

# R-22

## CHLORODIFLUOROMETHANE - CHF<sub>2</sub>Cl

Molecular weight (g/mol) .....	86.47
Melting point (°C) .....	-157.42
Boiling point (at 1.013 bar) .....	-40.82
Temperature glide at 1.013 bar (K) .....	0
Critical temperature (°C) .....	96.1
Critical pressure (bar absolute) .....	49.90
Specific heat (liquid) at + 25°C (kJ/kg.K) .....	1.257
Specific heat (vapour) at 1.013 bar and + 25°C (kJ/kg.K) .....	0.6620
Thermal capacity ratio (Cp/Cv) at + 25°C and 1.013 bar .....	1.185
Viscosity (liquid) at + 25°C in Centipoise (10 <sup>-3</sup> Pa.s) .....	0.164
Surface tension at + 25°C in dyne per centimetre (10 <sup>-3</sup> N/m) .....	8.11
Classification NF-EN 378 .....	A1
GWP (IPCC 4) .....	1810

### 🔍 Main applications

R-22 is a "hydrochlorofluorocarbon (HCFC)" refrigerant with high latent heat of vaporisation, was used in domestic, commercial and industrial air conditioning systems. Used at low temperatures (down to -40° C), R-22 was also suited for refrigeration and deep freezing.

### 🔍 Commercial specifications

Purity: ≥ 99.5 % weight.  
 Chloride ion test: negative.  
 Water content: ≤ 10 ppm weight.  
 Acidity (HCl): ≤ 1 ppm weight.  
 Non-condensables (gas phase): ≤ 1.5 % volume.  
 High boiling residue: ≤ 0.01 % volume.

### 🔍 Oils

Use a mineral (MO) or an alkyl benzene (AB) oil at low vaporisation temperatures.  
 Check with **Climalife** regarding the viscosity of the oil selected for your application, and the miscibility with the fluid under consideration.

### 🔍 Regulation

Using R-22 is governed by European regulation n° 1005/2009 of September 16, 2009:  
 - using R-22, recycled or reclaimed was completely prohibited in Europe after 01.01.2015. For use in other countries please check local regulations that will apply.  
 In Europe, R-22 recovery is mandatory as per regulation n° 517/2014.

