VIRIAL COEFFICIENTS OF SELECTED GASES

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This table gives second virial coefficients of about 110 inorganic and organic gases as a function of temperature. Selected data from the literature have been fitted by least squares to the equation

$$B / \mathrm{cm^3 mol^{-1}} = \sum_{i=1}^{n} a(i)[(T_0 / T) - 1]^{i-1}$$

where T_0 = 298.15 K. The table gives values of B at fixed temperature increments, as calculated from this smoothing equation. The first row (lowest temperature) for each compound includes the coefficients $a(i)$ for that compound. Compounds are listed by name.

The equation may be used with the tabulated coefficients for interpolation within the indicated temperature range. It should not be used for extrapolation beyond this range. A useful compilation of virial coefficient data from the literature may be found in the reference.

Reference

Dymond, J. H., and Smith, E. B,, *The Virial Coefficients of Pure Gases and Mixtures, A Critical Compilation*, Oxford University Press, Oxford, 1980.

Name	Mol. Form.	T/K	B/cm³mol⁻¹	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Acetaldehyde	C_2H_4O	290	-1352	-1217	-4647	-5725		
Acetaldehyde	C_2H_4O	320	-927					
Acetaldehyde	C_2H_4O	350	-654					
Acetaldehyde	C_2H_4O	380	-482					
Acetaldehyde	C_2H_4O	410	-375					
Acetaldehyde	C_2H_4O	440	-314					
Acetaldehyde	C_2H_4O	470	-283					
Acetone	C_3H_6O	300	-1996	-2051	-8903	-18056	-16448	
Acetone	C_3H_6O	320	-1522					
Acetone	C_3H_6O	340	-1198					
Acetone	C_3H_6O	360	-971					
Acetone	C_3H_6O	380	-806					
Acetone	C_3H_6O	400	-683					
Acetone	C_3H_6O	420	-586					
Acetone	C_3H_6O	440	-506					
Acetone	C_3H_6O	460	-437					
Acetone	C_3H_6O	480	-375					
Acetonitrile	C_2H_3N	330	-3468	-5840	-29175	-47611		
Acetonitrile	C_2H_3N	340	-2971					
Acetonitrile	C_2H_3N	350	-2563					
Acetonitrile	C_2H_3N	360	-2233					
Acetonitrile	C_2H_3N	370	-1970					
Acetonitrile	C_2H_3N	380	-1765					
Acetonitrile	C_2H_3N	390	-1610					
Acetonitrile	C_2H_3N	400	-1499					
Acetonitrile	C_2H_3N	410	-1425					
Acetylene	C_2H_2	200	-573	-216	-375	-716		
Acetylene	C_2H_2	210	-500					
Acetylene	C_2H_2	220	-440					
Acetylene	C_2H_2	230	-390					
Acetylene	C_2H_2	240	-349					
Acetylene	C_2H_2	250	-315					
Acetylene	C_2H_2	260	-287					
Acetylene	C_2H_2	270	-263					
Ammonia	H_3N	290	-302	-271	-1022	-2715	-4189	
Ammonia	H_3N	300	-265					
Ammonia	H_3N	310	-236					
Ammonia	H_3N	320	-213					
Ammonia	H_3N	330	-194					
Ammonia	H_3N	340	-179					
Ammonia	H_3N	350	-166					
Ammonia	H_3N	360	-154					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Ammonia	H_3N	370	-144					
Ammonia	H_3N	380	-135					
Ammonia	H_3N	400	-118					
Ammonia	H_3N	420	-101					
Argon	Ar	100	-184	-16	-60	-9.7	-1.5	
Argon	Ar	120	-131					
Argon	Ar	140	-98					
Argon	Ar	160	-76					
Argon	Ar	180	-60					
Argon	Ar	200	-48					
Argon	Ar	300	-16					
Argon	Ar	400	-1					
Argon	Ar	500	7					
Argon	Ar	600	12					
Argon	Ar	700	15					
Argon	Ar	800	18					
Argon	Ar	900	20					
Argon	Ar	1000	22					
Benzene	C_6H_6	290	-1588	-1477	-3851	-3683	-1423	
Benzene	C_6H_6	300	-1454					
Benzene	C_6H_6	310	-1335					
Benzene	C_6H_6	320	-1231					
Benzene	C_6H_6	330	-1139					
Benzene	C_6H_6	340	-1056					
Benzene	C_6H_6	350	-983					
Benzene	C_6H_6	400	-712					
Benzene	C_6H_6	450	-542					
Benzene	C_6H_6	500	-429					
Benzene	C_6H_6	550	-349					
Benzene	C_6H_6	600	-291					
Boron trifluoride	BF_3	200	-338	-106	-330	-251	-80	
Boron trifluoride	BF_3	240	-202					
Boron trifluoride	BF_3	280	-129					
Boron trifluoride	BF_3	320	-85					
Boron trifluoride	BF_3	360	-56					
Boron trifluoride	BF_3	400	-37					
Boron trifluoride	BF_3	440	-23					
