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中华人民共和国国家标准

GB/T 8704.1—1997

钒铁化学分析方法 红外线吸收法及气体容量法测定碳量

**Methods for chemical analysis of ferrovandium
The infrared absorption method and the
gasometric method for the determination
of carbon content**

1997-03-17发布　　1997-09-01实施

国家技术监督局　发布

前　言

本标准等效采用日本 JISG1318—1982《钒铁化学分析方法》中 4.2 气体容量法测定碳量，测定范围：>0.05%和 4.5 红外线吸收法测定碳量，测定范围：>0.001%。其称样量为 0.5 g～1 g。本标准方法 1 红外线吸收法测定碳量，测定范围：0.025%～1.200%，方法 2 气体容量法测定碳量，测定范围：0.400%～1.200%，其称样量为 0.5 g。

本标准的修订将原 GB 8704.1—88 和 GB 8704.2—88《钒铁化学分析方法》红外线吸收法和气体容量法合并为 GB/T 8704.1。

本标准为 GB/T 8704 第 1 部分，GB/T 8704《钒铁化学分析方法》包括 7 部分：

GB/T 8704.1　红外线吸收法和气体容量法测定碳量

GB/T 8704.3　红外线吸收法和燃烧中和滴定法测定硫量

GB/T 8704.5　电位滴定法测定钒量

GB/T 8704.6　硫酸脱水重量法测定硅量

GB/T 8704.7　钼蓝光度法测定磷量

GB/T 8704.8　铬天青 S 光度法和 EDTA 容量法测定铝量

GB/T 8704.9　高碘酸钾光度法和火焰原子吸收光谱法测定锰量

自本标准实施之日起代替 GB 8704.1—88《钒铁化学分析方法》红外线吸收法测定碳量、GB 8704.2—88《钒铁化学分析方法》气体容量法测定碳量。

本标准的附录 A 是标准的附录。

本标准由中华人民共和国冶金工业部提出。

本标准由冶金工业部信息标准研究院归口。

本标准由新余钢铁有限责任公司、冶金工业部信息标准研究院负责起草。

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本标准 1988 年 2 月 21 日首次发布。

中华人民共和国国家标准

钒铁化学分析方法 红外线吸收法及气体容量法测定碳量

GB/T 8704.1—1997

代替 GB 8704.1～8704.2—88

Methods for chemical analysis of ferrovandium The infrared absorption method and the gasometric method for the determination of carbon content

1 范围

本标准适用于钒铁中碳量的测定。

本标准规定了以下两个方法测定钒铁中碳量。

方法Ⅰ：红外线吸收法，测定范围：0.025%～1.200%。

方法Ⅱ：气体容量法，测定范围：0.400%～1.200%。

2 方法Ⅰ 红外线吸收法测定碳量

2.1 方法提要

试样于高频感应炉的氧气流中加热燃烧，生成的二氧化碳由氧气载至红外线检测器的测量室，二氧化碳吸收某特定波长的红外能，其吸收能与碳的浓度成正比，根据检测器接受能量的变化可测定碳量。

2.2 试剂及材料

2.2.1 丙酮：蒸发后的残余物含碳量小于 0.000 5%。

2.2.2 高氯酸镁：无水、粒状。

2.2.3 烧碱石棉：粒状。

2.2.4 玻璃棉。

2.2.5 钨粒：碳量小于 0.002%，粒度 0.8 mm～1.4 mm。

2.2.6 锡粒：碳量小于 0.002%，粒度 0.4 mm～0.8 mm。必要时应用丙酮(2.2.1)清洗表面，并在室温下干燥。

2.2.7 纯铁：纯度大于 99.8%，碳量小于 0.002%，粒度 0.8 mm～1.68 mm。

2.2.8 氧气：纯度大于 99.95%，其他级别氧气若能获得低而一致的空白时，也可使用。

2.2.9 动力气源：氮气、氩气或压缩空气，其杂质(水和油)含量小于 0.5%。

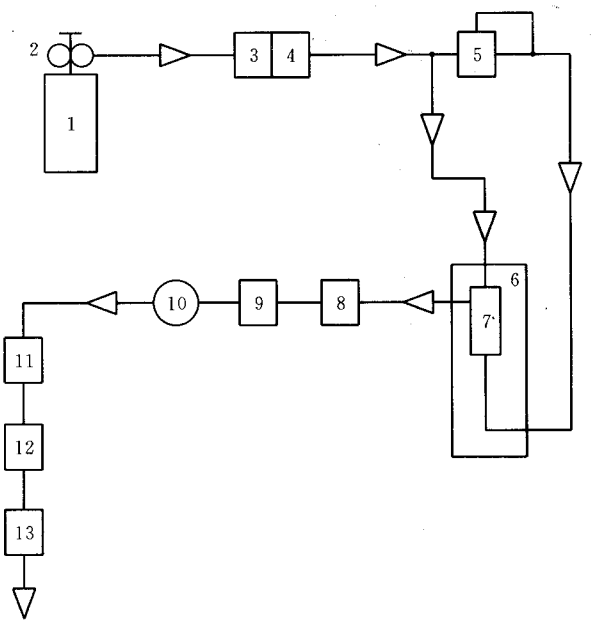
2.2.10 素质瓷坩埚直径×高度，23 mm×23 mm 或 25 mm×25 mm，并在高于 1 200℃的高温加热炉中灼烧 4 h 或通氧灼烧至空白值为最低。

2.2.11 坩埚钳。

2.3 仪器及设备

2.3.1 红外线吸收定碳仪(灵敏度为 1×10^{-6})，其装置如图 1。

国家技术监督局 1997-03-17 批准　　1997-09-01 实施



1—氧气瓶；2—两级压力调节器；3—洗气瓶；4、9—干燥管；5—压力调节器；6—高频感应炉；7—燃烧管；8—除尘器；10—流量控制器；11—一氧化碳转换为二氧化碳的转换器；12—除硫器；13—二氧化碳红外检测器

图 1　红外线吸收定碳仪装置图

2.3.1.1　洗气瓶(3)：内装烧碱石棉(2.2.3)。

2.3.1.2　干燥管(4、9)：内装高氯酸镁(2.2.2)。

2.3.2　气源

2.3.2.1　载气系统包括氧气容器、两级压力调节器及保证提供合适压力和额定流量的时序控制部分。

2.3.2.2　动力气源系统包括动力气(2.2.9)、两级压力调节器及保证提供合适压力和额定流量的时序控制部分。

2.3.3　高频感应炉

应满足试样熔融温度的要求。

2.3.4　控制系统

2.3.4.1　微处理机系统包括中央处理机、存储器、键盘输入设备、信息中心显示屏、分析结果显示屏及分析结果打印机等。

2.3.4.2　控制功能包括自动装卸坩埚和炉台升降、自动清扫、分析条件选择设置、分析过程的监控和报警中断、分析数据的采集、计算、校正及处理等。

2.3.5　测量系统

主要由微处理机控制的电子天平(感量不大于 1.0 mg)，红外线分析器及电子测量元件组成。

2.4　试样

试样应全部通过 0.177 mm 筛孔。

2.5　分析步骤

2.5.1　试样量

称取 0.500 g 试样三份。

2.5.2　空白试验

随同试样做空白试验，重复足够次数，记录最小的、比较稳定一致的三次读数，计算平均值并输入到仪器中，在测定试样时仪器会自动扣除空白值。

2.5.3 分析准备

调试检查仪器，使仪器处于正常稳定状态，并选用最佳分析条件。

2.5.4 校正试验

2.5.4.1 根据待测试样的含碳量，选择相应的量程或通道，并选择三个同类型标样（待测试样含碳量应落在所选三个标样含碳量的范围内）依次进行校正，测得结果的波动应在允许误差范围内，以确认系统的线性，否则应调节系统的线性。

2.5.4.2 不同量程或通道，应分别测其空白值并校正。当分析条件变化时，应重新测定空白并校正。

2.5.5 测定

2.5.5.1 按待测试样的含碳量范围，分别选择仪器的最佳分析条件。

2.5.5.2 将称取的试样（2.5.1）均匀置于三只预先盛有 0.300 g 锡粒（2.2.6）的坩埚（2.2.10）内，依次均匀覆盖 0.500 g 纯铁（2.2.7）和 1.500 g 钨粒（2.2.5），开始分析并读取结果。

三份试样的分析结果应在允许差范围内，否则应补充分析，取 3 份相接近的结果，求其算术平均值报出。

2.6 允许差

实验室之间分析结果的差值应不大于表 1 所列允许差。

表 1 允许差 %

碳 量	允许差
0.025	0.003
>0.025～0.070	0.006
>0.070～0.120	0.008
>0.120～0.400	0.012
>0.400～1.200	0.030

3 方法Ⅱ 气体容量法

3.1 方法提要：

试样置于管式燃烧炉中加热通氧燃烧，生成的二氧化碳等混合气体经除硫后收集于量气管中，然后以氢氧化钾溶液吸收其中的二氧化碳，吸收前后体积之差即为二氧化碳体积，再换算为碳量。

3.2 试剂及材料

3.2.1 助熔剂：锡粒（0.4 mm～0.8 mm）、铜、铁粉、五氧化二钒等。助熔剂中含碳量不大于 0.002%。

3.2.2 石棉纤维。

3.2.3 碱石灰或氢氧化钠。

3.2.4 氧化铝：活性、粒状。

3.2.5 二氧化锰：活性、粒状。

3.2.6 硫酸（ρ1.84 g/mL）。

3.2.7 硫酸（0.1+100）：滴加甲基红溶液呈红色。

3.2.8 铬酸饱和的硫酸溶液：于硫酸（3.2.6）中加重铬酸钾至饱和，使用其上部澄清溶液。

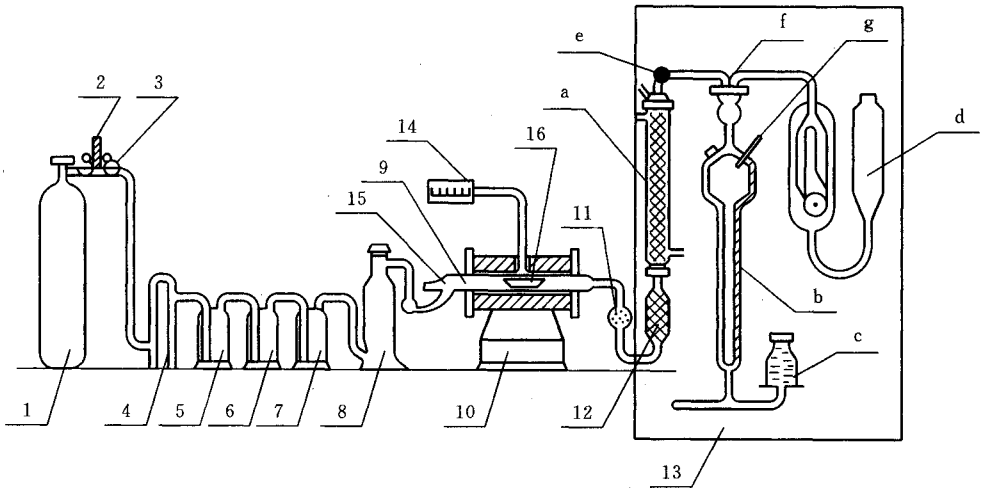
3.2.9 氢氧化钾溶液（400 g/L）。

3.2.10 氯化钠溶液（260 g/L）：以甲基红溶液作指示剂，滴加硫酸（1+1）至酸性。

3.2.11 氧气：纯度大于 99.5%。

3.3 仪器及设备

3.3.1 气体容量法定碳装置见图 2。



1—氧气瓶；2—氧气表；3—缓冲瓶；4—微型转子流量计；5、6—洗气瓶；7、8—干燥塔；9—高温燃烧管；10—管式燃烧炉；11—石棉纤维；12—除硫管；13—容量定碳仪(包括：冷凝管 a、量气管 b、水准瓶 c、吸收器 d、小活塞 e、三通活塞 f、温度计 g)；14—高温控制器；15—磨砂玻璃塞；16—瓷舟

图 2　气体容量法定碳装置图

3.3.1.1　洗气瓶(5)：内盛铬酸饱和的硫酸溶液(3.2.8)。

3.3.1.2　洗气瓶(6)：内装碱石灰或氢氧化钠。

3.3.1.3　干燥塔(7、8)：内装氧化铝(3.2.4)。

3.3.1.4　高温燃烧管(9)：直径×长度，20 mm×600 mm 或 24 mm×600 mm。

3.3.1.5　管式燃烧炉(10)：可调节电流以保证燃烧试样所需温度。

3.3.1.6　石棉纤维(11)：灼烧至无碳。

3.3.1.7　除硫管(12)：内装二氧化锰(3.2.5)。

3.3.1.8　瓷舟(16)：长 88 mm 或 97 mm，并在高于 1 200℃高温加热炉中灼烧 4 h 或通氧灼烧至空白值为最低。

3.3.1.9　量气管(b)：内盛氯化钠溶液(3.2.10)或硫酸溶液(3.2.7)。每一格刻度为 0.05 mL，它是在 16℃、101.32 kPa(760 mmHg)标准状况下刻制的。

3.3.1.10　吸收器(d)：内盛氢氧化钾溶液(3.2.9)。

3.3.1.11　小活塞(e)：有一方可通大气。

3.3.2　长钩：用低碳镍铬丝或耐热合金钢制成。

3.3.3　水银气压计：气压值应按式(1)校正。

$$P = P'(1 - 0.000\,163\,t - 0.002\,6\cos 2\varphi - 0.000\,000\,2\,H) \quad \cdots\cdots(1)$$

式中：P——校正后的气压值，kPa；

P'——水银气压计测得的气压值，kPa；

t——水银气压计所在处温度，℃；

φ——水银气压计所在处纬度，(°)；

H——水银气压计所在处海拔高度，m。

3.4　试样

试样应全部通过 0.177 mm 筛孔。

3.5　分析步骤

3.5.1　试样量

按表 2 称取试样和助熔剂。

表 2　试样及助熔剂称取量

碳量,%	试样量,g	助熔剂量(任选其一),g					
		锡粒	铜或氧化铜	五氧化二钒	氧化铜＋五氧化二钒(1＋1)	铁粉＋氧化铜(1＋1)	五氧化二钒＋铁粉(1＋1)
0.400～1.200	1.000 0	0.5	0.5～1.0	0.5～1.0	0.5～1.0	0.5～1.0	0.5～1.0

3.5.2　空白试验

随同试样做空白试验。

3.5.3　分析前的准备

将炉温升至 1 200℃～1 350℃,检查管路及活塞是否漏气,装置是否正常,燃烧标准试样,检查仪器及操作。

3.5.4　测定

将试样(3.5.1)置于瓷舟(3.3.1.8)中,按表 2 覆盖助熔剂,将瓷舟推入高温燃烧管温度最高处,立即塞紧磨砂玻璃塞(15),将量气管上的三通活塞(f)打开,调节氧气流速至 120 mL/min～140 mL/min,通氧约 3 min,使高温燃烧管中的温度恒定。

按容量定碳仪操作规程,将混合气体导入量气管,定容,吸收后,测量其读数,并确认残留的气体体积没有变化后,启开磨砂玻璃塞,用长钩(3.3.2)将瓷舟拉出,检查熔块,确认燃烧完全后,将残留气体放空。

3.6　计算

按公式(2)计算碳的百分含量:

$$C(\%) = \frac{(V - V_0) \times A \times f}{m} \times 100 \qquad \cdots\cdots(2)$$