*(For their use, pay attention to the regulation of your country).*

## Thermodynamic properties of R-22 - Saturated state

Absolute pressure P (bar)	LIQUID					VAPOUR					Latent heat Lv (kJ/kg)
	Bubble point t' (°C)	Volume v' (dm <sup>3</sup> /kg)	Density ρ' (kg/dm <sup>3</sup> )	Enthalpy h' (kJ/kg)	Entropy s' (kJ/kg.K)	Dew point t'' (°C)	Volume v'' (m <sup>3</sup> /kg)	Density ρ'' (kg/m <sup>3</sup> )	Enthalpy h'' (kJ/kg)	Entropy s'' (kJ/kg.K)	
0.020	-100	0.636	1.571	90.705	0.505	-100.0	8.266	0.121	358.967	2.054	268.262
0.032	-95	0.642	1.558	96.011	0.535	-95.0	5.413	0.185	361.403	2.025	265.392
0.048	-90	0.647	1.545	101.318	0.565	-90.0	3.645	0.274	363.852	1.998	262.534
0.072	-85	0.653	1.532	106.626	0.593	-85.0	2.517	0.397	366.310	1.973	259.685
0.104	-80	0.659	1.518	111.937	0.621	-80.0	1.778	0.562	368.774	1.951	256.837
0.147	-75	0.665	1.505	117.253	0.648	-75.0	1.283	0.779	371.239	1.930	253.985
0.205	-70	0.671	1.491	122.578	0.675	-70.0	0.943	1.060	373.700	1.911	251.121
0.279	-65	0.677	1.477	127.915	0.701	-65.0	0.706	1.416	376.153	1.893	248.238
0.375	-60	0.683	1.464	133.266	0.726	-60.0	0.537	1.863	378.593	1.877	245.328
0.496	-55	0.690	1.450	138.635	0.751	-55.0	0.414	2.414	381.016	1.862	242.382
0.645	-50	0.697	1.436	144.025	0.775	-50.0	0.324	3.088	383.416	1.848	239.391
0.829	-45	0.704	1.421	149.441	0.799	-45.0	0.256	3.901	385.789	1.835	236.348
1.103	-40.82	0.710	1.409	153.996	0.819	-40.82	0.213	4.703	387.750	1.825	233.754
1.052	-40	0.711	1.407	154.887	0.823	-40.0	0.205	4.873	388.129	1.823	233.242
1.320	-35	0.718	1.392	160.366	0.846	-35.0	0.166	6.025	390.432	1.812	230.066
1.639	-30	0.726	1.377	165.882	0.869	-30.0	0.136	7.379	392.692	1.802	226.810
2.014	-25	0.734	1.362	171.440	0.891	-25.0	0.112	8.958	394.904	1.792	223.464
2.453	-20	0.743	1.347	177.044	0.913	-20.0	0.093	10.790	397.063	1.783	220.019
2.962	-15	0.751	1.331	182.697	0.935	-15.0	0.078	12.901	399.163	1.774	216.466
3.548	-10	0.761	1.315	188.404	0.957	-10.0	0.065	15.322	401.198	1.766	212.793
4.218	-5	0.770	1.298	194.171	0.979	-5.0	0.055	18.086	403.162	1.758	208.991
4.980	0	0.780	1.282	200.000	1.000	0.0	0.047	21.229	405.048	1.751	205.048
5.841	5	0.791	1.264	205.898	1.021	5.0	0.040	24.792	406.849	1.744	200.952
6.809	10	0.802	1.247	211.869	1.042	10.0	0.035	28.820	408.558	1.737	196.688
7.893	15	0.814	1.229	217.920	1.063	15.0	0.030	33.362	410.164	1.730	192.244
9.100	20	0.827	1.210	224.058	1.084	20.0	0.026	38.477	411.658	1.724	187.600
10.439	25	0.840	1.191	230.289	1.105	25.0	0.023	44.232	413.029	1.717	182.739
11.919	30	0.854	1.171	236.624	1.125	30.0	0.020	50.705	414.262	1.711	177.638
13.548	35	0.870	1.150	243.072	1.146	35.0	0.017	57.988	415.341	1.705	172.269
15.336	40	0.886	1.129	249.647	1.166	40.0	0.015	66.193	416.246	1.698	166.600
17.292	45	0.904	1.106	256.364	1.187	45.0	0.013	75.457	416.955	1.692	160.590
19.427	50	0.924	1.082	263.245	1.208	50.0	0.012	85.952	417.435	1.685	154.190
21.751	55	0.946	1.057	270.316	1.229	55.0	0.010	97.899	417.651	1.678	147.334
24.275	60	0.971	1.030	277.613	1.250	60.0	0.009	111.591	417.549	1.670	139.937
27.012	65	0.999	1.001	285.183	1.272	65.0	0.008	127.430	417.063	1.662	131.880
29.974	70	1.031	0.970	293.096	1.295	70.0	0.007	145.991	416.094	1.653	122.998
33.177	75	1.070	0.934	301.457	1.318	75.0	0.006	168.158	414.492	1.642	113.035
36.638	80	1.119	0.894	310.440	1.342	80.0	0.005	195.404	412.013	1.630	101.573
40.378	85	1.184	0.845	320.379	1.369	85.0	0.004	230.560	408.186	1.614	87.807
44.423	90	1.282	0.780	332.086	1.400	90.0	0.004	280.625	401.868	1.592	69.782
48.824	95	1.509	0.663	349.557	1.446	95.0	0.003	382.037	387.280	1.549	37.723