Bromomethane	CH_3Br	280	-645	-559	-1324			
Bromomethane	CH_3Br	290	-596					
Bromomethane	CH_3Br	300	-551					
Bromomethane	CH_3Br	310	-509					
Bromomethane	CH_3Br	320	-469					
Bromomethane	CH_3Br	340	-396					
Bromomethane	CH_3Br	360	-332					
Bromomethane	CH_3Br	380	-274					
Butane	C_4H_{10}	250	-1170	-735	-1835	-1922	-1330	
Butane	C_4H_{10}	280	-863					
Butane	C_4H_{10}	310	-668					
Butane	C_4H_{10}	340	-536					
Butane	C_4H_{10}	370	-442					
Butane	C_4H_{10}	400	-371					
Butane	C_4H_{10}	430	-315					
Butane	C_4H_{10}	460	-270					
Butane	C_4H_{10}	490	-232					
Butane	C_4H_{10}	520	-199					
Butane	C_4H_{10}	550	-171					
1-Butanol	$C_4H_{10}O$	350	-1693	-2629	-6315			
1-Butanol	$C_4H_{10}O$	360	-1544					
1-Butanol	$C_4H_{10}O$	370	-1402					
1-Butanol	$C_4H_{10}O$	380	-1268					
1-Butanol	$C_4H_{10}O$	390	-1141					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
1-Butanol	$C_4H_{10}O$	400	-1021					
1-Butanol	$C_4H_{10}O$	420	-796					
1-Butanol	$C_4H_{10}O$	440	-593					
2-Butanol	$C_4H_{10}O$	380	-1110	-2232	-5209			
2-Butanol	$C_4H_{10}O$	390	-1005					
2-Butanol	$C_4H_{10}O$	400	-906					
2-Butanol	$C_4H_{10}O$	410	-811					
2-Butanol	$C_4H_{10}O$	420	-721					
2-Butanone	C_4H_8O	310	-2056	-2282	-5907			
2-Butanone	C_4H_8O	320	-1878					
2-Butanone	C_4H_8O	330	-1712					
2-Butanone	C_4H_8O	340	-1555					
2-Butanone	C_4H_8O	350	-1407					
2-Butanone	C_4H_8O	360	-1267					
2-Butanone	C_4H_8O	370	-1135					
1-Butene	C_4H_8	300	-624	-633	-1442	-932		
1-Butene	C_4H_8	320	-539					
1-Butene	C_4H_8	340	-470					
1-Butene	C_4H_8	360	-413					
1-Butene	C_4H_8	380	-366					
1-Butene	C_4H_8	400	-327					
1-Butene	C_4H_8	420	-294					
Carbon dioxide	CO_2	220	-244	-127	-288	-118		
Carbon dioxide	CO_2	240	-204					
Carbon dioxide	CO_2	260	-172					
Carbon dioxide	CO_2	280	-146					
Carbon dioxide	CO_2	300	-126					
Carbon dioxide	CO_2	320	-108					
Carbon dioxide	CO_2	340	-94					
Carbon dioxide	CO_2	360	-81					
Carbon dioxide	CO_2	380	-71					
Carbon dioxide	CO_2	400	-62					
Carbon dioxide	CO_2	500	-30					
Carbon dioxide	CO_2	600	-13					
Carbon dioxide	CO_2	700	-1					
Carbon dioxide	CO_2	800	7					
Carbon dioxide	CO_2	900	12					
Carbon dioxide	CO_2	1000	16					
Carbon dioxide	CO_2	1100	19					
Carbon disulfide	CS_2	280	-932	-807	-1829	-1371		
Carbon disulfide	CS_2	310	-740					
Carbon disulfide	CS_2	340	-603					
Carbon disulfide	CS_2	370	-504					
Carbon disulfide	CS_2	400	-431					
Carbon disulfide	CS_2	430	-375					
Carbon monoxide	CO	210	-36	-9	-58	-18		
Carbon monoxide	CO	240	-24					
Carbon monoxide	CO	270	-15					
Carbon monoxide	CO	300	-8					
Carbon monoxide	CO	330	-3					
Carbon monoxide	CO	360	1					
Carbon monoxide	CO	420	7					
Carbon monoxide	CO	480	11					
Chlorine	Cl_2	210	-508	-303	-555	9	329	68
Chlorine	Cl_2	220	-483					
Chlorine	Cl_2	230	-457					
Chlorine	Cl_2	240	-432					
Chlorine	Cl_2	250	-407					
Chlorine	Cl_2	260	-383					
Chlorine	Cl_2	270	-360					
Chlorine	Cl_2	280	-339					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Chlorine	Cl_2	290	-318					
Chlorine	Cl_2	300	-299					
Chlorine	Cl_2	350	-221					
Chlorine	Cl_2	400	-166					
Chlorine	Cl_2	450	-126					
Chlorine	Cl_2	500	-97					
Chlorine	Cl_2	600	-59					
Chlorine	Cl_2	700	-36					
Chlorine	Cl_2	800	-22					
Chlorine	Cl_2	900	-12					
1-Chlorobutane	C_4H_9Cl	330	-1224	-1643	-4897	-6178	-3718	
1-Chlorobutane	C_4H_9Cl	370	-898					
1-Chlorobutane	C_4H_9Cl	410	-691					
1-Chlorobutane	C_4H_9Cl	450	-551					
1-Chlorobutane	C_4H_9Cl	490	-449					
1-Chlorobutane	C_4H_9Cl	530	-371					
1-Chlorobutane	C_4H_9Cl	570	-309					
Chlorodifluoromethane	$CHClF_2$	300	-343	-347	-575	187		
Chlorodifluoromethane	$CHClF_2$	325	-298					