式中:A——16℃,气压 101.32 kPa,用酸性水作封闭液时,封闭液面上每毫升二氧化碳中含碳量 A 值为 0.000 500 0 g;用氯化钠酸性溶液作封闭液时 A 值为 0.000 502 2 g;

V——吸收前与吸收后气体的体积差,即二氧化碳体积,mL;

V_0——空白试验的气体体积,mL;

m——试样量,g;

f——温度、气压校正系数,见附录 A(标准的附录)中表 A1 或表 A2。

3.7　允许差

实验室之间分析结果的差值应不大于表 3 所列允许差。

表 3　允许差　　%

碳　　量	允许差
0.400～1.200	0.030

附 录

（标准的

表 A1 气体容量法测定碳的温度、气压补正系数表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
750	0.774	0.771	0.768	0.764	0.761	0.757	0.754	0.750	0.746	0.743	0.739	0.735	0.732	0.728	0.724	0.720	0.716	0.712
752	0.777	0.773	0.770	0.766	0.763	0.759	0.756	0.752	0.748	0.745	0.741	0.737	0.734	0.730	0.726	0.722	0.718	0.714
754	0.779	0.775	0.772	0.768	0.765	0.761	0.758	0.754	0.751	0.747	0.743	0.740	0.736	0.732	0.728	0.724	0.720	0.716
756	0.781	0.777	0.774	0.770	0.767	0.763	0.760	0.756	0.753	0.749	0.745	0.742	0.738	0.734	0.730	0.726	0.722	0.718
758	0.783	0.779	0.776	0.772	0.769	0.765	0.762	0.758	0.755	0.751	0.747	0.744	0.740	0.736	0.732	0.728	0.724	0.720
760	0.785	0.781	0.778	0.774	0.771	0.767	0.764	0.760	0.757	0.753	0.749	0.746	0.742	0.738	0.734	0.730	0.726	0.722
762	0.787	0.784	0.780	0.777	0.773	0.769	0.766	0.762	0.759	0.755	0.751	0.748	0.744	0.740	0.736	0.732	0.728	0.724
764	0.789	0.786	0.782	0.779	0.775	0.771	0.768	0.764	0.761	0.757	0.753	0.750	0.746	0.742	0.738	0.734	0.730	0.726
766	0.791	0.788	0.784	0.781	0.777	0.774	0.770	0.766	0.763	0.759	0.755	0.752	0.748	0.744	0.740	0.736	0.732	0.728
768	0.793	0.790	0.786	0.783	0.779	0.776	0.772	0.768	0.765	0.761	0.757	0.754	0.750	0.746	0.742	0.738	0.734	0.730
770	0.795	0.792	0.788	0.785	0.781	0.778	0.774	0.770	0.767	0.763	0.759	0.756	0.752	0.748	0.744	0.740	0.736	0.732
772	0.797	0.794	0.790	0.787	0.783	0.780	0.776	0.772	0.769	0.765	0.761	0.758	0.754	0.750	0.746	0.742	0.738	0.734
774	0.800	0.796	0.792	0.789	0.785	0.782	0.778	0.774	0.771	0.767	0.763	0.760	0.756	0.752	0.748	0.744	0.740	0.736
776	0.802	0.798	0.795	0.791	0.787	0.784	0.780	0.776	0.773	0.769	0.765	0.762	0.758	0.754	0.750	0.746	0.742	0.738
778	0.804	0.800	0.797	0.793	0.789	0.786	0.782	0.778	0.775	0.771	0.767	0.764	0.760	0.756	0.752	0.748	0.744	0.740
780	0.806	0.802	0.799	0.795	0.792	0.788	0.784	0.781	0.777	0.773	0.769	0.766	0.762	0.758	0.754	0.750	0.746	0.742
782	0.808	0.804	0.801	0.797	0.794	0.790	0.786	0.783	0.779	0.775	0.771	0.768	0.764	0.760	0.756	0.752	0.748	0.744
784	0.810	0.806	0.803	0.799	0.796	0.792	0.788	0.785	0.781	0.777	0.773	0.770	0.766	0.762	0.758	0.754	0.750	0.746
786	0.812	0.809	0.805	0.801	0.798	0.794	0.790	0.787	0.783	0.779	0.775	0.772	0.768	0.764	0.760	0.756	0.752	0.748
788	0.814	0.811	0.807	0.803	0.800	0.796	0.792	0.789	0.785	0.781	0.777	0.774	0.770	0.766	0.762	0.758	0.754	0.750

A

附录）

（本表用1∶1 000的硫酸溶液作封闭液）

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.708	0.704	0.700	0.696	0.692	0.687	0.683	0.678	0.674	0.669	0.664	0.659	0.654	0.649	0.644	0.639	0.633	0.628	0.622	0.616
0.710	0.706	0.702	0.698	0.694	0.689	0.685	0.680	0.676	0.671	0.666	0.661	0.656	0.651	0.646	0.640	0.635	0.629	0.624	0.618
0.712	0.708	0.704	0.700	0.695	0.691	0.687	0.682	0.677	0.673	0.668	0.663	0.658	0.653	0.648	0.642	0.637	0.631	0.626	0.620
0.714	0.710	0.706	0.702	0.697	0.693	0.689	0.684	0.679	0.675	0.670	0.665	0.660	0.655	0.650	0.644	0.639	0.633	0.627	0.622
0.716	0.712	0.708	0.704	0.699	0.695	0.691	0.686	0.681	0.677	0.672	0.667	0.662	0.657	0.651	0.646	0.641	0.635	0.629	0.623
0.718	0.714	0.710	0.706	0.701	0.697	0.693	0.688	0.683	0.678	0.674	0.669	0.664	0.659	0.653	0.648	0.642	0.637	0.631	0.625
0.720	0.716	0.712	0.708	0.703	0.699	0.694	0.690	0.685	0.680	0.676	0.671	0.666	0.660	0.655	0.650	0.644	0.639	0.633	0.627
0.722	0.718	0.714	0.710	0.705	0.701	0.696	0.692	0.687	0.682	0.677	0.672	0.667	0.662	0.657	0.652	0.646	0.641	0.635	0.629
0.724	0.720	0.716	0.711	0.707	0.703	0.698	0.694	0.689	0.684	0.679	0.674	0.669	0.664	0.659	0.654	0.648	0.642	0.637	0.631
0.726	0.722	0.718	0.713	0.709	0.705	0.700	0.696	0.691	0.686	0.681	0.676	0.671	0.666	0.661	0.655	0.650	0.644	0.638	0.633
0.728	0.724	0.720	0.715	0.711	0.707	0.702	0.697	0.693	0.688	0.683	0.678	0.673	0.668	0.663	0.657	0.652	0.646	0.640	0.634
0.730	0.726	0.722	0.717	0.713	0.708	0.704	0.699	0.695	0.690	0.685	0.680	0.675	0.670	0.665	0.659	0.654	0.648	0.642	0.636
0.732	0.728	0.724	0.719	0.715	0.710	0.706	0.701	0.697	0.692	0.687	0.682	0.677	0.672	0.666	0.661	0.655	0.650	0.644	0.638
0.734	0.730	0.725	0.721	0.717	0.712	0.708	0.703	0.698	0.694	0.689	0.684	0.679	0.674	0.668	0.663	0.657	0.652	0.646	0.640
0.736	0.732	0.727	0.723	0.719	0.714	0.710	0.705	0.700	0.696	0.691	0.686	0.681	0.676	0.670	0.665	0.659	0.654	0.648	0.642
0.738	0.734	0.729	0.725	0.721	0.716	0.712	0.707	0.702	0.698	0.693	0.688	0.683	0.678	0.672	0.667	0.661	0.655	0.650	0.644
0.740	0.735	0.731	0.727	0.722	0.718	0.714	0.709	0.704	0.699	0.695	0.690	0.684	0.679	0.674	0.668	0.663	0.657	0.651	0.645
0.742	0.738	0.733	0.729	0.725	0.720	0.716	0.711	0.706	0.701	0.696	0.691	0.686	0.681	0.676	0.670	0.665	0.659	0.653	0.647
0.744	0.739	0.735	0.731	0.726	0.722	0.717	0.713	0.708	0.703	0.698	0.693	0.688	0.683	0.678	0.672	0.667	0.661	0.655	0.649
0.746	0.741	0.737	0.733	0.728	0.724	0.719	0.715	0.710	0.705	0.700	0.695	0.690	0.685	0.680	0.674	0.669	0.663	0.657	0.651

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
790	0.816	0.813	0.809	0.805	0.802	0.798	0.794	0.791	0.787	0.783	0.779	0.776	0.772	0.768	0.764	0.760	0.756	0.752
792	0.818	0.815	0.811	0.808	0.804	0.800	0.796	0.793	0.789	0.785	0.782	0.778	0.774	0.770	0.766	0.762	0.758	0.754
794	0.820	0.817	0.813	0.810	0.806	0.802	0.799	0.795	0.791	0.787	0.783	0.780	0.776	0.772	0.768	0.764	0.760	0.756
796	0.823	0.819	0.815	0.812	0.808	0.804	0.801	0.797	0.793	0.789	0.785	0.782	0.778	0.774	0.770	0.766	0.762	0.758
798	0.825	0.821	0.817	0.814	0.810	0.806	0.803	0.799	0.795	0.791	0.788	0.784	0.780	0.776	0.772	0.768	0.764	0.760
800	0.827	0.823	0.819	0.816	0.812	0.808	0.805	0.801	0.797	0.793	0.790	0.786	0.782	0.778	0.774	0.770	0.766	0.762
802	0.829	0.825	0.822	0.818	0.814	0.810	0.807	0.803	0.799	0.795	0.792	0.788	0.784	0.780	0.776	0.772	0.768	0.764
804	0.831	0.827	0.824	0.820	0.816	0.812	0.809	0.805	0.801	0.797	0.794	0.790	0.786	0.782	0.778	0.774	0.770	0.766
806	0.833	0.829	0.826	0.822	0.818	0.815	0.811	0.807	0.803	0.799	0.796	0.792	0.788	0.784	0.780	0.776	0.772	0.768
808	0.835	0.831	0.828	0.824	0.820	0.817	0.813	0.809	0.805	0.802	0.798	0.794	0.790	0.786	0.782	0.778	0.774	0.770
810	0.837	0.833	0.830	0.826	0.822	0.819	0.815	0.811	0.807	0.804	0.800	0.796	0.792	0.788	0.784	0.780	0.776	0.771
812	0.839	0.836	0.832	0.828	0.824	0.821	0.817	0.813	0.809	0.806	0.802	0.798	0.794	0.790	0.786	0.782	0.778	0.773
814	0.841	0.838	0.834	0.830	0.826	0.823	0.819	0.815	0.811	0.808	0.804	0.800	0.796	0.792	0.788	0.784	0.780	0.775
816	0.843	0.840	0.836	0.832	0.829	0.825	0.821	0.817	0.813	0.810	0.806	0.802	0.798	0.794	0.790	0.786	0.782	0.777
818	0.845	0.842	0.838	0.834	0.831	0.827	0.823	0.819	0.816	0.812	0.808	0.804	0.800	0.796	0.792	0.788	0.784	0.779
820	0.848	0.844	0.840	0.836	0.833	0.829	0.825	0.821	0.818	0.814	0.810	0.806	0.802	0.798	0.794	0.790	0.786	0.781
822	0.850	0.846	0.842	0.838	0.835	0.831	0.827	0.823	0.820	0.816	0.812	0.808	0.804	0.800	0.796	0.792	0.788	0.783
824	0.852	0.848	0.844	0.841	0.837	0.833	0.829	0.825	0.822	0.818	0.814	0.810	0.806	0.802	0.798	0.794	0.789	0.785
826	0.854	0.850	0.846	0.843	0.839	0.835	0.831	0.827	0.824	0.820	0.816	0.812	0.808	0.804	0.800	0.796	0.791	0.787
828	0.856	0.852	0.848	0.845	0.841	0.837	0.833	0.830	0.826	0.822	0.818	0.814	0.810	0.806	0.802	0.798	0.793	0.789
830	0.858	0.854	0.850	0.847	0.843	0.839	0.835	0.832	0.828	0.824	0.820	0.816	0.812	0.808	0.804	0.800	0.795	0.791
832	0.860	0.856	0.853	0.849	0.845	0.841	0.837	0.834	0.830	0.826	0.822	0.818	0.814	0.810	0.806	0.802	0.797	0.793

A1

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.748	0.743	0.739	0.735	0.730	0.726	0.721	0.717	0.712	0.707	0.702	0.697	0.692	0.687	0.681	0.676	0.670	0.665	0.659	0.653
0.750	0.745	0.741	0.737	0.732	0.728	0.723	0.719	0.714	0.709	0.704	0.699	0.694	0.689	0.683	0.678	0.672	0.667	0.661	0.655
0.752	0.747	0.743	0.739	0.734	0.730	0.725	0.720	0.716	0.711	0.706	0.701	0.696	0.691	0.685	0.680	0.674	0.668	0.663	0.657
0.754	0.749	0.745	0.741	0.736	0.732	0.727	0.722	0.718	0.713	0.708	0.703	0.698	0.692	0.687	0.682	0.676	0.670	0.664	0.658
0.755	0.751	0.747	0.743	0.738	0.734	0.729	0.724	0.720	0.715	0.710	0.705	0.700	0.694	0.689	0.683	0.678	0.672	0.666	0.660
0.757	0.753	0.749	0.744	0.740	0.735	0.731	0.726	0.721	0.717	0.712	0.707	0.701	0.696	0.691	0.685	0.680	0.674	0.668	0.662
0.759	0.755	0.751	0.746	0.742	0.737	0.733	0.728	0.723	0.718	0.714	0.708	0.703	0.698	0.693	0.687	0.682	0.676	0.670	0.664
0.761	0.757	0.753	0.748	0.744	0.739	0.735	0.730	0.725	0.720	0.715	0.710	0.705	0.700	0.694	0.689	0.683	0.678	0.672	0.666
0.763	0.759	0.755	0.750	0.746	0.741	0.737	0.732	0.727	0.722	0.717	0.712	0.707	0.702	0.696	0.691	0.685	0.680	0.674	0.668
0.765	0.761	0.757	0.752	0.748	0.743	0.739	0.734	0.729	0.724	0.719	0.714	0.709	0.704	0.698	0.693	0.687	0.681	0.675	0.669
0.767	0.763	0.759	0.754	0.750	0.745	0.741	0.736	0.731	0.726	0.721	0.716	0.711	0.706	0.700	0.695	0.689	0.683	0.677	0.671
0.769	0.765	0.760	0.756	0.752	0.747	0.742	0.738	0.733	0.728	0.723	0.718	0.713	0.707	0.702	0.696	0.691	0.685	0.679	0.673
0.771	0.767	0.762	0.758	0.754	0.749	0.744	0.740	0.735	0.730	0.725	0.720	0.715	0.709	0.704	0.698	0.693	0.687	0.681	0.675
0.773	0.769	0.764	0.760	0.756	0.751	0.746	0.742	0.737	0.732	0.727	0.722	0.716	0.711	0.706	0.700	0.694	0.689	0.683	0.677
0.775	0.771	0.766	0.762	0.757	0.753	0.748	0.743	0.739	0.734	0.729	0.724	0.718	0.713	0.708	0.702	0.696	0.691	0.685	0.679
0.777	0.773	0.768	0.764	0.759	0.755	0.750	0.745	0.740	0.736	0.731	0.725	0.720	0.715	0.709	0.704	0.698	0.692	0.686	0.680
0.779	0.775	0.770	0.766	0.761	0.757	0.752	0.747	0.742	0.738	0.732	0.727	0.722	0.717	0.711	0.706	0.700	0.694	0.688	0.682
0.781	0.777	0.772	0.768	0.763	0.759	0.754	0.749	0.744	0.739	0.734	0.729	0.724	0.719	0.713	0.708	0.702	0.696	0.690	0.684
0.783	0.779	0.774	0.770	0.765	0.760	0.756	0.751	0.746	0.741	0.736	0.731	0.726	0.721	0.715	0.710	0.704	0.698	0.692	0.686
0.785	0.781	0.776	0.772	0.767	0.762	0.758	0.753	0.748	0.743	0.738	0.733	0.728	0.722	0.717	0.711	0.706	0.700	0.694	0.688
0.787	0.783	0.778	0.774	0.769	0.764	0.760	0.755	0.750	0.745	0.740	0.735	0.730	0.724	0.719	0.713	0.708	0.702	0.696	0.690
0.789	0.784	0.780	0.776	0.771	0.766	0.762	0.757	0.752	0.747	0.742	0.737	0.732	0.726	0.721	0.715	0.709	0.704	0.698	0.692