## Thermodynamic properties of R-22 - (superheated vapour) - Volume (dm<sup>3</sup>/kg)

Sat. Temp. °C	Sat. Pressure bar	Superheat (°C)																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
-100	0.020	8265.965	8506.386	8746.680	8986.861	9226.943	9466.938	9706.855	9946.705	10186.494	10426.229	10665.916	10905.560	11145.166	11384.737	11624.278	11863.791	12103.279	12342.744	12582.189	12821.615	13061.025
-95	0.032	5413.232	5566.715	5720.085	5873.356	6026.539	6179.645	6332.683	6485.660	6638.583	6791.458	6944.290	7097.084	7249.843	7402.571	7555.272	7707.947	7860.600	8013.232	8165.846	8318.443	8471.024
-90	0.048	3644.758	3745.662	3846.467	3947.183	4047.822	4148.393	4248.902	4349.357	4449.764	4550.128	4650.453	4750.740	4851.004	4951.236	5051.443	5151.627	5251.791	5351.936	5452.064	5552.177	5652.276
-85	0.072	2516.712	2584.862	2652.923	2720.907	2788.821	2856.674	2924.473	2992.223	3059.930	3127.598	3195.232	3262.834	3330.409	3397.958	3465.485	3532.991	3600.478	3667.943	3735.403	3802.844	3870.272
-80	0.104	1778.150	1825.334	1872.439	1919.474	1966.447	2013.366	2060.236	2107.062	2153.850	2200.602	2247.323	2294.016	2340.684	2387.329	2433.953	2480.559	2527.147	2573.720	2620.279	2666.825	2713.359
-75	0.147	1282.894	1316.317	1349.670	1382.961	1416.196	1449.382	1482.523	1515.626	1548.693	1581.729	1614.737	1647.719	1680.678	1713.616	1746.535	1779.437	1812.324	1845.197	1878.056	1910.904	1943.740
-70	0.205	943.421	967.604	991.722	1015.785	1039.797	1063.765	1087.693	1111.586	1135.447	1159.279	1183.085	1206.869	1230.631	1254.374	1278.101	1301.811	1325.507	1349.190	1372.861	1396.522	1420.172
-65	0.279	705.986	723.829	741.614	759.348	777.036	794.685	812.297	829.877	847.428	864.953	882.455	899.935	917.396	934.840	952.268	969.681	987.082	1004.470	1021.848	1039.215	1056.573
-60	0.375	536.802	550.209	563.564	576.872	590.138	603.368	616.565	629.733	642.874	655.992	669.088	682.165	695.224	708.267	721.295	734.310	747.313	760.306	773.287	786.260	799.224
-55	0.496	414.165	424.411	434.609	444.765	454.883	464.967	475.022	485.049	495.052	505.033	514.995	524.939	534.866	544.779	554.679	564.566	574.442	584.308	594.164	604.012	613.851
-50	0.645	323.847	331.803	339.715	347.587	355.425	363.232	371.011	378.765	386.497	394.209	401.903	409.581	417.243	424.892	432.528	440.153	447.768	455.373	462.970	470.558	478.139
-45	0.829	256.348	262.618	268.847	275.040	281.200	287.332	293.438	299.522	305.584	311.629	317.656	323.666	329.666	335.652	341.626	347.590	353.544	359.489	365.426	371.355	377.278
-40.82	1.013	212.644	217.837	222.990	228.109	233.199	238.261	243.299	248.316	253.314	258.294	263.258	268.208	273.145	278.070	282.984	287.888	292.783	297.670	302.549	307.421	312.286
-40	1.052	205.213	210.224	215.196	220.134	225.042	229.924	234.782	239.619	244.437	249.237	254.022	258.793	263.551	268.297	273.032	277.758	282.474	287.183	291.883	296.577	301.264
-35	1.320	165.982	170.039	174.059	178.048	182.010	185.946	189.860	193.754	197.631	201.491	205.337	209.170	212.991	216.801	220.600	224.391	228.173	231.947	235.715	239.475	243.230
-30	1.639	135.529	138.854	142.145	145.407	148.642	151.854	155.045	158.216	161.374	164.515	167.642	170.757	173.861	176.954	180.038	183.114	186.181	189.242	192.295	195.343	198.384
-25	2.014	111.629	114.387	117.112	119.809	122.482	125.132	127.763	130.377	132.974	135.558	138.129	140.688	143.237	145.776	148.306	150.829	153.343	155.851	158.353	160.848	163.339
-20	2.453	92.681	94.993	97.275	99.529	101.761	103.971	106.163	108.338	110.499	112.648	114.782	116.900	119.020	121.125	123.222	125.312	127.394	129.470	131.539	133.604	135.663