Chlorodifluoromethane	$CHClF_2$	350	-257					
Chlorodifluoromethane	$CHClF_2$	375	-221					
Chlorodifluoromethane	$CHClF_2$	400	-188					
Chlorodifluoromethane	$CHClF_2$	425	-158					
Chloroethane	C_2H_5Cl	320	-634	-777	-2205	-1764		
Chloroethane	C_2H_5Cl	360	-450					
Chloroethane	C_2H_5Cl	400	-330					
Chloroethane	C_2H_5Cl	440	-249					
Chloroethane	C_2H_5Cl	480	-195					
Chloroethane	C_2H_5Cl	520	-157					
Chloroethane	C_2H_5Cl	560	-131					
Chloroethane	C_2H_5Cl	600	-114					
Chloromethane	CH_3Cl	280	-466	-407	-887	-385		
Chloromethane	CH_3Cl	300	-402					
Chloromethane	CH_3Cl	320	-348					
Chloromethane	CH_3Cl	340	-304					
Chloromethane	CH_3Cl	360	-266					
Chloromethane	CH_3Cl	380	-234					
Chloromethane	CH_3Cl	400	-206					
Chloromethane	CH_3Cl	420	-182					
Chloromethane	CH_3Cl	440	-161					
Chloromethane	CH_3Cl	460	-142					
Chloromethane	CH_3Cl	480	-126					
Chloromethane	CH_3Cl	500	-112					
Chloromethane	CH_3Cl	600	-58					
1-Chloropropane	C_3H_7Cl	310	-1001	-1121	-3271	-3786	-1974	
1-Chloropropane	C_3H_7Cl	340	-772					
1-Chloropropane	C_3H_7Cl	370	-614					
1-Chloropropane	C_3H_7Cl	400	-501					
1-Chloropropane	C_3H_7Cl	430	-417					
1-Chloropropane	C_3H_7Cl	460	-352					
1-Chloropropane	C_3H_7Cl	490	-302					
1-Chloropropane	C_3H_7Cl	520	-261					
1-Chloropropane	C_3H_7Cl	550	-227					
1-Chloropropane	C_3H_7Cl	580	-198					
Chlorotrifluoromethane	$CClF_3$	240	-369	-223	-504	-340	-291	
Chlorotrifluoromethane	$CClF_3$	290	-237					
Chlorotrifluoromethane	$CClF_3$	340	-165					
Chlorotrifluoromethane	$CClF_3$	390	-119					
Chlorotrifluoromethane	$CClF_3$	440	-86					
Chlorotrifluoromethane	$CClF_3$	490	-60					
Chlorotrifluoromethane	$CClF_3$	540	-39					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Cyclohexane	C_6H_{12}	300	-1698	-1733	-5618	-9486	-7936	
Cyclohexane	C_6H_{12}	320	-1391					
Cyclohexane	C_6H_{12}	340	-1170					
Cyclohexane	C_6H_{12}	360	-1007					
Cyclohexane	C_6H_{12}	380	-883					
Cyclohexane	C_6H_{12}	400	-786					
Cyclohexane	C_6H_{12}	420	-707					
Cyclohexane	C_6H_{12}	440	-641					
Cyclohexane	C_6H_{12}	460	-584					
Cyclohexane	C_6H_{12}	480	-534					
Cyclohexane	C_6H_{12}	500	-488					
Cyclohexane	C_6H_{12}	520	-446					
Cyclohexane	C_6H_{12}	540	-406					
Cyclohexane	C_6H_{12}	560	-368					
Cyclopentane	C_5H_{10}	300	-1049	-1062	-2116			
Cyclopentane	C_5H_{10}	305	-1015					
Cyclopentane	C_5H_{10}	310	-981					
Cyclopentane	C_5H_{10}	315	-949					
Cyclopentane	C_5H_{10}	320	-918					
Cyclopropane	C_3H_6	300	-383	-388	-861	-538		
Cyclopropane	C_3H_6	310	-356					
Cyclopropane	C_3H_6	320	-332					
Cyclopropane	C_3H_6	330	-310					
Cyclopropane	C_3H_6	340	-290					
Cyclopropane	C_3H_6	350	-272					
Cyclopropane	C_3H_6	360	-256					
Cyclopropane	C_3H_6	370	-241					
Cyclopropane	C_3H_6	380	-227					
Cyclopropane	C_3H_6	390	-215					
Cyclopropane	C_3H_6	400	-204					
Dichlorodifluoromethane	CCl_2F_2	250	-769	-486	-1217	-1188	-698	
Dichlorodifluoromethane	CCl_2F_2	280	-570					
Dichlorodifluoromethane	CCl_2F_2	310	-441					
Dichlorodifluoromethane	CCl_2F_2	340	-353					
Dichlorodifluoromethane	CCl_2F_2	370	-289					
Dichlorodifluoromethane	CCl_2F_2	400	-241					
Dichlorodifluoromethane	CCl_2F_2	430	-204					
Dichlorodifluoromethane	CCl_2F_2	460	-174					
1,2-Dichloroethane	$C_2H_4Cl_2$	370	-812	-1362	-3240	-2100		
1,2-Dichloroethane	$C_2H_4Cl_2$	390	-716					
1,2-Dichloroethane	$C_2H_4Cl_2$	410	-635					
1,2-Dichloroethane	$C_2H_4Cl_2$	430	-566					
1,2-Dichloroethane	$C_2H_4Cl_2$	450	-508					
1,2-Dichloroethane	$C_2H_4Cl_2$	470	-458					
1,2-Dichloroethane	$C_2H_4Cl_2$	490	-416					
1,2-Dichloroethane	$C_2H_4Cl_2$	510	-379					
1,2-Dichloroethane	$C_2H_4Cl_2$	530	-347					
