,705
75	49,57	49,041	612,61	275,64	359,16	428,96	1,491	1,692
76	50,583	50,124	588,14	297,34	364,37	424,02	1,506	1,677
77	51,608	51,251	554,79	328,29	371,11	416,98	1,525	1,656
78	52,61	52,483	482,32	399,9	384,91	401,25	1,563	1,61

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