-15	2.962	77.514	79.474	81.404	83.308	85.189	87.051	88.896	90.724	92.539	94.341	96.132	97.912	99.683	101.445	103.199	104.946	106.687	108.421	110.150	111.873	113.592
-10	3.548	65.266	66.973	68.642	70.216	71.818	73.401	74.968	76.519	78.057	79.584	81.099	82.605	84.101	85.589	87.070	88.544	90.012	91.474	92.930	94.382	95.829
-5	4.218	55.291	56.741	58.163	59.560	60.937	62.295	63.638	64.966	66.281	67.585	68.879	70.163	71.438	72.706	73.967	75.221	76.469	77.711	78.949	80.182	81.410
0	4.980	47.105	48.369	49.606	50.820	52.013	53.189	54.349	55.495	56.629	57.752	58.865	59.970	61.066	62.154	63.236	64.311	65.381	66.445	67.505	68.560	69.611
5	5.841	40.335	41.448	42.534	43.596	44.639	45.665	46.676	47.673	48.659	49.634	50.599	51.556	52.505	53.447	54.382	55.311	56.235	57.153	58.067	58.977	59.882
10	6.809	34.699	35.687	36.648	37.586	38.505	39.407	40.294	41.168	42.031	42.884	43.729	44.562	45.390	46.210	47.025	47.833	48.636	49.435	50.229	51.018	51.804
15	7.893	29.974	30.859	31.716	32.551	33.367	34.166	34.951	35.723	36.484	37.235	37.977	38.710	39.437	40.157	40.871	41.579	42.282	42.981	43.675	44.365	45.051
20	9.100	25.989	26.788	27.559	28.308	29.037	29.750	30.449	31.136	31.811	32.477	33.134	33.784	34.426	35.061	35.691	36.316	36.935	37.550	38.161	38.768	39.371
25	10.439	22.608	23.335	24.034	24.710	25.367	26.008	26.635	27.249	27.853	28.447	29.033	29.611	30.182	30.747	31.306	31.860	32.409	32.953	33.494	34.031	34.564
30	11.919	19.722	20.390	21.028	21.644	22.240	22.819	23.385	23.939	24.481	25.015	25.540	26.058	26.568	27.073	27.572	28.066	28.556	29.041	29.522	29.999	30.473
35	13.548	17.245	17.863	18.451	19.015	19.560	20.087	20.601	21.103	21.594	22.076	22.549	23.016	23.475	23.929	24.377	24.820	25.258	25.693	26.123	26.550	26.974
40	15.336	15.107	15.685	16.231	16.751	17.252	17.736	18.205	18.663	19.109	19.547	19.976	20.399	20.814	21.224	21.628	22.028	22.423	22.814	23.201	23.585	23.965
45	17.292	13.253	13.797	14.308	14.792	15.255	15.701	16.133	16.552	16.961	17.361	17.752	18.136	18.514	18.886	19.253	19.615	19.972	20.326	20.676	21.022	21.366
50	19.427	11.634	12.153	12.635	13.088	13.520	13.934	14.333	14.720	15.096	15.462	15.821	16.172	16.517	16.857	17.191	17.520	17.845	18.167	18.484	18.798	19.110
55	21.751	10.215	10.714	11.172	11.600	12.005	12.392	12.763	13.121	13.469	13.807	14.137	14.460	14.777	15.088	15.393	15.694	15.991	16.284	16.574	16.860	17.144
60	24.275	8.961	9.448	9.888	10.295	10.678	11.040	11.387	11.721	12.044	12.358	12.663	12.961	13.253	13.539	13.820	14.096	14.368	14.637	14.902	15.164	15.423
65	27.012	7.847	8.329	8.756	9.146	9.510	9.852	10.178	10.491	10.792	11.084	11.368	11.644	11.914	12.178	12.437	12.692	12.943	13.189	13.433	13.673	13.911
70	29.974	6.850	7.325	7.754	8.131	8.478	8.803	9.111	9.405	9.688	9.961	10.225	10.482	10.733	10.978	11.218	11.453	11.685	11.913	12.137	12.358	12.577
75	33.177	5.947	6.447	6.863	7.230	7.564	7.875	8.167	8.445	8.711	8.966	9.214	9.454	9.687	9.915	10.138	10.357	10.571	10.782	10.990	11.194	11.396
80	36.638	5.118	5.649	6.067	6.428	6.751	7.049	7.328	7.591	7.843	8.083	8.316	8.540	8.759	8.972	9.179	9.383	9.582	9.778	9.970	10.160	10.347
85	40.378	4.337	4.927	5.355	5.712	6.027	6.314	6.581	6.831	7.069	7.296	7.515	7.726	7.931	8.130	8.324	8.514	8.700	8.882	9.061	9.237	9.410
90	44.423	3.563	4.272	4.714	5.070	5.379	5.656	5.912	6.151	6.377	6.592	6.798	6.997	7.190	7.376	7.558	7.735	7.909	8.082	8.246	8.409	8.571
95	48.824	2.618	3.672	4.136	4.492	4.795	5.064	5.309	5.538	5.753	5.957	6.152	6.339	6.520	6.695	6.866	7.032	7.194	7.353	7.508	7.661	7.811