1,2-Dichloroethane	$C_2H_4Cl_2$	550	-319					
1,2-Dichloroethane	$C_2H_4Cl_2$	570	-295					
Dichlorofluoromethane	$CHCl_2F$	250	-728	-562	-862			
Dichlorofluoromethane	$CHCl_2F$	275	-634					
Dichlorofluoromethane	$CHCl_2F$	300	-557					
Dichlorofluoromethane	$CHCl_2F$	325	-491					
Dichlorofluoromethane	$CHCl_2F$	350	-434					
Dichlorofluoromethane	$CHCl_2F$	375	-385					
Dichlorofluoromethane	$CHCl_2F$	400	-343					
Dichlorofluoromethane	$CHCl_2F$	425	-305					
Dichlorofluoromethane	$CHCl_2F$	450	-271					
Dichloromethane	CH_2Cl_2	320	-706	-913	-3371	-5013		
Dichloromethane	CH_2Cl_2	330	-634					
Dichloromethane	CH_2Cl_2	340	-574					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Dichloromethane	CH_2Cl_2	350	-524					
Dichloromethane	CH_2Cl_2	360	-482					
Dichloromethane	CH_2Cl_2	370	-447					
Dichloromethane	CH_2Cl_2	380	-420					
Dichloromethane	CH_2Cl_2	400	-380					
Dichloromethane	CH_2Cl_2	420	-357					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	300	-801	-812	-1773	-963		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	320	-695					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	340	-608					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	360	-536					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	380	-475					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	400	-423					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	420	-379					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	440	-341					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	460	-307					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	480	-279					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	$C_2Cl_2F_4$	500	-253					
Diethylamine	$C_4H_{11}N$	320	-1228	-1522	-5204	-15047	-28835	
Diethylamine	$C_4H_{11}N$	330	-1134					
Diethylamine	$C_4H_{11}N$	340	-1056					
Diethylamine	$C_4H_{11}N$	350	-988					
Diethylamine	$C_4H_{11}N$	360	-926					
Diethylamine	$C_4H_{11}N$	370	-868					
Diethylamine	$C_4H_{11}N$	380	-812					
Diethylamine	$C_4H_{11}N$	390	-755					
Diethylamine	$C_4H_{11}N$	400	-697					
Diethyl ether	$C_4H_{10}O$	280	-1550	-1226	-4458	-7746	-10005	
Diethyl ether	$C_4H_{10}O$	300	-1199					
Diethyl ether	$C_4H_{10}O$	320	-954					
Diethyl ether	$C_4H_{10}O$	340	-776					
Diethyl ether	$C_4H_{10}O$	360	-638					
Diethyl ether	$C_4H_{10}O$	380	-525					
Diethyl ether	$C_4H_{10}O$	400	-428					
Diethyl ether	$C_4H_{10}O$	420	-340					
Difluoromethane	CH_2F_2	280	-375	-321	-754	-1300		
Difluoromethane	CH_2F_2	290	-343					
Difluoromethane	CH_2F_2	300	-316					
Difluoromethane	CH_2F_2	310	-294					
Difluoromethane	CH_2F_2	320	-275					
Difluoromethane	CH_2F_2	330	-260					
Difluoromethane	CH_2F_2	340	-248					
Difluoromethane	CH_2F_2	350	-238					
Dimethylamine	C_2H_7N	310	-606	-662	-1504	-667		
Dimethylamine	C_2H_7N	320	-563					
Dimethylamine	C_2H_7N	330	-523					
Dimethylamine	C_2H_7N	340	-487					
Dimethylamine	C_2H_7N	350	-454					
Dimethylamine	C_2H_7N	360	-423					
Dimethylamine	C_2H_7N	370	-395					
Dimethylamine	C_2H_7N	380	-369					
Dimethylamine	C_2H_7N	390	-345					
Dimethylamine	C_2H_7N	400	-322					
Dimethyl ether	C_2H_6O	275	-536	-455	-965			
Dimethyl ether	C_2H_6O	280	-517					
Dimethyl ether	C_2H_6O	285	-499					
Dimethyl ether	C_2H_6O	290	-482					
Dimethyl ether	C_2H_6O	295	-465					
Dimethyl ether	C_2H_6O	300	-449					
Dimethyl ether	C_2H_6O	305	-433					
Dimethyl ether	C_2H_6O	310	-418					
Ethane	C_2H_6	200	-409	-184	-376	-143	-54	

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Ethane	C_2H_6	220	-337					
Ethane	C_2H_6	240	-284					
Ethane	C_2H_6	260	-242					
Ethane	C_2H_6	280	-209					
Ethane	C_2H_6	300	-181					
Ethane	C_2H_6	320	-159					