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
834	0.862	0.858	0.855	0.851	0.847	0.843	0.839	0.836	0.832	0.828	0.824	0.820	0.816	0.812	0.808	0.804	0.799	0.795
836	0.864	0.860	0.857	0.853	0.849	0.845	0.842	0.838	0.834	0.830	0.826	0.822	0.818	0.814	0.810	0.806	0.801	0.797
838	0.866	0.863	0.859	0.855	0.851	0.847	0.844	0.840	0.836	0.832	0.828	0.824	0.820	0.816	0.812	0.808	0.803	0.799
840	0.868	0.865	0.861	0.857	0.853	0.849	0.846	0.842	0.838	0.834	0.830	0.826	0.822	0.818	0.814	0.810	0.805	0.801
842	0.871	0.867	0.863	0.859	0.855	0.852	0.848	0.844	0.840	0.836	0.832	0.828	0.824	0.820	0.816	0.811	0.807	0.803
844	0.873	0.869	0.865	0.861	0.857	0.854	0.850	0.846	0.842	0.838	0.834	0.830	0.826	0.822	0.818	0.813	0.809	0.805
846	0.875	0.871	0.867	0.863	0.859	0.856	0.852	0.848	0.844	0.840	0.836	0.832	0.828	0.824	0.820	0.815	0.811	0.807
848	0.877	0.873	0.869	0.865	0.862	0.858	0.854	0.850	0.846	0.842	0.838	0.834	0.830	0.826	0.822	0.817	0.813	0.809
850	0.879	0.875	0.871	0.867	0.864	0.860	0.856	0.852	0.848	0.844	0.840	0.836	0.832	0.828	0.824	0.819	0.815	0.811
852	0.881	0.877	0.873	0.870	0.866	0.862	0.858	0.854	0.850	0.846	0.842	0.838	0.834	0.830	0.826	0.821	0.817	0.813
854	0.883	0.879	0.875	0.872	0.868	0.864	0.860	0.856	0.852	0.848	0.844	0.840	0.836	0.832	0.828	0.823	0.819	0.815
856	0.885	0.881	0.878	0.874	0.870	0.866	0.862	0.858	0.854	0.850	0.846	0.842	0.838	0.834	0.830	0.825	0.821	0.817
858	0.887	0.883	0.880	0.876	0.872	0.868	0.864	0.860	0.856	0.852	0.848	0.844	0.840	0.836	0.832	0.827	0.823	0.819
860	0.889	0.886	0.882	0.878	0.874	0.870	0.866	0.862	0.858	0.854	0.850	0.846	0.842	0.838	0.834	0.829	0.825	0.821
862	0.891	0.888	0.884	0.880	0.876	0.872	0.868	0.864	0.860	0.856	0.852	0.848	0.844	0.840	0.836	0.831	0.827	0.823
864	0.894	0.890	0.886	0.882	0.878	0.874	0.870	0.866	0.862	0.858	0.854	0.850	0.846	0.842	0.838	0.833	0.829	0.825
866	0.896	0.892	0.888	0.884	0.880	0.876	0.872	0.868	0.864	0.860	0.856	0.852	0.848	0.844	0.840	0.835	0.831	0.827
868	0.898	0.894	0.890	0.886	0.882	0.878	0.874	0.870	0.866	0.862	0.858	0.854	0.850	0.846	0.842	0.837	0.833	0.829
870	0.900	0.896	0.892	0.888	0.884	0.880	0.876	0.872	0.868	0.864	0.860	0.856	0.852	0.848	0.844	0.839	0.835	0.831
872	0.902	0.898	0.894	0.890	0.886	0.882	0.878	0.874	0.870	0.866	0.862	0.858	0.854	0.850	0.846	0.841	0.837	0.833
874	0.904	0.900	0.896	0.892	0.888	0.884	0.880	0.876	0.872	0.868	0.864	0.860	0.856	0.852	0.847	0.843	0.839	0.834
876	0.906	0.902	0.898	0.894	0.890	0.886	0.882	0.878	0.874	0.870	0.866	0.862	0.858	0.854	0.849	0.845	0.841	0.836
878	0.908	0.904	0.900	0.896	0.892	0.888	0.884	0.880	0.876	0.872	0.868	0.864	0.860	0.856	0.851	0.847	0.843	0.838

A1

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.791	0.786	0.782	0.777	0.773	0.768	0.764	0.759	0.754	0.749	0.744	0.739	0.733	0.728	0.723	0.717	0.711	0.706	0.700	0.693
0.793	0.788	0.784	0.779	0.775	0.770	0.766	0.761	0.756	0.751	0.746	0.741	0.735	0.730	0.724	0.719	0.713	0.707	0.701	0.695
0.795	0.790	0.786	0.781	0.777	0.772	0.767	0.763	0.758	0.753	0.748	0.742	0.737	0.732	0.726	0.721	0.715	0.709	0.703	0.697
0.797	0.792	0.788	0.783	0.779	0.774	0.769	0.764	0.760	0.755	0.750	0.744	0.739	0.734	0.728	0.723	0.717	0.711	0.705	0.699
0.799	0.794	0.790	0.785	0.781	0.776	0.771	0.766	0.762	0.756	0.751	0.746	0.741	0.736	0.730	0.724	0.719	0.713	0.707	0.701
0.801	0.796	0.792	0.787	0.783	0.778	0.773	0.768	0.763	0.758	0.753	0.748	0.743	0.738	0.732	0.726	0.721	0.715	0.709	0.703
0.802	0.798	0.794	0.789	0.785	0.780	0.775	0.770	0.765	0.760	0.755	0.750	0.745	0.739	0.734	0.728	0.722	0.717	0.711	0.704
0.804	0.800	0.796	0.791	0.786	0.782	0.777	0.772	0.767	0.762	0.757	0.752	0.747	0.741	0.736	0.730	0.724	0.718	0.712	0.706
0.806	0.802	0.798	0.793	0.788	0.784	0.779	0.774	0.769	0.764	0.759	0.754	0.748	0.743	0.738	0.732	0.726	0.720	0.714	0.708
0.808	0.804	0.800	0.795	0.790	0.786	0.781	0.776	0.771	0.766	0.761	0.756	0.750	0.745	0.740	0.734	0.728	0.722	0.716	0.710
0.810	0.806	0.801	0.797	0.792	0.788	0.783	0.778	0.773	0.768	0.763	0.758	0.752	0.747	0.741	0.736	0.730	0.724	0.718	0.712
0.812	0.808	0.803	0.799	0.794	0.790	0.785	0.780	0.775	0.770	0.765	0.760	0.754	0.749	0.743	0.738	0.732	0.726	0.720	0.714
0.814	0.810	0.805	0.801	0.796	0.791	0.787	0.782	0.777	0.772	0.767	0.761	0.756	0.751	0.745	0.739	0.734	0.728	0.722	0.716
0.816	0.812	0.807	0.803	0.798	0.793	0.790	0.784	0.779	0.774	0.768	0.763	0.758	0.752	0.747	0.741	0.736	0.730	0.724	0.717
0.818	0.814	0.809	0.805	0.800	0.795	0.791	0.786	0.781	0.776	0.770	0.765	0.760	0.754	0.749	0.743	0.737	0.731	0.725	0.719
0.820	0.816	0.811	0.807	0.802	0.797	0.792	0.788	0.782	0.778	0.772	0.767	0.762	0.756	0.751	0.745	0.739	0.733	0.727	0.721
0.822	0.818	0.813	0.809	0.804	0.799	0.794	0.789	0.784	0.779	0.774	0.769	0.764	0.758	0.753	0.747	0.741	0.735	0.729	0.723
0.824	0.820	0.815	0.810	0.806	0.801	0.796	0.791	0.786	0.781	0.776	0.771	0.766	0.760	0.754	0.749	0.743	0.737	0.731	0.725
0.826	0.822	0.817	0.812	0.808	0.803	0.798	0.793	0.788	0.783	0.778	0.773	0.767	0.762	0.756	0.751	0.745	0.739	0.733	0.727
0.828	0.824	0.819	0.814	0.810	0.805	0.800	0.795	0.790	0.785	0.780	0.775	0.769	0.764	0.758	0.752	0.747	0.741	0.735	0.728
0.830	0.826	0.821	0.816	0.812	0.807	0.802	0.797	0.792	0.787	0.782	0.776	0.771	0.766	0.760	0.754	0.748	0.743	0.736	0.730
0.832	0.828	0.823	0.818	0.814	0.809	0.804	0.799	0.794	0.789	0.784	0.778	0.773	0.768	0.762	0.756	0.750	0.744	0.738	0.732
0.834	0.829	0.825	0.820	0.816	0.811	0.806	0.801	0.796	0.791	0.786	0.780	0.775	0.769	0.764	0.758	0.752	0.746	0.740	0.734

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
880	0.910	0.906	0.902	0.898	0.894	0.890	0.886	0.882	0.878	0.874	0.870	0.866	0.862	0.858	0.853	0.849	0.845	0.840
882	0.912	0.908	0.904	0.900	0.897	0.893	0.889	0.884	0.880	0.876	0.872	0.868	0.864	0.860	0.855	0.851	0.847	0.842
884	0.914	0.910	0.907	0.903	0.899	0.895	0.891	0.887	0.882	0.878	0.874	0.870	0.866	0.862	0.857	0.853	0.849	0.844
886	0.917	0.913	0.909	0.905	0.901	0.897	0.893	0.889	0.884	0.880	0.876	0.872	0.868	0.864	0.859	0.855	0.851	0.846
888	0.919	0.915	0.911	0.907	0.903	0.899	0.895	0.891	0.887	0.882	0.878	0.874	0.870	0.866	0.861	0.857	0.853	0.848
890	0.921	0.917	0.913	0.909	0.905	0.901	0.897	0.893	0.889	0.884	0.880	0.876	0.872	0.868	0.863	0.859	0.855	0.850
892	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.895	0.891	0.886	0.882	0.878	0.874	0.870	0.865	0.861	0.857	0.852
894	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.897	0.893	0.888	0.884	0.880	0.876	0.872	0.867	0.863	0.859	0.854
896	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.895	0.890	0.886	0.882	0.878	0.874	0.869	0.865	0.861	0.856
898	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.897	0.893	0.888	0.884	0.880	0.876	0.871	0.867	0.863	0.858
900	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.895	0.890	0.886	0.882	0.878	0.873	0.869	0.864	0.860
902	0.933	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.897	0.892	0.888	0.884	0.880	0.875	0.871	0.866	0.862
904	0.935	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.894	0.890	0.886	0.882	0.877	0.873	0.868	0.864
906	0.937	0.933	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.896	0.892	0.888	0.884	0.879	0.875	0.870	0.866
908	0.940	0.936	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.898	0.894	0.890	0.886	0.881	0.877	0.872	0.868
910	0.942	0.938	0.934	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.900	0.896	0.892	0.888	0.883	0.879	0.874	0.870
912	0.944	0.940	0.936	0.932	0.927	0.923	0.919	0.915	0.911	0.907	0.902	0.898	0.894	0.890	0.885	0.881	0.876	0.872
914	0.946	0.942	0.938	0.934	0.930	0.925	0.921	0.917	0.913	0.909	0.904	0.900	0.896	0.892	0.887	0.883	0.878	0.874
916	0.948	0.944	0.940	0.936	0.932	0.927	0.923	0.919	0.915	0.911	0.907	0.902	0.898	0.894	0.889	0.885	0.880	0.876
918	0.950	0.946	0.942	0.938	0.934	0.930	0.925	0.921	0.917	0.913	0.909	0.904	0.900	0.896	0.891	0.887	0.882	0.878
920	0.952	0.948	0.944	0.940	0.936	0.932	0.927	0.923	0.919	0.915	0.911	0.906	0.902	0.898	0.893	0.889	0.884	0.880
922	0.954	0.950	0.946	0.942	0.938	0.934	0.929	0.925	0.921	0.917	0.913	0.908	0.904	0.900	0.895	0.891	0.886	0.882

A1

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.836	0.831	0.827	0.822	0.818	0.813	0.808	0.803	0.798	0.793	0.788	0.782	0.777	0.771	0.766	0.760	0.754	0.748	0.742	0.736
0.838	0.833	0.829	0.824	0.819	0.815	0.810	0.805	0.800	0.795	0.789	0.784	0.779	0.773	0.768	0.762	0.756	0.750	0.744	0.738
0.840	0.835	0.831	0.826	0.821	0.817	0.812	0.807	0.802	0.796	0.791	0.786	0.781	0.775	0.769	0.764	0.758	0.752	0.746	0.740
0.842	0.837	0.833	0.828	0.823	0.818	0.814	0.809	0.804	0.798	0.793	0.788	0.782	0.777	0.771	0.766	0.760	0.754	0.748	0.741
0.844	0.839	0.835	0.830	0.825	0.820	0.816	0.810	0.806	0.800	0.795	0.790	0.784	0.779	0.773	0.767	0.762	0.756	0.750	0.743
0.846	0.841	0.837	0.832	0.827	0.822	0.817	0.812	0.807	0.802	0.797	0.792	0.786	0.781	0.775	0.769	0.763	0.757	0.751	0.745
0.848	0.843	0.839	0.834	0.829	0.824	0.819	0.814	0.809	0.804	0.799	0.794	0.788	0.783	0.777	0.771	0.765	0.759	0.753	0.747
0.850	0.845	0.840	0.836	0.831	0.826	0.821	0.816	0.811	0.806	0.801	0.795	0.790	0.784	0.779	0.773	0.767	0.761	0.755	0.749
0.852	0.847	0.842	0.838	0.833	0.828	0.823	0.818	0.813	0.808	0.803	0.797	0.792	0.786	0.781	0.775	0.769	0.763	0.757	0.751
0.854	0.849	0.844	0.840	0.835	0.830	0.825	0.820	0.815	0.810	0.805	0.799	0.794	0.788	0.783	0.777	0.771	0.765	0.759	0.752
0.856	0.851	0.846	0.842	0.837	0.832	0.827	0.822	0.817	0.812	0.806	0.801	0.796	0.790	0.784	0.779	0.773	0.767	0.761	0.754
0.858	0.853	0.848	0.844	0.839	0.834	0.829	0.824	0.819	0.814	0.808	0.803	0.798	0.792	0.786	0.780	0.775	0.769	0.762	0.756
0.859	0.855	0.850	0.845	0.841	0.836	0.831	0.826	0.821	0.816	0.810	0.805	0.799	0.794	0.788	0.782	0.776	0.770	0.764	0.758
0.861	0.857	0.852	0.847	0.843	0.838	0.833	0.828	0.823	0.818	0.812	0.807	0.801	0.796	0.790	0.784	0.778	0.772	0.766	0.760
0.863	0.859	0.854	0.849	0.845	0.840	0.835	0.830	0.825	0.819	0.814	0.809	0.803	0.798	0.792	0.786	0.780	0.774	0.768	0.762
0.865	0.861	0.856	0.851	0.846	0.842	0.837	0.832	0.826	0.821	0.816	0.811	0.805	0.800	0.794	0.788	0.782	0.776	0.770	0.763
0.867	0.863	0.858	0.853	0.848	0.844	0.839	0.834	0.828	0.823	0.818	0.812	0.807	0.801	0.796	0.790	0.784	0.778	0.772	0.765
0.869	0.865	0.860	0.855	0.850	0.845	0.840	0.835	0.830	0.825	0.820	0.814	0.809	0.803	0.798	0.792	0.786	0.780	0.774	0.767
0.871	0.867	0.862	0.857	0.852	0.847	0.842	0.837	0.832	0.827	0.822	0.816	0.811	0.805	0.799	0.794	0.788	0.782	0.775	0.769
0.873	0.869	0.864	0.859	0.854	0.849	0.844	0.839	0.834	0.829	0.824	0.818	0.813	0.807	0.801	0.796	0.790	0.783	0.777	0.771
0.875	0.871	0.866	0.861	0.856	0.851	0.846	0.841	0.836	0.831	0.825	0.820	0.814	0.809	0.803	0.797	0.791	0.785	0.779	0.773
0.877	0.872	0.868	0.863	0.858	0.853	0.848	0.843	0.838	0.833	0.827	0.822	0.816	0.811	0.805	0.799	0.793	0.787	0.781	0.774