## Thermodynamic properties of R-22 - (superheated vapour) - Enthalpy (kJ/kg)

Sat. Temp. °C	Sat. Pressure bar	Superheat (°C)																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
-100	0.020	358.967	361.469	364.001	366.564	369.158	371.783	374.438	377.125	379.843	382.591	385.371	388.181	391.022	393.894	396.797	399.730	402.694	405.688	408.713	411.768	414.854
-95	0.032	361.403	363.940	366.508	369.106	371.734	374.393	377.083	379.803	382.554	385.336	388.149	390.992	393.865	396.770	399.704	402.669	405.665	408.691	411.747	414.834	417.950
-90	0.048	363.852	366.426	369.030	371.663	374.327	377.022	379.746	382.501	385.286	388.101	390.947	393.823	396.730	399.667	402.634	405.631	408.659	411.717	414.805	417.922	421.070
-85	0.072	366.310	368.922	371.564	374.234	376.935	379.665	382.425	385.215	388.034	390.884	393.764	396.674	399.614	402.584	405.584	408.614	411.674	414.762	417.883	421.032	424.211
-80	0.104	368.774	371.426	374.106	376.815	379.553	382.320	385.116	387.942	390.797	393.682	396.597	399.541	402.515	405.518	408.552	411.615	414.703	417.829	420.981	424.161	427.373
-75	0.147	371.239	373.932	376.653	379.401	382.178	384.983	387.817	390.680	393.571	396.492	399.442	402.421	405.429	408.467	411.534	414.631	417.757	420.912	424.096	427.309	430.552
-70	0.205	373.700	376.436	379.199	381.998	384.806	387.651	390.524	393.424	396.353	399.311	402.297	405.312	408.355	411.428	414.530	417.660	420.820	424.008	427.225	430.471	433.745
-65	0.279	376.153	378.935	381.742	384.575	387.434	390.319	393.232	396.172	399.139	402.135	405.158	408.210	411.290	414.398	417.534	420.700	423.893	427.115	430.366	433.645	436.952
-60	0.375	378.593	381.423	384.276	387.154	390.057	392.985	395.939	398.919	401.927	404.961	408.023	411.112	414.229	417.373	420.546	423.746	426.975	430.231	433.516	436.828	440.169
-55	0.496	381.016	383.896	386.798	389.722	392.670	395.643	398.640	401.662	404.711	407.785	410.886	414.014	417.169	420.351	423.560	426.797	430.061	433.353	436.672	440.018	443.392
-50	0.645	383.416	386.349	389.302	392.276	395.271	398.298	401.331	404.398	407.488	410.605	413.746	416.914	420.108	423.328	426.575	429.849	433.149	436.477	439.831	443.212	446.620
-45	0.829	385.789	388.778	391.784	394.809	397.854	400.921	404.009	407.121	410.256	413.415	416.599	419.807	423.042	426.301	429.587	432.898	436.236	439.600	442.990	446.407	449.850
-40.82	1.013	387.750	390.788	393.841	396.911	400.000	403.108	406.237	409.388	412.561	415.758	418.977	422.222	425.490	428.784	432.102	435.446	438.816	442.211	445.632	449.079	452.551
-40	1.052	388.129	391.177	394.240	397.319	400.416	403.533	406.670	409.829	413.009	416.213	419.440	422.691	425.967	429.267	432.592	435.942	439.318	442.719	446.146	449.599	453.078
-35	1.320	390.432	393.543	396.665	399.801	402.953	406.122	409.309	412.517	415.745	418.995	422.267	425.562	428.880	432.222	435.588	438.978	442.393	445.833	449.297	452.786	456.301
-30	1.639	392.692	395.869	399.054	402.250	405.459	408.683	411.923	415.182	418.459	421.757	425.076	428.416	431.778	435.162	438.570	442.002	445.457	448.935	452.438	455.966	459.517
-25	2.014	394.904	398.152	401.403	404.662	407.931	411.212	414.508	417.820	421.149	424.496	427.863	431.249	434.657	438.086	441.537	445.010	448.506	452.026	455.568	459.134	462.723
-20	2.453	397.063	400.385	403.707	407.032	410.364	413.706	417.060	420.427	423.809	427.208	430.624	434.059	437.514	440.989	444.484	448.001	451.539	455.100	458.683	462.288	465.916
-15	2.962	399.163	402.565	405.961	409.357	412.755	416.160	419.574	422.999	426.437	429.889	433.358	436.843	440.346	443.868	447.409	450.971	454.553	458.155	461.780	465.425	469.093
-10	3.548	401.198	404.685	408.161	411.630	415.099	418.570	422.047	425.532	429.028	423.537	436.059	439.596	443.149	446.720	450.309	453.916	457.543	461.189	464.856	468.543	472.252