Ethane	C_2H_6	340	-140					
Ethane	C_2H_6	360	-123					
Ethane	C_2H_6	380	-109					
Ethane	C_2H_6	400	-96					
Ethane	C_2H_6	500	-52					
Ethane	C_2H_6	600	-24					
Ethanol	C_2H_6O	320	-2710	-4475	-29719	-56716		
Ethanol	C_2H_6O	330	-2135					
Ethanol	C_2H_6O	340	-1676					
Ethanol	C_2H_6O	350	-1317					
Ethanol	C_2H_6O	360	-1043					
Ethanol	C_2H_6O	370	-843					
Ethanol	C_2H_6O	380	-705					
Ethanol	C_2H_6O	390	-622					
Ethyl acetate	$C_4H_8O_2$	330	-1543	-2272	-8818	-13130		
Ethyl acetate	$C_4H_8O_2$	340	-1385					
Ethyl acetate	$C_4H_8O_2$	350	-1254					
Ethyl acetate	$C_4H_8O_2$	360	-1144					
Ethyl acetate	$C_4H_8O_2$	370	-1055					
Ethyl acetate	$C_4H_8O_2$	380	-982					
Ethyl acetate	$C_4H_8O_2$	390	-923					
Ethyl acetate	$C_4H_8O_2$	400	-878					
Ethylamine	C_2H_7N	300	-773	-785	-2012	-1397		
Ethylamine	C_2H_7N	310	-710					
Ethylamine	C_2H_7N	320	-654					
Ethylamine	C_2H_7N	330	-604					
Ethylamine	C_2H_7N	340	-558					
Ethylamine	C_2H_7N	350	-517					
Ethylamine	C_2H_7N	360	-480					
Ethylamine	C_2H_7N	370	-447					
Ethylamine	C_2H_7N	380	-416					
Ethylamine	C_2H_7N	390	-389					
Ethylamine	C_2H_7N	400	-363					
Ethylene	C_2H_4	240	-218	-140	-296	-101		
Ethylene	C_2H_4	270	-172					
Ethylene	C_2H_4	300	-139					
Ethylene	C_2H_4	330	-113					
Ethylene	C_2H_4	360	-92					
Ethylene	C_2H_4	390	-76					
Ethylene	C_2H_4	420	-63					
Ethylene	C_2H_4	450	-52					
Ethyl formate	$C_3H_6O_2$	330	-1003	-1371	-4231	-4312		
Ethyl formate	$C_3H_6O_2$	340	-916					
Ethyl formate	$C_3H_6O_2$	350	-839					
Ethyl formate	$C_3H_6O_2$	360	-771					
Ethyl formate	$C_3H_6O_2$	370	-712					
Ethyl formate	$C_3H_6O_2$	380	-660					
Ethyl formate	$C_3H_6O_2$	390	-614					
Fluorine	F_2	80	-378	8.5	-163.2	84.0	-27.9	
Fluorine	F_2	110	-165					
Fluorine	F_2	140	-109					
Fluorine	F_2	170	-79					
Fluorine	F_2	200	-55					
Fluorine	F_2	230	-33					
Fluorine	F_2	260	-14					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Fluoromethane	CH_3F	280	-244	-209	-525	-365		
Fluoromethane	CH_3F	300	-205					
Fluoromethane	CH_3F	320	-174					
Fluoromethane	CH_3F	340	-150					
Fluoromethane	CH_3F	360	-129					
Fluoromethane	CH_3F	380	-112					
Fluoromethane	CH_3F	400	-99					
Fluoromethane	CH_3F	420	-87					
Helium	He	2	-172	12.44	-1.25			
Helium	He	6	-48					
Helium	He	10	-24					
Helium	He	14	-13					
Helium	He	18	-7					
Helium	He	22	-3					
Helium	He	26	-1					
Helium	He	30	1					
Helium	He	50	6					
Helium	He	70	8					
Helium	He	90	10					
Helium	He	110	10					
Helium	He	150	11					
Helium	He	250	12					
Helium	He	650	13					
Helium	He	700	13					
Heptane	C_7H_{16}	300	-2782	-2834	-8523	-10068	-5051	
Heptane	C_7H_{16}	320	-2297					
Heptane	C_7H_{16}	340	-1928					
Heptane	C_7H_{16}	360	-1641					
Heptane	C_7H_{16}	380	-1415					
Heptane	C_7H_{16}	400	-1233					
Heptane	C_7H_{16}	420	-1085					
Heptane	C_7H_{16}	440	-963					
Heptane	C_7H_{16}	460	-862					
Heptane	C_7H_{16}	480	-775					
Heptane	C_7H_{16}	500	-702					
Heptane	C_7H_{16}	540	-583					
Heptane	C_7H_{16}	580	-490					
Heptane	C_7H_{16}	620	-416					
Heptane	C_7H_{16}	660	-355					
Heptane	C_7H_{16}	700	-304					
1-Heptene	C_7H_{14}	340	-1781	-2491	-6230	-3780		
1-Heptene	C_7H_{14}	350	-1651					
1-Heptene	C_7H_{14}	360	-1532					
1-Heptene	C_7H_{14}	370	-1424					
1-Heptene	C_7H_{14}	380	-1324					
1-Heptene	C_7H_{14}	390	-1233					
1-Heptene	C_7H_{14}	400	-1150					
1-Heptene	C_7H_{14}	410	-1073					
Hexane	C_6H_{14}	300	-1920	-1961	-6691	-13167	-15273	
Hexane	C_6H_{14}	310	-1724					
Hexane	C_6H_{14}	320	-1561					
Hexane	C_6H_{14}	330	-1424					
Hexane	C_6H_{14}	340	-1309					
Hexane	C_6H_{14}	350	-1209					
Hexane	C_6H_{14}	360	-1123					
Hexane	C_6H_{14}	370	-1046					