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
924	0.956	0.952	0.948	0.944	0.940	0.936	0.932	0.927	0.923	0.919	0.915	0.910	0.906	0.902	0.897	0.893	0.888	0.884
926	0.958	0.954	0.950	0.946	0.942	0.938	0.934	0.929	0.925	0.921	0.917	0.912	0.908	0.904	0.899	0.895	0.890	0.886
928	0.960	0.956	0.952	0.948	0.944	0.940	0.936	0.931	0.927	0.923	0.919	0.914	0.910	0.906	0.901	0.897	0.892	0.888
930	0.962	0.958	0.954	0.950	0.946	0.942	0.938	0.933	0.929	0.925	0.921	0.916	0.912	0.908	0.903	0.899	0.894	0.890
932	0.965	0.960	0.956	0.952	0.948	0.944	0.940	0.936	0.931	0.927	0.923	0.918	0.914	0.910	0.905	0.901	0.896	0.892
934	0.967	0.962	0.958	0.954	0.950	0.946	0.942	0.938	0.933	0.929	0.925	0.920	0.916	0.912	0.907	0.903	0.898	0.894
936	0.969	0.965	0.960	0.956	0.952	0.948	0.944	0.940	0.935	0.931	0.927	0.922	0.918	0.914	0.909	0.905	0.900	0.896
938	0.971	0.967	0.963	0.958	0.954	0.950	0.946	0.942	0.937	0.933	0.929	0.924	0.920	0.916	0.911	0.907	0.902	0.897
940	0.973	0.969	0.965	0.960	0.956	0.952	0.948	0.944	0.939	0.935	0.931	0.926	0.922	0.918	0.913	0.909	0.904	0.899
942	0.975	0.971	0.967	0.962	0.958	0.954	0.950	0.946	0.941	0.937	0.933	0.928	0.924	0.920	0.915	0.911	0.906	0.901
944	0.977	0.973	0.969	0.965	0.960	0.956	0.952	0.948	0.943	0.939	0.935	0.930	0.926	0.922	0.917	0.913	0.908	0.903
946	0.979	0.975	0.971	0.967	0.962	0.958	0.954	0.950	0.945	0.941	0.937	0.932	0.928	0.924	0.919	0.915	0.910	0.905
948	0.981	0.977	0.973	0.969	0.964	0.960	0.956	0.952	0.948	0.943	0.939	0.934	0.930	0.926	0.921	0.916	0.912	0.907
950	0.983	0.979	0.975	0.971	0.967	0.962	0.958	0.954	0.950	0.945	0.941	0.936	0.932	0.928	0.923	0.918	0.914	0.909
952	0.985	0.981	0.977	0.973	0.969	0.964	0.960	0.956	0.952	0.947	0.943	0.938	0.934	0.930	0.925	0.920	0.916	0.911
954	0.988	0.983	0.979	0.975	0.971	0.966	0.962	0.958	0.954	0.949	0.945	0.940	0.936	0.932	0.927	0.922	0.918	0.913
956	0.990	0.985	0.981	0.977	0.973	0.968	0.964	0.960	0.956	0.951	0.947	0.942	0.938	0.934	0.929	0.924	0.920	0.915
958	0.992	0.988	0.983	0.979	0.975	0.971	0.966	0.962	0.958	0.953	0.949	0.944	0.940	0.935	0.931	0.926	0.922	0.917
960	0.994	0.990	0.985	0.981	0.977	0.973	0.968	0.964	0.960	0.955	0.951	0.946	0.942	0.938	0.933	0.928	0.924	0.919
962	0.996	0.992	0.987	0.983	0.979	0.975	0.970	0.966	0.962	0.957	0.953	0.948	0.944	0.940	0.935	0.930	0.926	0.921
964	0.998	0.994	0.990	0.985	0.981	0.977	0.972	0.968	0.964	0.959	0.955	0.950	0.946	0.942	0.937	0.932	0.928	0.923
966	1.000	0.996	0.992	0.987	0.983	0.979	0.974	0.970	0.966	0.961	0.957	0.952	0.948	0.944	0.939	0.934	0.930	0.925
968	1.002	0.998	0.994	0.989	0.985	0.981	0.976	0.972	0.968	0.963	0.959	0.954	0.950	0.946	0.941	0.936	0.932	0.927

A1

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.879	0.874	0.870	0.865	0.860	0.855	0.850	0.845	0.840	0.835	0.829	0.824	0.818	0.813	0.807	0.801	0.795	0.789	0.783	0.776
0.881	0.876	0.872	0.867	0.862	0.857	0.852	0.847	0.842	0.836	0.831	0.826	0.820	0.815	0.809	0.803	0.797	0.791	0.785	0.778
0.883	0.878	0.874	0.869	0.864	0.859	0.854	0.849	0.844	0.838	0.833	0.828	0.822	0.816	0.811	0.805	0.799	0.793	0.786	0.780
0.885	0.880	0.876	0.871	0.866	0.861	0.856	0.851	0.846	0.840	0.835	0.830	0.824	0.818	0.813	0.807	0.801	0.795	0.788	0.782
0.887	0.882	0.878	0.873	0.868	0.863	0.858	0.853	0.848	0.842	0.837	0.831	0.826	0.820	0.814	0.808	0.802	0.796	0.790	0.784
0.889	0.884	0.879	0.875	0.870	0.865	0.860	0.855	0.849	0.844	0.839	0.833	0.828	0.822	0.816	0.810	0.804	0.798	0.792	0.786
0.891	0.886	0.881	0.877	0.872	0.867	0.862	0.856	0.851	0.846	0.841	0.835	0.830	0.824	0.818	0.812	0.806	0.800	0.794	0.787
0.893	0.888	0.883	0.879	0.874	0.869	0.864	0.858	0.853	0.848	0.843	0.837	0.832	0.826	0.820	0.814	0.808	0.802	0.796	0.789
0.895	0.890	0.885	0.880	0.876	0.871	0.866	0.860	0.855	0.850	0.844	0.839	0.833	0.828	0.822	0.816	0.810	0.804	0.798	0.791
0.897	0.892	0.887	0.882	0.878	0.873	0.867	0.862	0.857	0.852	0.846	0.841	0.835	0.830	0.824	0.818	0.812	0.806	0.799	0.793
0.899	0.894	0.889	0.884	0.879	0.874	0.869	0.864	0.859	0.854	0.848	0.843	0.837	0.832	0.826	0.820	0.814	0.808	0.801	0.795
0.901	0.896	0.891	0.886	0.881	0.876	0.871	0.866	0.861	0.856	0.850	0.845	0.839	0.833	0.828	0.822	0.816	0.809	0.803	0.797
0.903	0.898	0.893	0.888	0.883	0.878	0.873	0.868	0.863	0.858	0.852	0.846	0.841	0.835	0.829	0.824	0.817	0.811	0.805	0.798
0.905	0.900	0.895	0.890	0.885	0.880	0.875	0.870	0.865	0.859	0.854	0.848	0.843	0.837	0.831	0.825	0.819	0.813	0.807	0.800
0.907	0.902	0.897	0.892	0.887	0.882	0.877	0.872	0.867	0.861	0.856	0.850	0.845	0.839	0.833	0.827	0.821	0.815	0.809	0.802
0.908	0.904	0.899	0.894	0.889	0.884	0.879	0.874	0.868	0.863	0.858	0.852	0.847	0.841	0.835	0.829	0.823	0.817	0.810	0.804
0.910	0.906	0.901	0.896	0.891	0.886	0.881	0.876	0.870	0.865	0.860	0.854	0.848	0.843	0.837	0.831	0.825	0.819	0.812	0.806
0.912	0.908	0.903	0.898	0.893	0.888	0.883	0.878	0.872	0.867	0.862	0.856	0.850	0.845	0.839	0.833	0.827	0.821	0.814	0.808
0.914	0.910	0.905	0.900	0.895	0.890	0.885	0.880	0.874	0.869	0.863	0.858	0.852	0.846	0.841	0.835	0.829	0.822	0.816	0.810
0.916	0.912	0.907	0.902	0.897	0.892	0.887	0.881	0.876	0.871	0.865	0.860	0.854	0.848	0.843	0.837	0.830	0.824	0.818	0.811
0.918	0.914	0.909	0.904	0.899	0.894	0.889	0.883	0.878	0.873	0.867	0.862	0.856	0.850	0.844	0.838	0.832	0.826	0.820	0.813
0.920	0.916	0.911	0.906	0.901	0.896	0.891	0.885	0.880	0.875	0.869	0.864	0.858	0.852	0.846	0.840	0.834	0.828	0.822	0.815
0.922	0.917	0.913	0.908	0.903	0.898	0.892	0.887	0.882	0.876	0.871	0.866	0.860	0.854	0.848	0.842	0.836	0.830	0.823	0.817

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
970	1.004	1.000	0.996	0.991	0.987	0.983	0.979	0.974	0.970	0.965	0.961	0.957	0.952	0.948	0.943	0.938	0.934	0.929
972	1.006	1.002	0.998	0.994	0.989	0.985	0.981	0.976	0.972	0.967	0.963	0.959	0.954	0.950	0.945	0.940	0.936	0.931
974	1.008	1.004	1.000	0.996	0.991	0.987	0.983	0.978	0.974	0.970	0.965	0.961	0.956	0.952	0.947	0.942	0.938	0.933
976	1.011	1.006	1.002	0.998	0.993	0.989	0.985	0.980	0.976	0.972	0.967	0.963	0.958	0.954	0.949	0.944	0.940	0.935
978	1.013	1.008	1.004	1.000	0.995	0.991	0.987	0.982	0.978	0.974	0.969	0.965	0.960	0.956	0.951	0.946	0.942	0.937
980	1.015	1.010	1.006	1.002	0.998	0.993	0.989	0.984	0.980	0.976	0.971	0.967	0.962	0.958	0.953	0.948	0.944	0.939
982	1.017	1.012	1.008	1.004	1.000	0.995	0.991	0.986	0.982	0.978	0.973	0.969	0.964	0.960	0.955	0.950	0.946	0.941
984	1.019	1.015	1.010	1.006	1.002	0.997	0.993	0.988	0.984	0.980	0.975	0.971	0.966	0.962	0.957	0.952	0.948	0.943
986	1.021	1.017	1.012	1.008	1.004	0.999	0.995	0.990	0.986	0.982	0.977	0.973	0.968	0.964	0.959	0.954	0.950	0.945
988	1.023	1.019	1.014	1.010	1.006	1.001	0.997	0.993	0.988	0.984	0.979	0.975	0.970	0.966	0.961	0.956	0.951	0.947
990	1.025	1.021	1.016	1.012	1.008	1.003	0.999	0.995	0.990	0.986	0.981	0.977	0.972	0.968	0.963	0.958	0.953	0.949
992	1.027	1.023	1.019	1.014	1.010	1.005	1.001	0.997	0.992	0.988	0.983	0.979	0.974	0.970	0.965	0.960	0.955	0.951
994	1.029	1.025	1.021	1.016	1.012	1.008	1.003	0.999	0.994	0.990	0.985	0.981	0.976	0.972	0.967	0.962	0.957	0.953
996	1.031	1.027	1.023	1.018	1.014	1.010	1.005	1.001	0.996	0.992	0.987	0.983	0.978	0.974	0.969	0.964	0.959	0.955
998	1.034	1.029	1.025	1.020	1.016	1.012	1.007	1.003	0.998	0.994	0.989	0.985	0.980	0.976	0.971	0.966	0.961	0.957
1 000	1.036	1.031	1.027	1.022	1.018	1.014	1.009	1.005	1.000	0.996	0.991	0.987	0.982	0.978	0.973	0.968	0.963	0.959
1 002	1.038	1.033	1.029	1.024	1.020	1.016	1.011	1.007	1.002	0.998	0.993	0.989	0.984	0.979	0.975	0.970	0.965	0.961
1 004	1.040	1.035	1.031	1.027	1.022	1.018	1.013	1.009	1.004	1.000	0.995	0.991	0.986	0.981	0.977	0.972	0.967	0.962
1 006	1.042	1.038	1.033	1.029	1.024	1.020	1.015	1.011	1.006	1.002	0.997	0.993	0.988	0.983	0.979	0.974	0.969	0.964
1 008	1.044	1.040	1.035	1.031	1.026	1.022	1.017	1.013	1.008	1.004	0.999	0.995	0.990	0.985	0.981	0.976	0.971	0.966
1 010	1.046	1.042	1.037	1.033	1.028	1.024	1.019	1.015	1.010	1.006	1.001	0.997	0.992	0.987	0.983	0.978	0.973	0.968
1 012	1.048	1.044	1.039	1.035	1.030	1.026	1.022	1.017	1.012	1.008	1.003	0.999	0.994	0.989	0.985	0.980	0.975	0.970