-5	4.218	403.162	406.741	410.300	413.849	417.391	420.932	424.475	428.024	431.580	435.146	438.724	442.315	445.921	449.542	453.179	456.834	460.507	464.198	467.909	471.639	475.388
0	4.980	405.068	408.725	412.375	416.006	419.626	423.241	426.854	430.469	434.088	437.715	441.351	444.998	448.657	452.330	456.018	459.722	463.442	467.180	470.935	474.709	478.501
5	5.841	406.849	410.532	414.178	418.098	421.801	425.493	429.179	432.863	436.549	440.239	443.935	447.640	451.355	455.082	458.822	462.577	466.346	470.131	473.933	477.751	481.588
10	6.809	408.558	412.254	416.303	420.118	423.909	427.683	431.446	435.203	438.958	442.714	446.473	450.239	454.012	457.795	461.589	465.395	469.215	473.049	476.898	480.763	484.645
15	7.903	410.164	414.185	418.145	422.061	425.946	429.806	433.651	437.485	441.312	445.137	448.962	452.790	456.624	460.465	464.315	468.175	472.047	475.932	479.830	483.742	487.670
20	9.100	411.658	415.814	419.895	423.921	427.905	431.858	435.789	439.703	443.607	447.504	451.397	455.291	459.188	463.089	466.997	470.913	474.839	478.776	482.724	486.686	490.661
25	10.439	413.029	417.334	421.546	425.689	429.780	433.832	437.854	441.854	445.838	449.811	453.776	457.739	461.700	465.664	469.632	473.606	477.588	481.579	485.579	489.591	493.615
30	11.919	414.262	418.732	423.088	427.359	431.566	435.723	439.842	443.932	448.001	452.053	456.094	460.128	464.158	468.187	472.218	476.252	480.291	484.339	488.392	492.456	496.531
35	13.548	415.341	419.966	424.511	428.922	433.253	437.524	441.747	445.933	450.091	454.228	458.348	462.457	466.558	470.655	474.751	478.847	482.946	487.050	491.161	495.278	499.405
40	15.336	416.246	421.112	425.804	430.368	434.835	439.228	443.563	447.851	452.104	456.330	460.533	464.721	468.897	473.064	477.228	481.389	485.550	489.714	493.882	498.055	502.235
45	17.292	416.955	422.062	426.953	431.687	436.303	440.828	445.282	449.681	454.035	458.354	462.645	466.916	471.169	475.412	479.645	483.878	488.100	492.326	496.553	500.784	505.019
50	19.427	417.435	422.825	427.942	432.866	437.646	442.316	446.899	451.415	455.877	460.296	464.680	469.037	473.373	477.693	482.001	486.299	490.593	494.883	499.172	503.462	507.755
55	21.751	417.651	423.376	428.754	433.892	438.854	443.682	448.406	453.048	457.625	462.150	466.633	471.082	475.504	479.905	484.290	488.662	493.025	497.382	501.735	506.087	510.439
60	24.275	417.549	423.683	429.367	434.749	439.914	444.916	449.793	454.572	459.273	463.910	468.499	473.045	477.558	482.045	486.510	490.959	495.395	499.821	504.241	508.657	513.070
65	27.012	417.063	423.709	429.756	435.419	440.813	446.008	451.053	455.981	460.815	465.574	470.273	474.922	479.531	484.107	488.657	493.186	497.698	502.197	506.686	511.168	515.645
70	29.974	416.094	423.404	429.892	435.882	441.535	446.946	452.176	457.265	462.243	467.132	471.949	476.707	481.418	486.089	490.728	495.340	499.932	504.506	509.067	513.618	518.161
75	33.177	414.492	422.705	429.739	436.114	442.065	447.718	453.151	458.416	463.549	468.578	473.521	478.396	483.213	487.984	492.717	497.417	502.092	506.745	511.381	516.003	520.615
80	36.638	412.013	421.532	429.255	436.091	442.383	448.308	453.967	459.424	464.726	469.905	474.984	479.981	484.913	489.789	494.619	499.412	504.173	508.909	513.623	518.319	523.002
85	40.378	408.186	419.776	428.395	435.783	442.471	448.702	454.610	460.279	465.764	471.104	476.327	481.457	486.508	491.495	496.429	501.319	506.171	510.992	515.788	520.562	525.319
90	44.423	401.868	417.302	427.101	435.157	442.303	448.880	455.065	460.965	466.648	472.162	477.541	482.810	487.989	493.094	498.137	503.128	508.076	512.987	517.868	522.723	527.557
95	48.824	387.280	413.922	425.290	434.153	441.829	448.797	455.291	461.446	467.345	473.048	478.593	484.013	489.328	494.559	499.717	504.816	509.865	514.871	519.842	524.782	529.696