Hexane	C_6H_{14}	380	-978					
Hexane	C_6H_{14}	390	-916					
Hexane	C_6H_{14}	400	-859					
Hexane	C_6H_{14}	410	-806					
Hexane	C_6H_{14}	430	-707					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Hexane	C_6H_{14}	450	-616					
Hydrogen	H_2	15	-230	15.4	-9.0	-0.21		
Hydrogen	H_2	20	-151					
Hydrogen	H_2	25	-108					
Hydrogen	H_2	30	-82					
Hydrogen	H_2	35	-64					
Hydrogen	H_2	40	-52					
Hydrogen	H_2	45	-42					
Hydrogen	H_2	50	-35					
Hydrogen	H_2	60	-24					
Hydrogen	H_2	70	-16					
Hydrogen	H_2	80	-11					
Hydrogen	H_2	90	-7					
Hydrogen	H_2	100	-3					
Hydrogen	H_2	200	11					
Hydrogen	H_2	300	15					
Hydrogen	H_2	400	18					
Hydrogen chloride	ClH	190	-451	-144	-325	-277	-170	
Hydrogen chloride	ClH	230	-269					
Hydrogen chloride	ClH	270	-181					
Hydrogen chloride	ClH	310	-132					
Hydrogen chloride	ClH	350	-102					
Hydrogen chloride	ClH	390	-81					
Hydrogen chloride	ClH	430	-66					
Hydrogen chloride	ClH	470	-54					
Iodine pentafluoride	F_5I	320	-2540	-3077	-8474	-9116		
Iodine pentafluoride	F_5I	330	-2344					
Iodine pentafluoride	F_5I	340	-2172					
Iodine pentafluoride	F_5I	350	-2021					
Iodine pentafluoride	F_5I	360	-1890					
Iodine pentafluoride	F_5I	370	-1775					
Iodine pentafluoride	F_5I	380	-1674					
Iodine pentafluoride	F_5I	390	-1587					
Iodine pentafluoride	F_5I	400	-1510					
Iodine pentafluoride	F_5I	410	-1443					
Iodomethane	CH_3I	310	-725	-844	-3353	-6590		
Iodomethane	CH_3I	320	-646					
Iodomethane	CH_3I	330	-582					
Iodomethane	CH_3I	340	-531					
Iodomethane	CH_3I	350	-492					
Iodomethane	CH_3I	360	-462					
Iodomethane	CH_3I	370	-441					
Iodomethane	CH_3I	380	-427					
Isobutane	C_4H_{10}	270	-900	-707	-1719	-1282		
Isobutane	C_4H_{10}	300	-697					
Isobutane	C_4H_{10}	330	-553					
Isobutane	C_4H_{10}	360	-450					
Isobutane	C_4H_{10}	390	-374					
Isobutane	C_4H_{10}	420	-317					
Isobutane	C_4H_{10}	450	-273					
Isobutane	C_4H_{10}	480	-240					
Isobutane	C_4H_{10}	510	-215					
Isopentane	C_5H_{12}	280	-1263	-1095	-2503	-1534		
Isopentane	C_5H_{12}	290	-1166					
Isopentane	C_5H_{12}	300	-1079					
Isopentane	C_5H_{12}	310	-1001					
Isopentane	C_5H_{12}	320	-931					
Isopentane	C_5H_{12}	330	-867					
Isopentane	C_5H_{12}	340	-810					
Isopentane	C_5H_{12}	350	-757					
Isopentane	C_5H_{12}	400	-557					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Isopentane	C_5H_{12}	450	-424					
Krypton	Kr	110	-363	-51	-118	-29	-5	
Krypton	Kr	120	-307					
Krypton	Kr	130	-263					
Krypton	Kr	140	-229					
Krypton	Kr	150	-201					
Krypton	Kr	160	-178					
Krypton	Kr	170	-159					
Krypton	Kr	180	-143					
Krypton	Kr	190	-129					
Krypton	Kr	200	-117					
Krypton	Kr	250	-75					
Krypton	Kr	300	-51					
Krypton	Kr	400	-23					
Krypton	Kr	500	-8					
Krypton	Kr	600	2					
Krypton	Kr	700	8					
Methane	CH_4	110	-328	-43	-114	-19	-7	
Methane	CH_4	120	-276					
Methane	CH_4	130	-237					
Methane	CH_4	140	-206					
Methane	CH_4	150	-181					
Methane	CH_4	160	-160					
Methane	CH_4	170	-143					
Methane	CH_4	180	-128					
Methane	CH_4	190	-116					
Methane	CH_4	200	-105					
Methane	CH_4	250	-66					
Methane	CH_4	300	-43					
Methane	CH_4	350	-27					
Methane	CH_4	400	-16					
Methane	CH_4	500	0					
Methane	CH_4	600	10					
Methanol	CH_4O	320	-1431	-1752	-4694			
Methanol	CH_4O	330	-1299					
Methanol	CH_4O	340	-1174					
Methanol	CH_4O	350	-1056					
Methanol	CH_4O	360	-945					
Methanol	CH_4O	370	-840					
Methanol	CH_4O	380	-741					
Methanol	CH_4O	390	-646					
Methanol	CH_4O	400	-557					
Methyl acetate	$C_3H_6O_2$	320	-1320	-1709	-6348	-9650		
Methyl acetate	$C_3H_6O_2$	330	-1186					
Methyl acetate	$C_3H_6O_2$	340	-1074					
Methyl acetate	$C_3H_6O_2$	350	-980					