A1

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.924	0.919	0.914	0.910	0.905	0.900	0.894	0.889	0.884	0.878	0.873	0.867	0.862	0.856	0.850	0.844	0.838	0.832	0.825	0.819
0.926	0.921	0.916	0.912	0.906	0.901	0.896	0.891	0.886	0.880	0.875	0.869	0.864	0.858	0.852	0.846	0.840	0.834	0.827	0.821
0.928	0.923	0.918	0.913	0.908	0.903	0.898	0.893	0.888	0.882	0.877	0.871	0.865	0.860	0.854	0.848	0.842	0.835	0.829	0.822
0.930	0.925	0.920	0.915	0.910	0.905	0.900	0.895	0.890	0.884	0.879	0.873	0.867	0.862	0.856	0.850	0.844	0.837	0.831	0.824
0.932	0.927	0.922	0.917	0.912	0.907	0.902	0.897	0.891	0.886	0.880	0.875	0.869	0.863	0.858	0.852	0.845	0.839	0.833	0.826
0.934	0.929	0.924	0.919	0.914	0.909	0.904	0.899	0.893	0.888	0.882	0.877	0.871	0.865	0.859	0.853	0.847	0.841	0.835	0.828
0.936	0.931	0.926	0.921	0.916	0.911	0.906	0.901	0.895	0.890	0.884	0.879	0.873	0.867	0.861	0.855	0.849	0.843	0.836	0.830
0.938	0.933	0.928	0.923	0.918	0.913	0.908	0.903	0.897	0.892	0.886	0.881	0.875	0.869	0.863	0.857	0.851	0.845	0.838	0.832
0.940	0.935	0.930	0.925	0.920	0.915	0.910	0.904	0.899	0.894	0.888	0.882	0.877	0.871	0.865	0.859	0.853	0.846	0.840	0.834
0.942	0.937	0.932	0.927	0.922	0.917	0.912	0.906	0.901	0.896	0.890	0.884	0.879	0.873	0.867	0.861	0.855	0.848	0.842	0.835
0.944	0.939	0.934	0.929	0.924	0.919	0.914	0.908	0.903	0.898	0.892	0.886	0.881	0.875	0.869	0.863	0.856	0.850	0.844	0.837
0.946	0.941	0.936	0.931	0.926	0.921	0.916	0.910	0.905	0.899	0.894	0.888	0.882	0.877	0.871	0.865	0.858	0.852	0.846	0.839
0.948	0.943	0.938	0.933	0.928	0.923	0.917	0.912	0.907	0.901	0.896	0.890	0.884	0.878	0.872	0.866	0.860	0.854	0.848	0.841
0.950	0.945	0.940	0.935	0.930	0.925	0.919	0.914	0.909	0.903	0.898	0.892	0.886	0.880	0.874	0.868	0.862	0.856	0.849	0.843
0.952	0.947	0.942	0.937	0.932	0.927	0.921	0.916	0.911	0.905	0.900	0.894	0.888	0.882	0.876	0.870	0.864	0.858	0.851	0.845
0.954	0.949	0.944	0.939	0.934	0.928	0.923	0.918	0.913	0.907	0.901	0.896	0.890	0.884	0.878	0.872	0.866	0.860	0.853	0.846
0.956	0.951	0.946	0.941	0.936	0.930	0.925	0.920	0.914	0.909	0.903	0.898	0.892	0.886	0.880	0.874	0.868	0.861	0.855	0.848
0.958	0.953	0.948	0.943	0.938	0.932	0.927	0.922	0.916	0.911	0.905	0.900	0.894	0.888	0.882	0.876	0.870	0.863	0.857	0.850
0.960	0.955	0.950	0.945	0.939	0.934	0.929	0.924	0.918	0.913	0.907	0.901	0.896	0.890	0.884	0.878	0.871	0.865	0.859	0.852
0.962	0.957	0.952	0.947	0.941	0.936	0.931	0.926	0.920	0.915	0.909	0.903	0.898	0.892	0.886	0.880	0.873	0.867	0.860	0.854
0.963	0.959	0.954	0.948	0.943	0.938	0.933	0.928	0.922	0.916	0.911	0.905	0.899	0.894	0.888	0.881	0.875	0.869	0.862	0.856
0.965	0.961	0.955	0.950	0.945	0.940	0.935	0.929	0.924	0.918	0.913	0.907	0.901	0.895	0.889	0.883	0.877	0.871	0.864	0.858

续表

t, C / p, 10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 014	1.050	1.046	1.041	1.037	1.032	1.028	1.024	1.019	1.014	1.010	1.005	1.001	0.996	0.991	0.987	0.982	0.977	0.972
1 016	1.052	1.048	1.043	1.039	1.035	1.030	1.026	1.021	1.017	1.012	1.007	1.003	0.998	0.993	0.989	0.984	0.979	0.974
1 018	1.054	1.050	1.046	1.041	1.037	1.032	1.028	1.023	1.019	1.014	1.009	1.005	1.000	0.995	0.991	0.986	0.981	0.976
1 020	1.057	1.052	1.048	1.043	1.039	1.034	1.030	1.025	1.021	1.016	1.011	1.007	1.002	0.997	0.993	0.988	0.983	0.978
1 022	1.059	1.054	1.050	1.045	1.041	1.036	1.032	1.027	1.023	1.018	1.013	1.009	1.004	0.999	0.995	0.990	0.985	0.980
1 024	1.061	1.056	1.052	1.047	1.043	1.038	1.034	1.029	1.025	1.020	1.015	1.011	1.006	1.001	0.997	0.992	0.987	0.982
1 026	1.063	1.058	1.054	1.049	1.045	1.040	1.036	1.031	1.027	1.022	1.018	1.013	1.008	1.003	0.999	0.994	0.989	0.984
1 028	1.065	1.060	1.056	1.051	1.047	1.042	1.038	1.033	1.029	1.024	1.020	1.015	1.010	1.005	1.001	0.996	0.991	0.986
1 030	1.067	1.062	1.058	1.054	1.049	1.044	1.040	1.035	1.031	1.026	1.022	1.017	1.012	1.007	1.003	0.998	0.993	0.988
1 032	1.069	1.065	1.060	1.056	1.051	1.046	1.042	1.037	1.033	1.028	1.024	1.019	1.014	1.009	1.005	1.000	0.995	0.990
1 034	1.071	1.067	1.062	1.058	1.053	1.049	1.044	1.039	1.035	1.030	1.026	1.021	1.016	1.011	1.007	1.002	0.997	0.992
1 036	1.073	1.069	1.064	1.060	1.055	1.051	1.046	1.041	1.037	1.032	1.028	1.023	1.018	1.013	1.009	1.004	0.999	0.994
1 038	1.075	1.071	1.066	1.062	1.057	1.053	1.048	1.044	1.039	1.034	1.030	1.025	1.020	1.015	1.011	1.006	1.001	0.996
1 040	1.077	1.073	1.068	1.064	1.059	1.055	1.050	1.046	1.041	1.036	1.032	1.027	1.022	1.017	1.013	1.008	1.003	0.998

表 A2　气体容量法测定碳的温度、气压补正系数表

t, C / p, 10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
750	0.773	0.770	0.767	0.763	0.760	0.757	0.753	0.750	0.747	0.743	0.740	0.737	0.733	0.730	0.726	0.723	0.719	0.716
752	0.775	0.772	0.769	0.765	0.762	0.759	0.756	0.752	0.749	0.745	0.742	0.739	0.735	0.732	0.728	0.725	0.721	0.717
754	0.777	0.774	0.771	0.768	0.764	0.761	0.758	0.754	0.751	0.747	0.744	0.741	0.737	0.734	0.730	0.727	0.723	0.719
756	0.779	0.776	0.773	0.770	0.766	0.763	0.760	0.756	0.753	0.749	0.746	0.743	0.739	0.736	0.732	0.729	0.725	0.721
758	0.782	0.778	0.775	0.772	0.768	0.765	0.762	0.758	0.755	0.751	0.748	0.745	0.741	0.738	0.734	0.731	0.727	0.723
760	0.784	0.780	0.777	0.774	0.770	0.767	0.764	0.760	0.757	0.754	0.750	0.747	0.743	0.740	0.736	0.733	0.729	0.725

A1

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.967	0.962	0.957	0.952	0.947	0.942	0.937	0.931	0.926	0.920	0.915	0.909	0.903	0.897	0.891	0.885	0.879	0.872	0.866	0.859
0.969	0.964	0.959	0.954	0.949	0.944	0.939	0.933	0.928	0.922	0.917	0.911	0.905	0.899	0.893	0.887	0.881	0.874	0.868	0.861
0.971	0.966	0.961	0.956	0.951	0.946	0.941	0.935	0.930	0.924	0.918	0.913	0.907	0.901	0.895	0.889	0.883	0.876	0.870	0.863
0.973	0.968	0.963	0.958	0.953	0.948	0.942	0.937	0.932	0.926	0.920	0.915	0.909	0.903	0.897	0.891	0.884	0.878	0.872	0.865
0.975	0.970	0.965	0.960	0.955	0.950	0.944	0.939	0.934	0.928	0.922	0.916	0.911	0.905	0.899	0.893	0.886	0.880	0.873	0.867
0.977	0.972	0.967	0.962	0.957	0.952	0.946	0.941	0.935	0.930	0.924	0.918	0.913	0.907	0.901	0.894	0.888	0.882	0.875	0.869
0.979	0.974	0.969	0.964	0.959	0.954	0.948	0.943	0.937	0.932	0.926	0.920	0.914	0.909	0.902	0.896	0.890	0.884	0.877	0.870
0.981	0.976	0.971	0.966	0.961	0.956	0.950	0.945	0.939	0.934	0.928	0.922	0.916	0.910	0.904	0.898	0.892	0.886	0.879	0.872
0.983	0.978	0.973	0.968	0.963	0.957	0.952	0.947	0.941	0.936	0.930	0.924	0.918	0.912	0.906	0.900	0.894	0.887	0.881	0.874
0.985	0.980	0.975	0.970	0.965	0.959	0.954	0.949	0.943	0.938	0.932	0.926	0.920	0.914	0.908	0.902	0.896	0.889	0.883	0.876
0.987	0.982	0.977	0.972	0.967	0.961	0.956	0.950	0.945	0.939	0.934	0.928	0.922	0.916	0.910	0.904	0.898	0.891	0.884	0.878
0.989	0.984	0.979	0.974	0.968	0.963	0.958	0.952	0.947	0.941	0.936	0.930	0.924	0.918	0.912	0.906	0.899	0.893	0.886	0.880
0.991	0.986	0.981	0.976	0.970	0.965	0.960	0.954	0.949	0.943	0.938	0.932	0.926	0.920	0.914	0.908	0.901	0.895	0.888	0.882
0.993	0.988	0.983	0.978	0.972	0.967	0.962	0.956	0.951	0.945	0.939	0.934	0.928	0.922	0.916	0.909	0.903	0.897	0.890	0.883

（本表用氯化钠酸性溶液作封闭液）

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.712	0.708	0.705	0.701	0.697	0.693	0.689	0.685	0.681	0.677	0.673	0.669	0.665	0.660	0.656	0.651	0.647	0.642	0.637	0.631
0.714	0.710	0.706	0.703	0.699	0.695	0.691	0.687	0.683	0.679	0.675	0.671	0.667	0.662	0.658	0.653	0.649	0.643	0.638	0.633
0.716	0.712	0.708	0.705	0.701	0.697	0.693	0.689	0.685	0.681	0.677	0.673	0.668	0.664	0.660	0.655	0.651	0.645	0.640	0.635
0.718	0.714	0.710	0.707	0.703	0.699	0.695	0.691	0.687	0.683	0.679	0.674	0.670	0.666	0.662	0.657	0.652	0.647	0.642	0.637
0.720	0.716	0.712	0.709	0.705	0.701	0.697	0.693	0.689	0.685	0.680	0.676	0.672	0.668	0.663	0.659	0.654	0.649	0.644	0.639
0.722	0.718	0.714	0.710	0.707	0.703	0.699	0.695	0.691	0.687	0.682	0.678	0.674	0.670	0.665	0.661	0.656	0.651	0.646	0.640

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
762	0.786	0.782	0.779	0.776	0.772	0.769	0.766	0.762	0.759	0.756	0.752	0.749	0.745	0.742	0.738	0.735	0.731	0.727
764	0.788	0.784	0.781	0.778	0.774	0.771	0.768	0.764	0.761	0.758	0.754	0.751	0.747	0.744	0.740	0.737	0.733	0.729
766	0.790	0.786	0.783	0.780	0.776	0.773	0.770	0.766	0.763	0.760	0.756	0.753	0.749	0.746	0.742	0.739	0.735	0.731
768	0.792	0.788	0.785	0.782	0.779	0.775	0.772	0.768	0.765	0.762	0.758	0.755	0.751	0.748	0.744	0.741	0.737	0.733
770	0.794	0.791	0.787	0.784	0.781	0.777	0.774	0.771	0.767	0.764	0.760	0.757	0.753	0.750	0.746	0.743	0.739	0.735
772	0.796	0.793	0.789	0.786	0.783	0.779	0.776	0.773	0.769	0.766	0.762	0.759	0.755	0.752	0.748	0.744	0.741	0.737
774	0.798	0.795	0.791	0.788	0.785	0.781	0.778	0.775	0.771	0.768	0.764	0.761	0.757	0.754	0.750	0.746	0.743	0.739
776	0.800	0.797	0.793	0.790	0.787	0.783	0.780	0.777	0.773	0.770	0.766	0.763	0.759	0.756	0.752	0.748	0.745	0.741
778	0.802	0.799	0.796	0.792	0.789	0.785	0.782	0.779	0.775	0.772	0.768	0.765	0.761	0.758	0.754	0.750	0.747	0.743
780	0.805	0.801	0.798	0.794	0.791	0.788	0.784	0.781	0.777	0.774	0.770	0.767	0.763	0.760	0.756	0.752	0.749	0.745
782	0.807	0.803	0.800	0.796	0.793	0.790	0.786	0.783	0.779	0.776	0.772	0.769	0.765	0.762	0.758	0.754	0.751	0.747
784	0.809	0.805	0.802	0.798	0.795	0.792	0.788	0.785	0.781	0.778	0.774	0.771	0.767	0.764	0.760	0.756	0.753	0.749
786	0.811	0.807	0.804	0.800	0.797	0.794	0.790	0.787	0.783	0.780	0.776	0.773	0.769	0.765	0.762	0.758	0.755	0.751
788	0.813	0.809	0.806	0.802	0.799	0.796	0.792	0.789	0.785	0.782	0.778	0.775	0.771	0.767	0.764	0.760	0.757	0.753
790	0.815	0.811	0.808	0.805	0.801	0.798	0.794	0.791	0.787	0.784	0.780	0.777	0.773	0.769	0.766	0.762	0.758	0.755
792	0.817	0.813	0.810	0.807	0.803	0.800	0.796	0.793	0.789	0.786	0.782	0.779	0.775	0.771	0.768	0.764	0.760	0.757
794	0.819	0.815	0.812	0.809	0.805	0.802	0.798	0.795	0.791	0.788	0.784	0.781	0.777	0.773	0.770	0.766	0.762	0.759
796	0.821	0.818	0.814	0.811	0.807	0.804	0.800	0.797	0.793	0.790	0.786	0.783	0.779	0.775	0.772	0.768	0.764	0.761
798	0.823	0.820	0.816	0.813	0.809	0.806	0.802	0.799	0.795	0.792	0.788	0.785	0.781	0.777	0.774	0.770	0.766	0.763
800	0.825	0.822	0.818	0.815	0.811	0.808	0.804	0.801	0.797	0.794	0.790	0.787	0.783	0.779	0.776	0.772	0.768	0.765
802	0.827	0.824	0.820	0.817	0.813	0.810	0.806	0.803	0.799	0.796	0.792	0.789	0.785	0.781	0.778	0.774	0.770	0.766
804	0.829	0.826	0.822	0.819	0.815	0.812	0.808	0.805	0.801	0.798	0.794	0.791	0.787	0.783	0.780	0.776	0.772	0.768