## Thermodynamic properties of R-22 - (superheated vapour) - Entropy (kJ/kg.K)

Sat. Temp. °C	Sat. Pressure bar	Superheat (°C)																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
-100	0.020	2.054	2.069	2.083	2.096	2.110	2.123	2.137	2.150	2.163	2.175	2.188	2.200	2.213	2.225	2.237	2.249	2.261	2.272	2.284	2.296	2.307
-95	0.032	2.025	2.039	2.053	2.066	2.080	2.093	2.106	2.119	2.132	2.144	2.157	2.169	2.181	2.194	2.205	2.217	2.229	2.241	2.252	2.264	2.275
-90	0.048	1.998	2.012	2.026	2.039	2.052	2.065	2.078	2.091	2.104	2.116	2.129	2.141	2.153	2.165	2.177	2.188	2.200	2.211	2.223	2.234	2.245
-85	0.072	1.973	1.987	2.001	2.014	2.027	2.040	2.053	2.065	2.078	2.090	2.102	2.115	2.127	2.138	2.150	2.162	2.173	2.185	2.196	2.207	2.218
-80	0.104	1.951	1.964	1.978	1.991	2.004	2.017	2.029	2.042	2.054	2.066	2.079	2.091	2.102	2.114	2.126	2.137	2.149	2.160	2.171	2.182	2.194
-75	0.147	1.930	1.943	1.957	1.970	1.983	1.995	2.008	2.020	2.033	2.045	2.057	2.069	2.080	2.092	2.104	2.115	2.126	2.138	2.149	2.160	2.171
-70	0.205	1.911	1.924	1.937	1.950	1.963	1.976	1.988	2.000	2.013	2.025	2.036	2.048	2.060	2.072	2.083	2.094	2.106	2.117	2.128	2.139	2.150
-65	0.279	1.893	1.906	1.919	1.932	1.945	1.957	1.970	1.982	1.994	2.006	2.018	2.030	2.041	2.053	2.064	2.075	2.087	2.098	2.109	2.120	2.130
-60	0.375	1.877	1.890	1.903	1.916	1.928	1.941	1.953	1.965	1.977	1.989	2.001	2.012	2.024	2.035	2.047	2.058	2.069	2.080	2.091	2.102	2.113
-55	0.496	1.862	1.875	1.888	1.901	1.913	1.925	1.938	1.950	1.962	1.973	1.985	1.997	2.008	2.019	2.031	2.042	2.053	2.064	2.075	2.085	2.096
-50	0.645	1.848	1.861	1.874	1.886	1.899	1.911	1.923	1.935	1.947	1.959	1.971	1.982	1.993	2.005	2.016	2.027	2.038	2.049	2.060	2.070	2.081
-45	0.829	1.835	1.848	1.861	1.873	1.886	1.898	1.910	1.922	1.934	1.946	1.957	1.969	1.980	1.991	2.002	2.013	2.024	2.035	2.046	2.056	2.067
-40.82	1.013	1.825	1.838	1.851	1.863	1.876	1.888	1.900	1.912	1.923	1.935	1.947	1.958	1.969	1.980	1.992	2.003	2.013	2.024	2.035	2.045	2.056
-40	1.052	1.823	1.836	1.849	1.861	1.874	1.886	1.898	1.910	1.922	1.933	1.945	1.956	1.967	1.978	1.990	2.001	2.011	2.022	2.033	2.043	2.054
-35	1.320	1.812	1.825	1.838	1.850	1.862	1.875	1.887	1.898	1.910	1.922	1.933	1.945	1.956	1.967	1.978	1.989	2.000	2.010	2.021	2.032	2.042
-30	1.639	1.802	1.814	1.827	1.840	1.852	1.864	1.876	1.888	1.900	1.911	1.923	1.934	1.945	1.956	1.967	1.978	1.989	1.999	2.010	2.021	2.031
-25	2.014	1.792	1.805	1.817	1.830	1.842	1.854	1.866	1.878	1.890	1.901	1.913	1.924	1.935	1.946	1.957	1.968	1.979	1.989	2.000	2.010	2.021
-20	2.453	1.783	1.796	1.808	1.821	1.833	1.845	1.857	1.869	1.881	1.892	1.904	1.915	1.926	1.937	1.948	1.959	1.969	1.980	1.990	2.001	2.011
-15	2.962	1.774	1.787	1.800	1.812	1.825	1.837	1.849	1.861	1.872	1.884	1.895	1.906	1.917	1.928	1.939	1.950	1.961	1.971	1.982	1.992	2.002
-10	3.548	1.766	1.779	1.792	1.804	1.817	1.829	1.841	1.853	1.864	1.876	1.887	1.898	1.909	1.920	1.931	1.942	1.953	1.963	1.974	1.984	1.994