Methyl acetate	$C_3H_6O_2$	360	-903					
Methyl acetate	$C_3H_6O_2$	370	-840					
Methyl acetate	$C_3H_6O_2$	380	-789					
Methyl acetate	$C_3H_6O_2$	390	-749					
Methylamine	CH_5N	300	-451	-459	-1191	-995		
Methylamine	CH_5N	325	-367					
Methylamine	CH_5N	350	-304					
Methylamine	CH_5N	375	-257					
Methylamine	CH_5N	400	-220					
Methylamine	CH_5N	425	-192					
Methylamine	CH_5N	450	-170					
Methylamine	CH_5N	500	-140					
Methylamine	CH_5N	550	-122					
Methylcyclopentane	C_6H_{12}	305	-1447	-1512	-2910			
Methylcyclopentane	C_6H_{12}	315	-1357					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Methylcyclopentane	C_6H_{12}	325	-1272					
Methylcyclopentane	C_6H_{12}	335	-1192					
Methylcyclopentane	C_6H_{12}	345	-1117					
Methyl formate	$C_2H_4O_2$	320	-821	-1035	-3425	-4203		
Methyl formate	$C_2H_4O_2$	330	-744					
Methyl formate	$C_2H_4O_2$	340	-677					
Methyl formate	$C_2H_4O_2$	350	-620					
Methyl formate	$C_2H_4O_2$	360	-571					
Methyl formate	$C_2H_4O_2$	370	-528					
Methyl formate	$C_2H_4O_2$	380	-492					
Methyl formate	$C_2H_4O_2$	390	-461					
Methyl formate	$C_2H_4O_2$	400	-435					
Methyl propanoate	$C_4H_8O_2$	330	-1588	-2216	-7339	-8658		
Methyl propanoate	$C_4H_8O_2$	340	-1444					
Methyl propanoate	$C_4H_8O_2$	350	-1319					
Methyl propanoate	$C_4H_8O_2$	360	-1211					
Methyl propanoate	$C_4H_8O_2$	370	-1117					
Methyl propanoate	$C_4H_8O_2$	380	-1037					
Methyl propanoate	$C_4H_8O_2$	390	-968					
Methyl propanoate	$C_4H_8O_2$	400	-908					
2-Methyl-1-propanol	$C_4H_{10}O$	390	-1076	-2269	-5065			
2-Methyl-1-propanol	$C_4H_{10}O$	400	-979					
2-Methyl-1-propanol	$C_4H_{10}O$	410	-887					
2-Methyl-1-propanol	$C_4H_{10}O$	420	-800					
2-Methyl-1-propanol	$C_4H_{10}O$	430	-716					
2-Methyl-1-propanol	$C_4H_{10}O$	440	-636					
2-Methyl-2-propanol	$C_4H_{10}O$	380	-924	-1952	-4775			
2-Methyl-2-propanol	$C_4H_{10}O$	390	-827					
2-Methyl-2-propanol	$C_4H_{10}O$	400	-736					
2-Methyl-2-propanol	$C_4H_{10}O$	410	-649					
2-Methyl-2-propanol	$C_4H_{10}O$	420	-567					
2-Methylpyridine	C_6H_7N	360	-1656	-2940	-8813	-7809		
2-Methylpyridine	C_6H_7N	370	-1523					
2-Methylpyridine	C_6H_7N	380	-1404					
2-Methylpyridine	C_6H_7N	390	-1297					
2-Methylpyridine	C_6H_7N	400	-1202					
2-Methylpyridine	C_6H_7N	410	-1117					
2-Methylpyridine	C_6H_7N	420	-1040					
2-Methylpyridine	C_6H_7N	430	-972					
3-Methylpyridine	C_6H_7N	380	-1819	-6304	-30415	-44549		
3-Methylpyridine	C_6H_7N	390	-1612					
3-Methylpyridine	C_6H_7N	400	-1448					
3-Methylpyridine	C_6H_7N	410	-1322					
3-Methylpyridine	C_6H_7N	420	-1230					
3-Methylpyridine	C_6H_7N	430	-1166					
4-Methylpyridine	C_6H_7N	380	-1787	-6553	-32873	-49874		
4-Methylpyridine	C_6H_7N	390	-1578					
4-Methylpyridine	C_6H_7N	400	-1417					
4-Methylpyridine	C_6H_7N	410	-1297					
4-Methylpyridine	C_6H_7N	420	-1214					
4-Methylpyridine	C_6H_7N	430	-1163					
Molybdenum(VI) fluoride	F_6Mo	300	-896	-914	-2922	-4778		
Molybdenum(VI) fluoride	F_6Mo	310	-810					
Molybdenum(VI) fluoride	F_6Mo	320	-737					
Molybdenum(VI) fluoride	F_6Mo	330	-677					
Molybdenum(VI) fluoride	F_6Mo	340	-627					
Molybdenum(VI) fluoride	F_6Mo	350	-586					
Molybdenum(VI) fluoride	F_6Mo	360	-553					
Molybdenum(VI) fluoride	F_6Mo	370	-527					
Molybdenum(VI) fluoride	F_6Mo	380	-506					
Molybdenum(VI) fluoride	F_6Mo	390	-491					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Neon	Ne	60	-25	10.8	-7.5	-0.4		
Neon	Ne	80	-13					
Neon	Ne	100	-6					
Neon	Ne	120	-1					
Neon	Ne	140	2					
Neon	Ne	160	4					
Neon	Ne	180	6					
Neon	Ne	200	7					
Neon	Ne	300	11					
Neon	Ne	400	13					
Neon	Ne	500	14					
Neon	Ne	600	15					
Neopentane	C_5H_{12}	300	-916	-931	-2387	-2641	-1810	