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.724	0.720	0.716	0.712	0.708	0.705	0.701	0.697	0.693	0.689	0.684	0.680	0.676	0.672	0.667	0.663	0.658	0.653	0.648	0.642
0.726	0.722	0.718	0.714	0.710	0.707	0.702	0.699	0.695	0.690	0.686	0.682	0.678	0.673	0.669	0.664	0.660	0.655	0.649	0.644
0.728	0.724	0.720	0.716	0.712	0.708	0.704	0.700	0.697	0.692	0.688	0.684	0.680	0.675	0.671	0.666	0.662	0.656	0.651	0.646
0.730	0.726	0.722	0.718	0.714	0.710	0.706	0.702	0.698	0.694	0.690	0.686	0.682	0.677	0.673	0.668	0.663	0.658	0.653	0.648
0.731	0.728	0.724	0.720	0.716	0.712	0.708	0.704	0.700	0.696	0.692	0.688	0.683	0.679	0.675	0.670	0.665	0.660	0.655	0.650
0.733	0.730	0.726	0.722	0.718	0.714	0.710	0.706	0.702	0.698	0.694	0.689	0.685	0.681	0.677	0.672	0.667	0.662	0.657	0.651
0.735	0.732	0.728	0.724	0.720	0.716	0.712	0.708	0.704	0.700	0.696	0.691	0.687	0.683	0.678	0.674	0.669	0.664	0.659	0.653
0.737	0.734	0.730	0.726	0.722	0.718	0.714	0.710	0.706	0.702	0.697	0.693	0.689	0.685	0.680	0.676	0.671	0.666	0.660	0.655
0.739	0.736	0.732	0.728	0.724	0.720	0.716	0.712	0.708	0.704	0.699	0.695	0.691	0.687	0.682	0.678	0.673	0.667	0.662	0.657
0.741	0.737	0.734	0.730	0.726	0.722	0.718	0.714	0.710	0.706	0.701	0.697	0.693	0.688	0.684	0.679	0.675	0.669	0.664	0.659
0.743	0.739	0.736	0.732	0.728	0.724	0.720	0.716	0.712	0.708	0.703	0.699	0.695	0.690	0.686	0.681	0.676	0.671	0.666	0.661
0.745	0.741	0.738	0.734	0.730	0.726	0.722	0.718	0.714	0.709	0.705	0.701	0.697	0.692	0.688	0.683	0.678	0.673	0.668	0.662
0.747	0.743	0.739	0.736	0.732	0.728	0.724	0.720	0.716	0.711	0.707	0.703	0.698	0.694	0.690	0.685	0.680	0.675	0.670	0.664
0.749	0.745	0.741	0.738	0.734	0.730	0.725	0.721	0.717	0.713	0.709	0.705	0.700	0.696	0.691	0.687	0.682	0.677	0.672	0.666
0.751	0.747	0.743	0.740	0.735	0.732	0.727	0.723	0.719	0.715	0.711	0.706	0.702	0.698	0.693	0.689	0.684	0.679	0.673	0.668
0.753	0.749	0.745	0.741	0.737	0.733	0.729	0.725	0.721	0.717	0.713	0.708	0.704	0.700	0.695	0.691	0.686	0.680	0.675	0.670
0.755	0.751	0.747	0.743	0.739	0.735	0.731	0.727	0.723	0.719	0.714	0.710	0.706	0.702	0.697	0.692	0.688	0.682	0.677	0.672
0.757	0.753	0.749	0.745	0.741	0.737	0.733	0.729	0.725	0.721	0.716	0.712	0.708	0.703	0.699	0.694	0.689	0.684	0.679	0.674
0.759	0.755	0.751	0.747	0.743	0.739	0.735	0.731	0.727	0.723	0.718	0.714	0.710	0.705	0.701	0.696	0.691	0.686	0.681	0.675
0.761	0.757	0.753	0.749	0.745	0.741	0.737	0.733	0.729	0.725	0.720	0.716	0.712	0.707	0.703	0.698	0.693	0.688	0.683	0.677
0.763	0.759	0.755	0.751	0.747	0.743	0.739	0.735	0.731	0.726	0.722	0.718	0.713	0.709	0.705	0.700	0.695	0.690	0.684	0.679
0.765	0.761	0.757	0.753	0.749	0.745	0.741	0.737	0.733	0.728	0.724	0.720	0.715	0.711	0.706	0.702	0.697	0.691	0.686	0.681

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
806	0.832	0.828	0.824	0.821	0.817	0.814	0.811	0.807	0.803	0.800	0.796	0.793	0.789	0.785	0.782	0.778	0.774	0.770
808	0.834	0.830	0.827	0.823	0.820	0.816	0.813	0.809	0.805	0.802	0.798	0.795	0.791	0.787	0.784	0.780	0.776	0.772
810	0.836	0.832	0.829	0.825	0.822	0.818	0.815	0.811	0.807	0.804	0.800	0.797	0.793	0.789	0.786	0.782	0.778	0.774
812	0.838	0.834	0.831	0.827	0.824	0.820	0.817	0.813	0.809	0.806	0.802	0.799	0.795	0.791	0.788	0.784	0.780	0.776
814	0.840	0.836	0.833	0.829	0.826	0.822	0.819	0.815	0.812	0.808	0.804	0.801	0.797	0.793	0.790	0.786	0.782	0.778
816	0.842	0.838	0.835	0.831	0.828	0.824	0.821	0.817	0.814	0.810	0.806	0.803	0.799	0.795	0.792	0.788	0.784	0.780
818	0.844	0.840	0.837	0.833	0.830	0.826	0.823	0.819	0.816	0.812	0.808	0.805	0.801	0.797	0.794	0.790	0.786	0.782
820	0.846	0.842	0.839	0.835	0.832	0.828	0.825	0.821	0.818	0.814	0.810	0.807	0.803	0.799	0.796	0.792	0.788	0.784
822	0.848	0.845	0.841	0.837	0.834	0.830	0.827	0.823	0.820	0.816	0.812	0.809	0.805	0.801	0.798	0.794	0.790	0.786
824	0.850	0.847	0.843	0.840	0.836	0.832	0.829	0.825	0.822	0.818	0.814	0.811	0.807	0.803	0.800	0.796	0.792	0.788
826	0.852	0.849	0.845	0.842	0.838	0.835	0.831	0.827	0.824	0.820	0.816	0.813	0.809	0.805	0.802	0.798	0.794	0.790
828	0.854	0.851	0.847	0.844	0.840	0.837	0.833	0.829	0.826	0.822	0.818	0.815	0.811	0.807	0.804	0.800	0.796	0.792
830	0.856	0.853	0.849	0.846	0.842	0.839	0.835	0.831	0.828	0.824	0.820	0.817	0.813	0.809	0.806	0.802	0.798	0.794
832	0.859	0.855	0.851	0.848	0.844	0.841	0.837	0.833	0.830	0.826	0.822	0.819	0.815	0.811	0.808	0.804	0.800	0.796
834	0.861	0.857	0.853	0.850	0.846	0.843	0.839	0.835	0.832	0.828	0.824	0.821	0.817	0.813	0.810	0.806	0.802	0.798
836	0.863	0.859	0.855	0.852	0.848	0.845	0.841	0.837	0.834	0.830	0.826	0.823	0.819	0.815	0.811	0.808	0.804	0.800
838	0.865	0.861	0.858	0.854	0.850	0.847	0.843	0.840	0.836	0.832	0.828	0.825	0.821	0.817	0.813	0.810	0.806	0.802
840	0.867	0.863	0.860	0.856	0.852	0.849	0.845	0.842	0.838	0.834	0.830	0.827	0.823	0.819	0.815	0.812	0.808	0.804
842	0.869	0.865	0.862	0.858	0.854	0.851	0.847	0.844	0.840	0.836	0.832	0.829	0.825	0.821	0.817	0.814	0.810	0.806
844	0.871	0.867	0.864	0.860	0.856	0.853	0.849	0.846	0.842	0.838	0.834	0.831	0.827	0.823	0.819	0.816	0.812	0.808
846	0.873	0.869	0.866	0.862	0.859	0.855	0.851	0.848	0.844	0.840	0.836	0.833	0.829	0.825	0.821	0.818	0.814	0.810
848	0.875	0.871	0.868	0.864	0.861	0.857	0.853	0.850	0.846	0.842	0.838	0.835	0.831	0.827	0.823	0.819	0.816	0.812
850	0.877	0.874	0.870	0.866	0.863	0.859	0.855	0.852	0.848	0.844	0.840	0.837	0.833	0.829	0.825	0.821	0.817	0.814

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.767	0.763	0.759	0.755	0.751	0.747	0.743	0.739	0.735	0.730	0.726	0.721	0.717	0.713	0.708	0.704	0.699	0.693	0.688	0.683
0.769	0.765	0.761	0.757	0.753	0.749	0.745	0.741	0.736	0.732	0.728	0.723	0.719	0.715	0.710	0.705	0.701	0.695	0.690	0.685
0.771	0.767	0.763	0.759	0.755	0.751	0.747	0.742	0.738	0.734	0.730	0.725	0.721	0.717	0.712	0.707	0.702	0.697	0.692	0.686
0.772	0.769	0.765	0.761	0.757	0.753	0.748	0.744	0.740	0.736	0.731	0.727	0.723	0.718	0.714	0.709	0.704	0.699	0.694	0.688
0.774	0.770	0.767	0.763	0.759	0.755	0.750	0.746	0.742	0.738	0.733	0.729	0.725	0.720	0.716	0.711	0.706	0.701	0.695	0.690
0.776	0.772	0.769	0.765	0.761	0.757	0.752	0.748	0.744	0.740	0.735	0.731	0.727	0.722	0.718	0.713	0.708	0.703	0.697	0.692
0.778	0.774	0.771	0.767	0.762	0.758	0.754	0.750	0.746	0.742	0.737	0.733	0.729	0.724	0.719	0.715	0.710	0.704	0.699	0.694
0.780	0.776	0.772	0.769	0.764	0.760	0.756	0.752	0.748	0.744	0.739	0.735	0.730	0.726	0.721	0.717	0.712	0.706	0.701	0.696
0.782	0.778	0.774	0.770	0.766	0.762	0.758	0.754	0.750	0.745	0.741	0.737	0.732	0.728	0.723	0.718	0.714	0.708	0.703	0.697
0.784	0.780	0.776	0.772	0.768	0.764	0.760	0.756	0.752	0.747	0.743	0.738	0.734	0.730	0.725	0.720	0.715	0.710	0.705	0.699
0.786	0.782	0.778	0.774	0.770	0.766	0.762	0.758	0.754	0.749	0.745	0.740	0.736	0.731	0.727	0.722	0.717	0.712	0.707	0.701
0.788	0.784	0.780	0.776	0.772	0.768	0.764	0.760	0.756	0.751	0.747	0.742	0.738	0.733	0.729	0.724	0.719	0.714	0.708	0.703
0.790	0.786	0.782	0.778	0.774	0.770	0.766	0.762	0.757	0.753	0.748	0.744	0.740	0.735	0.731	0.726	0.721	0.716	0.710	0.705
0.792	0.788	0.784	0.780	0.776	0.772	0.768	0.763	0.759	0.755	0.750	0.746	0.742	0.737	0.732	0.728	0.723	0.717	0.712	0.707
0.794	0.790	0.786	0.782	0.778	0.774	0.770	0.765	0.761	0.757	0.752	0.748	0.744	0.739	0.734	0.730	0.725	0.719	0.714	0.708
0.796	0.792	0.788	0.784	0.780	0.776	0.771	0.767	0.763	0.759	0.754	0.750	0.745	0.741	0.736	0.731	0.727	0.721	0.716	0.710
0.798	0.794	0.790	0.786	0.782	0.778	0.773	0.769	0.765	0.761	0.756	0.752	0.747	0.743	0.738	0.733	0.728	0.723	0.718	0.712
0.800	0.796	0.792	0.788	0.784	0.780	0.775	0.771	0.767	0.763	0.758	0.753	0.749	0.745	0.740	0.735	0.730	0.725	0.719	0.714
0.802	0.798	0.794	0.790	0.786	0.781	0.777	0.773	0.769	0.764	0.760	0.755	0.751	0.746	0.742	0.737	0.732	0.727	0.721	0.716
0.804	0.800	0.796	0.792	0.788	0.783	0.779	0.775	0.771	0.766	0.762	0.757	0.753	0.748	0.744	0.739	0.734	0.728	0.723	0.718
0.806	0.802	0.798	0.794	0.789	0.785	0.781	0.777	0.773	0.768	0.764	0.759	0.755	0.750	0.746	0.741	0.736	0.730	0.725	0.719
0.808	0.804	0.800	0.796	0.791	0.787	0.783	0.779	0.775	0.770	0.766	0.761	0.757	0.752	0.747	0.743	0.738	0.732	0.727	0.721
0.810	0.806	0.802	0.798	0.793	0.789	0.785	0.781	0.776	0.772	0.767	0.763	0.759	0.754	0.749	0.744	0.739	0.734	0.729	0.723

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
852	0.879	0.876	0.872	0.868	0.865	0.861	0.857	0.854	0.850	0.846	0.842	0.839	0.835	0.831	0.827	0.823	0.819	0.815
854	0.881	0.878	0.874	0.870	0.867	0.863	0.859	0.856	0.852	0.848	0.844	0.841	0.837	0.833	0.829	0.825	0.821	0.817
856	0.884	0.880	0.876	0.872	0.869	0.865	0.861	0.858	0.854	0.850	0.846	0.843	0.839	0.835	0.831	0.827	0.823	0.819
858	0.886	0.882	0.878	0.875	0.871	0.867	0.863	0.860	0.856	0.852	0.848	0.845	0.841	0.837	0.833	0.829	0.825	0.821
860	0.888	0.884	0.880	0.877	0.873	0.869	0.865	0.862	0.858	0.854	0.850	0.847	0.843	0.839	0.835	0.831	0.827	0.823
862	0.890	0.886	0.882	0.879	0.875	0.871	0.868	0.864	0.860	0.856	0.852	0.849	0.845	0.841	0.837	0.833	0.829	0.825
864	0.892	0.888	0.884	0.881	0.877	0.873	0.870	0.866	0.862	0.858	0.854	0.851	0.847	0.843	0.839	0.835	0.831	0.827
866	0.894	0.890	0.886	0.883	0.879	0.875	0.872	0.868	0.864	0.860	0.856	0.853	0.849	0.845	0.841	0.837	0.833	0.829
868	0.896	0.892	0.888	0.885	0.881	0.877	0.874	0.870	0.866	0.862	0.858	0.855	0.851	0.847	0.843	0.839	0.835	0.831
870	0.898	0.894	0.891	0.887	0.883	0.879	0.876	0.872	0.868	0.864	0.860	0.857	0.853	0.849	0.845	0.841	0.837	0.833
872	0.900	0.896	0.893	0.889	0.885	0.882	0.878	0.874	0.870	0.866	0.862	0.859	0.855	0.851	0.847	0.843	0.839	0.835
874	0.902	0.898	0.895	0.891	0.887	0.884	0.880	0.876	0.872	0.868	0.865	0.861	0.857	0.853	0.849	0.845	0.841	0.837
876	0.904	0.900	0.897	0.893	0.889	0.886	0.882	0.878	0.874	0.870	0.867	0.863	0.859	0.855	0.851	0.847	0.843	0.839
878	0.906	0.903	0.899	0.895	0.891	0.888	0.884	0.880	0.876	0.872	0.869	0.865	0.861	0.857	0.853	0.849	0.845	0.841
880	0.908	0.905	0.901	0.897	0.893	0.890	0.886	0.882	0.878	0.874	0.871	0.867	0.863	0.859	0.855	0.851	0.847	0.843
882	0.911	0.907	0.903	0.899	0.895	0.892	0.888	0.884	0.880	0.876	0.873	0.869	0.865	0.861	0.857	0.853	0.849	0.845
884	0.913	0.909	0.905	0.901	0.897	0.894	0.890	0.886	0.882	0.878	0.875	0.871	0.867	0.863	0.859	0.855	0.851	0.847
886	0.915	0.911	0.907	0.903	0.900	0.896	0.892	0.888	0.884	0.880	0.877	0.873	0.869	0.865	0.861	0.857	0.853	0.849
888	0.917	0.913	0.909	0.905	0.902	0.898	0.894	0.890	0.886	0.882	0.879	0.875	0.871	0.867	0.863	0.859	0.855	0.851
890	0.919	0.915	0.911	0.907	0.904	0.900	0.896	0.892	0.888	0.884	0.881	0.877	0.873	0.869	0.865	0.861	0.857	0.853
892	0.921	0.917	0.913	0.909	0.906	0.902	0.898	0.894	0.890	0.886	0.883	0.879	0.875	0.871	0.867	0.863	0.859	0.855
894	0.923	0.919	0.915	0.912	0.908	0.904	0.900	0.896	0.892	0.888	0.885	0.881	0.877	0.873	0.869	0.865	0.861	0.857