-5	4.218	1.758	1.771	1.784	1.797	1.809	1.821	1.833	1.845	1.857	1.868	1.880	1.891	1.902	1.913	1.924	1.934	1.945	1.956	1.966	1.976	1.987
0	4.980	1.751	1.764	1.777	1.790	1.802	1.814	1.826	1.838	1.850	1.861	1.873	1.884	1.895	1.906	1.917	1.927	1.938	1.949	1.959	1.969	1.980
5	5.841	1.744	1.757	1.770	1.783	1.796	1.808	1.820	1.832	1.843	1.855	1.866	1.877	1.889	1.899	1.910	1.921	1.932	1.942	1.952	1.963	1.973
10	6.809	1.737	1.750	1.764	1.777	1.789	1.802	1.814	1.826	1.837	1.849	1.860	1.871	1.882	1.893	1.904	1.915	1.926	1.936	1.946	1.957	1.967
15	7.983	1.730	1.744	1.757	1.770	1.783	1.796	1.808	1.820	1.831	1.843	1.854	1.866	1.877	1.888	1.899	1.909	1.920	1.930	1.941	1.951	1.961
20	9.100	1.724	1.738	1.751	1.765	1.777	1.790	1.802	1.814	1.826	1.838	1.849	1.860	1.871	1.882	1.893	1.904	1.915	1.925	1.935	1.946	1.956
25	10.439	1.717	1.732	1.746	1.759	1.772	1.784	1.797	1.809	1.821	1.832	1.844	1.855	1.866	1.877	1.888	1.899	1.910	1.920	1.930	1.941	1.951
30	11.919	1.711	1.726	1.740	1.753	1.766	1.779	1.792	1.804	1.816	1.828	1.839	1.850	1.862	1.873	1.883	1.894	1.905	1.915	1.926	1.936	1.946
35	13.548	1.705	1.720	1.734	1.748	1.761	1.774	1.787	1.799	1.811	1.823	1.834	1.846	1.857	1.868	1.879	1.890	1.900	1.911	1.921	1.932	1.942
40	15.336	1.698	1.714	1.729	1.743	1.756	1.769	1.782	1.794	1.806	1.818	1.830	1.841	1.853	1.864	1.875	1.886	1.896	1.907	1.917	1.927	1.938
45	17.292	1.692	1.708	1.723	1.737	1.751	1.764	1.777	1.790	1.802	1.814	1.826	1.837	1.848	1.860	1.871	1.881	1.892	1.903	1.913	1.923	1.934
50	19.427	1.685	1.702	1.717	1.732	1.746	1.759	1.772	1.785	1.798	1.810	1.821	1.833	1.844	1.856	1.867	1.878	1.888	1.899	1.909	1.920	1.930
55	21.751	1.678	1.695	1.711	1.726	1.741	1.755	1.768	1.781	1.793	1.805	1.817	1.829	1.841	1.852	1.863	1.874	1.885	1.895	1.906	1.916	1.926
60	24.275	1.670	1.689	1.705	1.721	1.736	1.750	1.763	1.776	1.789	1.801	1.813	1.825	1.837	1.848	1.859	1.870	1.881	1.892	1.902	1.913	1.923
65	27.012	1.662	1.682	1.699	1.715	1.730	1.745	1.759	1.772	1.785	1.797	1.810	1.821	1.833	1.845	1.856	1.867	1.878	1.888	1.899	1.909	1.920
70	29.974	1.653	1.674	1.693	1.709	1.725	1.740	1.754	1.768	1.781	1.793	1.806	1.818	1.829	1.841	1.852	1.863	1.874	1.885	1.896	1.906	1.916
75	33.177	1.642	1.666	1.686	1.703	1.720	1.735	1.749	1.763	1.776	1.789	1.802	1.814	1.826	1.837	1.849	1.860	1.871	1.882	1.892	1.903	1.913
80	36.638	1.630	1.657	1.678	1.697	1.714	1.730	1.744	1.759	1.772	1.785	1.798	1.810	1.822	1.834	1.845	1.857	1.868	1.879	1.889	1.900	1.910
85	40.378	1.614	1.646	1.670	1.690	1.708	1.724	1.739	1.754	1.768	1.781	1.794	1.806	1.819	1.830	1.842	1.853	1.864	1.875	1.886	1.897	1.907
90	44.423	1.592	1.634	1.661	1.682	1.701	1.718	1.734	1.749	1.763	1.777	1.790	1.803	1.815	1.827	1.839	1.850	1.861	1.872	1.883	1.894	1.904
95	48.824	1.549	1.621	1.651	1.674	1.694	1.712	1.728	1.744	1.758	1.772	1.786	1.798	1.811	1.823	1.835	1.846	1.858	1.869	1.880	1.891	1.901