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.812	0.808	0.804	0.799	0.795	0.791	0.787	0.783	0.778	0.774	0.769	0.765	0.760	0.756	0.751	0.746	0.741	0.736	0.730	0.725
0.814	0.810	0.805	0.801	0.797	0.793	0.789	0.784	0.780	0.776	0.771	0.767	0.762	0.758	0.753	0.748	0.743	0.738	0.732	0.727
0.815	0.811	0.807	0.803	0.799	0.795	0.791	0.786	0.782	0.778	0.773	0.769	0.764	0.760	0.755	0.750	0.745	0.740	0.734	0.729
0.817	0.813	0.809	0.805	0.801	0.797	0.792	0.788	0.784	0.780	0.775	0.770	0.766	0.761	0.757	0.752	0.747	0.741	0.736	0.730
0.819	0.815	0.811	0.807	0.803	0.799	0.794	0.790	0.786	0.781	0.777	0.772	0.768	0.763	0.759	0.754	0.749	0.743	0.738	0.732
0.821	0.817	0.813	0.809	0.805	0.801	0.796	0.792	0.788	0.783	0.779	0.774	0.770	0.765	0.760	0.756	0.751	0.745	0.740	0.734
0.823	0.819	0.815	0.811	0.807	0.803	0.798	0.794	0.790	0.785	0.781	0.776	0.772	0.767	0.762	0.757	0.752	0.747	0.741	0.736
0.825	0.821	0.817	0.813	0.809	0.805	0.800	0.796	0.792	0.787	0.783	0.778	0.774	0.769	0.764	0.759	0.754	0.749	0.743	0.738
0.827	0.823	0.819	0.815	0.811	0.806	0.802	0.798	0.794	0.789	0.784	0.780	0.775	0.771	0.766	0.761	0.756	0.751	0.745	0.740
0.829	0.825	0.821	0.817	0.813	0.808	0.804	0.800	0.795	0.791	0.786	0.782	0.777	0.773	0.768	0.763	0.758	0.752	0.747	0.741
0.831	0.827	0.823	0.819	0.815	0.810	0.806	0.802	0.797	0.793	0.788	0.784	0.779	0.775	0.770	0.765	0.760	0.754	0.749	0.743
0.833	0.829	0.825	0.821	0.816	0.812	0.808	0.804	0.799	0.795	0.790	0.786	0.781	0.776	0.772	0.767	0.762	0.756	0.751	0.745
0.835	0.831	0.827	0.823	0.818	0.814	0.810	0.805	0.801	0.797	0.792	0.787	0.783	0.778	0.774	0.769	0.764	0.758	0.753	0.747
0.837	0.833	0.829	0.825	0.820	0.816	0.812	0.807	0.803	0.799	0.794	0.789	0.785	0.780	0.775	0.770	0.765	0.760	0.754	0.749
0.839	0.835	0.831	0.827	0.822	0.818	0.814	0.809	0.805	0.800	0.796	0.791	0.787	0.782	0.777	0.772	0.767	0.762	0.756	0.751
0.841	0.837	0.833	0.828	0.824	0.820	0.815	0.811	0.807	0.802	0.798	0.793	0.789	0.784	0.779	0.774	0.769	0.764	0.758	0.752
0.843	0.839	0.835	0.830	0.826	0.822	0.817	0.813	0.809	0.804	0.800	0.795	0.790	0.786	0.781	0.776	0.771	0.765	0.760	0.754
0.845	0.841	0.836	0.832	0.828	0.824	0.819	0.815	0.811	0.806	0.801	0.797	0.792	0.788	0.783	0.778	0.773	0.767	0.762	0.756
0.847	0.843	0.838	0.834	0.830	0.826	0.821	0.817	0.813	0.808	0.803	0.799	0.794	0.790	0.785	0.780	0.775	0.769	0.764	0.758
0.849	0.845	0.840	0.836	0.832	0.828	0.823	0.819	0.814	0.810	0.805	0.801	0.796	0.791	0.787	0.782	0.777	0.771	0.765	0.760
0.851	0.847	0.842	0.838	0.834	0.830	0.825	0.821	0.816	0.812	0.807	0.802	0.798	0.793	0.788	0.784	0.778	0.773	0.767	0.762
0.853	0.848	0.844	0.840	0.836	0.831	0.827	0.823	0.818	0.814	0.809	0.804	0.800	0.795	0.790	0.785	0.780	0.775	0.769	0.763

续表

t, C / p, 10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
896	0.925	0.921	0.917	0.914	0.910	0.906	0.902	0.898	0.894	0.891	0.887	0.883	0.879	0.875	0.871	0.867	0.863	0.859
898	0.927	0.923	0.919	0.916	0.912	0.908	0.904	0.900	0.896	0.893	0.889	0.885	0.881	0.877	0.873	0.869	0.865	0.861
900	0.929	0.925	0.922	0.918	0.914	0.910	0.906	0.902	0.898	0.895	0.891	0.887	0.883	0.879	0.875	0.871	0.867	0.863
902	0.931	0.927	0.924	0.920	0.916	0.912	0.908	0.904	0.900	0.897	0.893	0.889	0.885	0.881	0.877	0.873	0.869	0.865
904	0.933	0.929	0.926	0.922	0.918	0.914	0.910	0.906	0.903	0.899	0.895	0.891	0.887	0.883	0.879	0.875	0.871	0.866
906	0.936	0.932	0.928	0.924	0.920	0.916	0.912	0.909	0.905	0.901	0.897	0.893	0.889	0.885	0.881	0.877	0.873	0.868
908	0.938	0.934	0.930	0.926	0.922	0.918	0.914	0.911	0.907	0.903	0.899	0.895	0.891	0.887	0.883	0.879	0.875	0.870
910	0.940	0.936	0.932	0.928	0.924	0.920	0.916	0.913	0.909	0.905	0.901	0.897	0.893	0.889	0.885	0.881	0.876	0.872
912	0.942	0.938	0.934	0.930	0.926	0.922	0.918	0.915	0.911	0.907	0.903	0.899	0.895	0.891	0.887	0.883	0.878	0.874
914	0.944	0.940	0.936	0.932	0.928	0.924	0.920	0.917	0.913	0.909	0.905	0.901	0.897	0.893	0.889	0.885	0.880	0.876
916	0.946	0.942	0.938	0.934	0.930	0.926	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.895	0.891	0.887	0.882	0.878
918	0.948	0.944	0.940	0.936	0.932	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.897	0.893	0.889	0.884	0.880
920	0.950	0.946	0.942	0.938	0.934	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.895	0.891	0.886	0.882
922	0.952	0.948	0.944	0.940	0.936	0.933	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.897	0.892	0.888	0.884
924	0.954	0.950	0.946	0.942	0.938	0.935	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.899	0.894	0.890	0.886
926	0.956	0.952	0.948	0.944	0.941	0.937	0.933	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.901	0.896	0.892	0.888
928	0.958	0.954	0.950	0.947	0.943	0.939	0.935	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.903	0.898	0.894	0.890
930	0.960	0.956	0.953	0.949	0.945	0.941	0.937	0.933	0.929	0.925	0.921	0.917	0.913	0.909	0.905	0.900	0.896	0.892
932	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.935	0.931	0.927	0.923	0.919	0.915	0.911	0.907	0.902	0.898	0.894
934	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.937	0.933	0.929	0.925	0.921	0.917	0.913	0.909	0.904	0.900	0.896
936	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.935	0.931	0.927	0.923	0.919	0.915	0.911	0.906	0.902	0.898
938	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.937	0.933	0.929	0.925	0.921	0.917	0.912	0.908	0.904	0.900
940	0.971	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.935	0.931	0.927	0.923	0.919	0.914	0.910	0.906	0.902

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.855	0.850	0.846	0.842	0.838	0.833	0.829	0.825	0.820	0.816	0.811	0.806	0.802	0.797	0.792	0.787	0.782	0.776	0.771	0.765
0.857	0.852	0.848	0.844	0.840	0.835	0.831	0.826	0.822	0.817	0.813	0.808	0.804	0.799	0.794	0.789	0.784	0.778	0.773	0.767
0.858	0.854	0.850	0.846	0.842	0.837	0.833	0.828	0.824	0.819	0.815	0.810	0.806	0.801	0.796	0.791	0.786	0.780	0.775	0.769
0.860	0.856	0.852	0.848	0.843	0.839	0.835	0.830	0.826	0.821	0.817	0.812	0.807	0.803	0.798	0.793	0.788	0.782	0.776	0.771
0.862	0.858	0.854	0.850	0.845	0.841	0.837	0.832	0.828	0.823	0.818	0.814	0.809	0.804	0.800	0.795	0.790	0.784	0.778	0.773
0.864	0.860	0.856	0.852	0.847	0.843	0.838	0.834	0.830	0.825	0.820	0.816	0.811	0.806	0.802	0.797	0.791	0.786	0.780	0.774
0.866	0.862	0.858	0.854	0.849	0.845	0.840	0.836	0.832	0.827	0.822	0.818	0.813	0.808	0.803	0.798	0.793	0.788	0.782	0.776
0.868	0.864	0.860	0.856	0.851	0.847	0.842	0.838	0.834	0.829	0.824	0.819	0.815	0.810	0.805	0.800	0.795	0.789	0.784	0.778
0.870	0.866	0.862	0.857	0.853	0.849	0.844	0.840	0.835	0.831	0.826	0.821	0.817	0.812	0.807	0.802	0.797	0.791	0.786	0.780
0.872	0.868	0.864	0.859	0.855	0.851	0.846	0.842	0.837	0.833	0.828	0.823	0.819	0.814	0.809	0.804	0.799	0.793	0.788	0.782
0.874	0.870	0.866	0.861	0.857	0.853	0.848	0.844	0.839	0.835	0.830	0.825	0.821	0.816	0.811	0.806	0.801	0.795	0.789	0.784
0.876	0.872	0.868	0.863	0.859	0.854	0.850	0.846	0.841	0.836	0.832	0.827	0.822	0.818	0.813	0.808	0.803	0.797	0.791	0.785
0.878	0.874	0.869	0.865	0.861	0.856	0.852	0.847	0.843	0.838	0.834	0.829	0.824	0.819	0.815	0.810	0.804	0.799	0.793	0.787
0.880	0.876	0.871	0.867	0.863	0.858	0.854	0.849	0.845	0.840	0.835	0.831	0.826	0.821	0.816	0.811	0.806	0.800	0.795	0.789
0.882	0.878	0.873	0.869	0.865	0.860	0.856	0.851	0.847	0.842	0.837	0.833	0.828	0.823	0.818	0.813	0.808	0.802	0.797	0.791
0.884	0.880	0.875	0.871	0.867	0.862	0.858	0.853	0.849	0.844	0.839	0.834	0.830	0.825	0.820	0.815	0.810	0.804	0.799	0.793
0.886	0.882	0.877	0.873	0.869	0.864	0.860	0.855	0.851	0.846	0.841	0.836	0.832	0.827	0.822	0.817	0.812	0.806	0.800	0.795
0.888	0.884	0.879	0.875	0.870	0.866	0.861	0.857	0.853	0.848	0.843	0.838	0.834	0.829	0.824	0.819	0.814	0.808	0.802	0.797
0.890	0.885	0.881	0.877	0.872	0.868	0.863	0.859	0.854	0.850	0.845	0.840	0.836	0.831	0.826	0.821	0.815	0.810	0.804	0.798
0.892	0.887	0.883	0.879	0.874	0.870	0.865	0.861	0.856	0.852	0.847	0.842	0.837	0.833	0.828	0.823	0.817	0.812	0.806	0.800
0.894	0.889	0.885	0.881	0.876	0.872	0.867	0.863	0.858	0.854	0.849	0.844	0.839	0.834	0.830	0.824	0.819	0.813	0.808	0.802
0.896	0.891	0.887	0.883	0.878	0.874	0.869	0.865	0.860	0.855	0.851	0.846	0.841	0.836	0.831	0.826	0.821	0.815	0.810	0.804
0.898	0.893	0.889	0.885	0.880	0.876	0.871	0.867	0.862	0.857	0.852	0.848	0.843	0.838	0.833	0.828	0.823	0.817	0.811	0.806

续表

t,℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
942	0.973	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.937	0.933	0.929	0.925	0.920	0.916	0.912	0.908	0.904
944	0.975	0.971	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.935	0.931	0.927	0.922	0.918	0.914	0.910	0.906
946	0.977	0.973	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.937	0.933	0.929	0.924	0.920	0.916	0.912	0.908
948	0.979	0.975	0.971	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.935	0.931	0.926	0.922	0.918	0.914	0.910
950	0.981	0.977	0.973	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.937	0.933	0.928	0.924	0.920	0.916	0.912
952	0.983	0.979	0.975	0.971	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.935	0.930	0.926	0.922	0.918	0.914
954	0.985	0.981	0.977	0.973	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.937	0.932	0.928	0.924	0.920	0.915
956	0.988	0.983	0.979	0.975	0.971	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.939	0.934	0.930	0.926	0.922	0.917
958	0.990	0.985	0.981	0.977	0.973	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.941	0.936	0.932	0.928	0.924	0.919
960	0.992	0.988	0.983	0.979	0.975	0.971	0.967	0.963	0.959	0.955	0.951	0.947	0.943	0.938	0.934	0.930	0.926	0.921
962	0.994	0.990	0.986	0.982	0.977	0.973	0.969	0.965	0.961	0.957	0.953	0.949	0.945	0.940	0.936	0.932	0.928	0.923
964	0.996	0.992	0.988	0.984	0.979	0.976	0.971	0.967	0.963	0.959	0.955	0.951	0.946	0.942	0.938	0.934	0.930	0.925
966	0.998	0.994	0.990	0.986	0.982	0.978	0.973	0.969	0.965	0.961	0.957	0.953	0.948	0.944	0.940	0.936	0.932	0.927
968	1.000	0.996	0.992	0.988	0.984	0.980	0.975	0.971	0.967	0.963	0.959	0.955	0.950	0.946	0.942	0.938	0.934	0.929
970	1.002	0.998	0.994	0.990	0.986	0.982	0.977	0.973	0.969	0.965	0.961	0.957	0.952	0.948	0.944	0.940	0.936	0.931
972	1.004	1.000	0.996	0.992	0.988	0.984	0.980	0.975	0.971	0.967	0.963	0.959	0.954	0.950	0.946	0.942	0.937	0.933
974	1.006	1.002	0.998	0.994	0.990	0.986	0.982	0.977	0.973	0.969	0.965	0.961	0.956	0.952	0.948	0.944	0.939	0.935
976	1.008	1.004	1.000	0.996	0.992	0.988	0.984	0.980	0.975	0.971	0.967	0.963	0.958	0.954	0.950	0.946	0.941	0.937
978	1.010	1.006	1.002	0.998	0.994	0.990	0.986	0.982	0.977	0.973	0.969	0.965	0.960	0.956	0.952	0.948	0.943	0.939
980	1.012	1.008	1.004	1.000	0.996	0.992	0.988	0.984	0.979	0.975	0.971	0.967	0.962	0.958	0.954	0.950	0.945	0.941
982	1.015	1.010	1.006	1.002	0.998	0.994	0.990	0.986	0.981	0.977	0.973	0.969	0.964	0.960	0.956	0.952	0.947	0.943
984	1.017	1.012	1.008	1.004	1.000	0.996	0.992	0.988	0.983	0.979	0.975	0.971	0.966	0.962	0.958	0.954	0.949	0.945

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.899	0.895	0.891	0.887	0.882	0.878	0.873	0.868	0.864	0.859	0.854	0.850	0.845	0.840	0.835	0.830	0.825	0.819	0.813	0.808
0.901	0.897	0.893	0.888	0.884	0.879	0.875	0.870	0.866	0.861	0.856	0.851	0.847	0.842	0.837	0.832	0.827	0.821	0.815	0.809
0.903	0.899	0.895	0.890	0.886	0.881	0.877	0.872	0.868	0.863	0.858	0.853	0.849	0.844	0.839	0.834	0.828	0.823	0.817	0.811
0.905	0.901	0.897	0.892	0.888	0.883	0.879	0.874	0.870	0.865	0.860	0.855	0.851	0.846	0.841	0.836	0.830	0.825	0.819	0.813
0.907	0.903	0.899	0.894	0.890	0.885	0.881	0.876	0.872	0.867	0.862	0.857	0.852	0.848	0.843	0.837	0.832	0.826	0.821	0.815
0.909	0.905	0.900	0.896	0.892	0.887	0.882	0.878	0.873	0.869	0.864	0.859	0.854	0.849	0.844	0.839	0.834	0.828	0.823	0.817
0.911	0.907	0.902	0.898	0.894	0.889	0.884	0.880	0.875	0.871	0.866	0.861	0.856	0.851	0.846	0.841	0.836	0.830	0.824	0.819
0.913	0.909	0.904	0.900	0.895	0.891	0.886	0.882	0.877	0.872	0.868	0.863	0.858	0.853	0.848	0.843	0.838	0.832	0.826	0.820
0.915	0.911	0.906	0.902	0.897	0.893	0.888	0.884	0.879	0.874	0.869	0.865	0.860	0.855	0.850	0.845	0.840	0.834	0.828	0.822
0.917	0.913	0.908	0.904	0.899	0.895	0.890	0.886	0.881	0.876	0.871	0.867	0.862	0.857	0.852	0.847	0.841	0.836	0.830	0.824
0.919	0.915	0.910	0.906	0.901	0.897	0.892	0.887	0.883	0.878	0.873	0.868	0.864	0.859	0.854	0.849	0.843	0.837	0.832	0.826
0.921	0.917	0.912	0.908	0.903	0.899	0.894	0.889	0.885	0.880	0.875	0.870	0.866	0.861	0.856	0.850	0.845	0.839	0.834	0.828
0.923	0.919	0.914	0.910	0.905	0.900	0.896	0.891	0.887	0.882	0.877	0.872	0.867	0.863	0.857	0.852	0.847	0.841	0.835	0.830
0.925	0.921	0.916	0.912	0.907	0.903	0.898	0.893	0.889	0.884	0.879	0.874	0.869	0.864	0.859	0.854	0.849	0.843	0.837	0.831
0.927	0.922	0.918	0.914	0.909	0.904	0.900	0.895	0.890	0.886	0.881	0.876	0.871	0.866	0.861	0.856	0.851	0.845	0.839	0.833
0.929	0.924	0.920	0.916	0.911	0.906	0.902	0.897	0.892	0.888	0.883	0.878	0.873	0.868	0.863	0.858	0.853	0.847	0.841	0.835
0.931	0.926	0.922	0.917	0.913	0.908	0.904	0.899	0.894	0.890	0.885	0.880	0.875	0.870	0.865	0.860	0.854	0.849	0.843	0.837
0.933	0.928	0.924	0.919	0.915	0.910	0.905	0.901	0.896	0.891	0.886	0.882	0.877	0.872	0.867	0.862	0.856	0.850	0.845	0.839
0.935	0.930	0.926	0.921	0.917	0.912	0.907	0.903	0.898	0.893	0.888	0.883	0.879	0.874	0.869	0.863	0.858	0.852	0.846	0.841
0.937	0.932	0.928	0.923	0.919	0.914	0.909	0.905	0.900	0.895	0.890	0.885	0.881	0.876	0.871	0.865	0.860	0.854	0.848	0.842
0.939	0.934	0.930	0.925	0.921	0.916	0.911	0.907	0.902	0.897	0.892	0.887	0.882	0.877	0.872	0.867	0.862	0.856	0.850	0.844
0.941	0.936	0.932	0.927	0.922	0.918	0.913	0.908	0.904	0.899	0.894	0.889	0.884	0.879	0.874	0.869	0.864	0.858	0.852	0.846

续表

t, C / p, 10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
986	1.019	1.014	1.010	1.006	1.002	0.998	0.994	0.990	0.985	0.981	0.977	0.973	0.968	0.964	0.960	0.956	0.951	0.947
988	1.021	1.017	1.012	1.008	1.004	1.000	0.996	0.992	0.987	0.983	0.979	0.975	0.970	0.966	0.962	0.958	0.953	0.949
990	1.023	1.019	1.014	1.010	1.006	1.002	0.998	0.994	0.989	0.985	0.981	0.977	0.972	0.968	0.964	0.960	0.955	0.951
992	1.025	1.021	1.017	1.012	1.008	1.004	1.000	0.996	0.991	0.987	0.983	0.979	0.974	0.970	0.966	0.962	0.957	0.953
994	1.027	1.023	1.019	1.014	1.010	1.006	1.002	0.998	0.993	0.989	0.985	0.981	0.976	0.972	0.968	0.964	0.959	0.955
996	1.029	1.025	1.021	1.017	1.012	1.008	1.004	1.000	0.996	0.991	0.987	0.983	0.978	0.974	0.970	0.966	0.961	0.957
998	1.031	1.027	1.023	1.019	1.014	1.010	1.006	1.002	0.998	0.993	0.989	0.985	0.980	0.976	0.972	0.968	0.963	0.959
1 000	1.033	1.029	1.025	1.021	1.016	1.012	1.008	1.004	1.000	0.995	0.991	0.987	0.982	0.978	0.974	0.969	0.965	0.961
1 002	1.035	1.031	1.027	1.023	1.018	1.014	1.010	1.006	1.002	0.997	0.993	0.989	0.984	0.980	0.976	0.971	0.967	0.963
1 004	1.037	1.033	1.029	1.025	1.021	1.016	1.012	1.008	1.004	0.999	0.995	0.991	0.986	0.982	0.978	0.973	0.969	0.964
1 006	1.040	1.035	1.031	1.027	1.023	1.018	1.014	1.010	1.006	1.001	0.997	0.993	0.988	0.984	0.980	0.975	0.971	0.966
1 008	1.042	1.037	1.033	1.029	1.025	1.020	1.016	1.012	1.008	1.003	0.999	0.995	0.990	0.986	0.982	0.977	0.973	0.968
1 010	1.044	1.039	1.035	1.031	1.027	1.022	1.018	1.014	1.010	1.005	1.001	0.997	0.992	0.988	0.984	0.979	0.975	0.970
1 012	1.046	1.041	1.037	1.033	1.029	1.025	1.020	1.016	1.012	1.007	1.003	0.999	0.994	0.990	0.986	0.981	0.977	0.972
1 014	1.048	1.043	1.039	1.035	1.031	1.027	1.022	1.018	1.014	1.009	1.005	1.001	0.996	0.992	0.988	0.983	0.979	0.974
1 016	1.050	1.046	1.041	1.037	1.033	1.029	1.024	1.020	1.016	1.011	1.007	1.003	0.998	0.994	0.990	0.985	0.981	0.976
1 018	1.052	1.048	1.043	1.039	1.035	1.031	1.026	1.022	1.018	1.013	1.009	1.005	1.000	0.996	0.992	0.987	0.983	0.978
1 020	1.054	1.050	1.045	1.041	1.037	1.033	1.028	1.024	1.020	1.015	1.011	1.007	1.002	0.998	0.994	0.989	0.985	0.980
1 022	1.056	1.052	1.048	1.043	1.039	1.035	1.030	1.026	1.022	1.017	1.013	1.009	1.004	1.000	0.996	0.991	0.987	0.982
1 024	1.058	1.054	1.050	1.045	1.041	1.037	1.032	1.028	1.024	1.019	1.015	1.011	1.006	1.002	0.998	0.993	0.989	0.984
1 026	1.060	1.056	1.052	1.047	1.043	1.039	1.035	1.030	1.026	1.021	1.017	1.013	1.008	1.004	1.000	0.995	0.991	0.986
1 028	1.062	1.058	1.054	1.049	1.045	1.041	1.037	1.032	1.028	1.023	1.019	1.015	1.010	1.006	1.002	0.997	0.993	0.988
1 030	1.065	1.060	1.056	1.051	1.047	1.043	1.039	1.034	1.030	1.026	1.021	1.017	1.012	1.008	1.004	0.999	0.995	0.990

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.942	0.938	0.934	0.929	0.924	0.920	0.915	0.910	0.906	0.901	0.896	0.891	0.886	0.881	0.876	0.871	0.866	0.860	0.854	0.848
0.944	0.940	0.935	0.931	0.926	0.922	0.917	0.912	0.908	0.903	0.898	0.893	0.888	0.883	0.878	0.873	0.867	0.861	0.856	0.850
0.946	0.942	0.937	0.933	0.928	0.924	0.919	0.914	0.910	0.905	0.900	0.895	0.890	0.885	0.880	0.875	0.869	0.863	0.858	0.852
0.948	0.944	0.939	0.935	0.930	0.926	0.921	0.916	0.911	0.907	0.902	0.897	0.892	0.887	0.882	0.876	0.871	0.865	0.859	0.853
0.950	0.946	0.941	0.937	0.932	0.927	0.923	0.918	0.913	0.908	0.903	0.898	0.894	0.889	0.884	0.878	0.873	0.867	0.861	0.855
0.952	0.948	0.943	0.939	0.934	0.929	0.925	0.920	0.915	0.910	0.905	0.900	0.896	0.891	0.885	0.880	0.875	0.869	0.863	0.857
0.954	0.950	0.945	0.941	0.936	0.931	0.927	0.922	0.917	0.912	0.907	0.902	0.898	0.892	0.887	0.882	0.877	0.871	0.865	0.859
0.956	0.952	0.947	0.943	0.938	0.933	0.928	0.924	0.919	0.914	0.909	0.904	0.899	0.894	0.889	0.884	0.878	0.873	0.867	0.861
0.958	0.954	0.949	0.945	0.940	0.935	0.930	0.926	0.921	0.916	0.911	0.906	0.901	0.896	0.891	0.886	0.880	0.874	0.869	0.863
0.960	0.956	0.951	0.946	0.942	0.937	0.932	0.928	0.923	0.918	0.913	0.908	0.903	0.898	0.893	0.888	0.882	0.876	0.870	0.864
0.962	0.957	0.953	0.948	0.944	0.939	0.934	0.929	0.925	0.920	0.915	0.910	0.905	0.900	0.895	0.890	0.884	0.878	0.872	0.866
0.964	0.959	0.955	0.950	0.946	0.941	0.936	0.931	0.927	0.922	0.917	0.912	0.907	0.902	0.897	0.891	0.886	0.880	0.874	0.868
0.966	0.961	0.957	0.952	0.948	0.943	0.938	0.933	0.929	0.924	0.919	0.914	0.909	0.904	0.899	0.893	0.888	0.882	0.876	0.870
0.968	0.963	0.959	0.954	0.949	0.945	0.940	0.935	0.931	0.926	0.920	0.915	0.911	0.906	0.900	0.895	0.890	0.884	0.878	0.872
0.970	0.965	0.961	0.956	0.951	0.947	0.942	0.937	0.932	0.927	0.922	0.917	0.913	0.907	0.902	0.897	0.891	0.885	0.880	0.874
0.972	0.967	0.963	0.958	0.953	0.949	0.944	0.939	0.934	0.929	0.924	0.919	0.914	0.909	0.904	0.899	0.893	0.887	0.881	0.875
0.974	0.969	0.965	0.960	0.955	0.951	0.946	0.941	0.936	0.931	0.926	0.921	0.916	0.911	0.906	0.901	0.895	0.889	0.883	0.877
0.976	0.971	0.967	0.962	0.957	0.952	0.948	0.943	0.938	0.933	0.928	0.923	0.918	0.913	0.908	0.903	0.897	0.891	0.885	0.879
0.978	0.973	0.968	0.964	0.959	0.954	0.950	0.945	0.940	0.935	0.930	0.925	0.920	0.915	0.910	0.904	0.899	0.893	0.887	0.881
0.980	0.975	0.970	0.966	0.961	0.956	0.951	0.947	0.942	0.937	0.932	0.927	0.922	0.917	0.912	0.906	0.901	0.895	0.889	0.883
0.982	0.977	0.972	0.968	0.963	0.958	0.953	0.948	0.944	0.939	0.934	0.929	0.924	0.919	0.913	0.908	0.903	0.897	0.891	0.885
0.983	0.979	0.974	0.970	0.965	0.960	0.955	0.950	0.946	0.941	0.936	0.931	0.926	0.920	0.915	0.910	0.904	0.898	0.893	0.886
0.985	0.981	0.976	0.972	0.967	0.962	0.957	0.952	0.948	0.943	0.937	0.932	0.928	0.922	0.917	0.912	0.906	0.900	0.894	0.888

续表

t/℃ / p,10^2Pa	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 032	1.067	1.062	1.058	1.054	1.049	1.045	1.041	1.036	1.032	1.028	1.023	1.019	1.014	1.010	1.006	1.001	0.996	0.992
1 034	1.069	1.064	1.060	1.056	1.051	1.047	1.043	1.038	1.034	1.030	1.025	1.021	1.016	1.012	1.008	1.003	0.998	0.994
1 036	1.071	1.066	1.062	1.058	1.053	1.049	1.045	1.040	1.036	1.032	1.027	1.023	1.018	1.014	1.010	1.005	1.000	0.996
1 038	1.073	1.068	1.064	1.060	1.055	1.051	1.047	1.042	1.038	1.034	1.029	1.025	1.020	1.016	1.012	1.007	1.002	0.998
1 040	1.075	1.070	1.066	1.062	1.057	1.053	1.049	1.044	1.040	1.036	1.031	1.027	1.022	1.018	1.014	1.009	1.004	1.000

A2

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
0.987	0.983	0.978	0.974	0.969	0.964	0.959	0.954	0.950	0.945	0.939	0.934	0.929	0.924	0.919	0.914	0.908	0.902	0.896	0.890
0.989	0.985	0.980	0.975	0.971	0.966	0.961	0.956	0.951	0.946	0.941	0.936	0.931	0.926	0.921	0.916	0.910	0.904	0.898	0.892
0.991	0.987	0.982	0.977	0.973	0.968	0.963	0.958	0.953	0.948	0.943	0.938	0.933	0.928	0.923	0.917	0.912	0.906	0.900	0.894
0.993	0.989	0.984	0.979	0.975	0.970	0.965	0.960	0.955	0.950	0.945	0.940	0.935	0.930	0.925	0.919	0.914	0.908	0.902	0.896
0.995	0.991	0.986	0.981	0.976	0.972	0.967	0.962	0.957	0.952	0.947	0.942	0.937	0.932	0.927	0.921	0.916	0.910	0.904	0.897

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