Neopentane	C_5H_{12}	310	-843					
Neopentane	C_5H_{12}	320	-780					
Neopentane	C_5H_{12}	330	-724					
Neopentane	C_5H_{12}	340	-674					
Neopentane	C_5H_{12}	350	-629					
Neopentane	C_5H_{12}	360	-590					
Neopentane	C_5H_{12}	370	-554					
Neopentane	C_5H_{12}	380	-521					
Neopentane	C_5H_{12}	390	-492					
Neopentane	C_5H_{12}	400	-464					
Neopentane	C_5H_{12}	450	-357					
Neopentane	C_5H_{12}	500	-279					
Neopentane	C_5H_{12}	550	-218					
Nitric oxide	NO	120	-232	-12	-119	89	-73	
Nitric oxide	NO	130	-176					
Nitric oxide	NO	140	-138					
Nitric oxide	NO	150	-113					
Nitric oxide	NO	160	-96					
Nitric oxide	NO	170	-83					
Nitric oxide	NO	180	-73					
Nitric oxide	NO	190	-65					
Nitric oxide	NO	200	-58					
Nitric oxide	NO	210	-52					
Nitric oxide	NO	230	-42					
Nitric oxide	NO	250	-32					
Nitric oxide	NO	270	-24					
Nitrogen	N_2	75	-274	-4.3	-55.7	-11.8		
Nitrogen	N_2	100	-161					
Nitrogen	N_2	125	-104					
Nitrogen	N_2	150	-71					
Nitrogen	N_2	175	-49					
Nitrogen	N_2	200	-34					
Nitrogen	N_2	225	-24					
Nitrogen	N_2	250	-15					
Nitrogen	N_2	300	-4					
Nitrogen	N_2	400	9					
Nitrogen	N_2	500	16					
Nitrogen	N_2	600	21					
Nitrogen	N_2	700	24					
Nitrous oxide	N_2O	240	-219	-130	-307	-248		
Nitrous oxide	N_2O	260	-181					
Nitrous oxide	N_2O	280	-151					
Nitrous oxide	N_2O	300	-128					
Nitrous oxide	N_2O	320	-110					
Nitrous oxide	N_2O	340	-96					
Nitrous oxide	N_2O	360	-85					
Nitrous oxide	N_2O	380	-76					
Nitrous oxide	N_2O	400	-68					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Octane	C_8H_{18}	300	-4042	-4123	-13120	-16408	-8580	
Octane	C_8H_{18}	350	-2511					
Octane	C_8H_{18}	400	-1704					
Octane	C_8H_{18}	450	-1234					
Octane	C_8H_{18}	500	-936					
Octane	C_8H_{18}	550	-732					
Octane	C_8H_{18}	600	-583					
Octane	C_8H_{18}	650	-468					
Octane	C_8H_{18}	700	-375					
1-Octene	C_8H_{16}	360	-2147	-3273	-6557			
1-Octene	C_8H_{16}	370	-2000					
1-Octene	C_8H_{16}	380	-1861					
1-Octene	C_8H_{16}	390	-1729					
1-Octene	C_8H_{16}	400	-1604					
1-Octene	C_8H_{16}	410	-1485					
Oxygen	O_2	90	-241	-16	-62	-8	-3	
Oxygen	O_2	110	-161					
Oxygen	O_2	130	-117					
Oxygen	O_2	150	-88					
Oxygen	O_2	170	-69					
Oxygen	O_2	190	-55					
Oxygen	O_2	210	-44					
Oxygen	O_2	230	-36					
Oxygen	O_2	250	-29					
Oxygen	O_2	270	-23					
Oxygen	O_2	290	-18					
Oxygen	O_2	310	-14					
Oxygen	O_2	330	-10					
Oxygen	O_2	350	-7					
Oxygen	O_2	400	-1					
Pentane	C_5H_{12}	300	-1234	-1254	-3345	-2726		
Pentane	C_5H_{12}	310	-1130					
Pentane	C_5H_{12}	320	-1038					
Pentane	C_5H_{12}	330	-957					
Pentane	C_5H_{12}	340	-884					
Pentane	C_5H_{12}	350	-818					
Pentane	C_5H_{12}	400	-579					
Pentane	C_5H_{12}	450	-436					
Pentane	C_5H_{12}	500	-348					
Pentane	C_5H_{12}	550	-294					
2-Pentanone	$C_5H_{10}O$	330	-2850	-4962	-26372	-46537		
2-Pentanone	$C_5H_{10}O$	340	-2420					
2-Pentanone	$C_5H_{10}O$	350	-2076					
2-Pentanone	$C_5H_{10}O$	360	-1804					
2-Pentanone	$C_5H_{10}O$	370	-1595					
2-Pentanone	$C_5H_{10}O$	380	-1440					
2-Pentanone	$C_5H_{10}O$	390	-1332					
1-Pentene	C_5H_{10}	310	-966	-1055	-2377	-1189		
1-Pentene	C_5H_{10}	320	-898					
1-Pentene	C_5H_{10}	330	-836					
1-Pentene	C_5H_{10}	340	-780					
1-Pentene	C_5H_{10}	350	-729					
1-Pentene	C_5H_{10}	360	-681					
1-Pentene	C_5H_{10}	370	-638					
1-Pentene	C_5H_{10}	380	-598					
1-Pentene	C_5H_{10}	390	-561					
1-Pentene	C_5H_{10}	400	-527					
1-Pentene	C_5H_{10}	410	-495					
Phosphine	H_3P	190	-457	-146	-733	1022	-1220	
Phosphine	H_3P	200	-404					
Phosphine	H_3P	210	-364					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Phosphine	H_3P	220	-332					
Phosphine	H_3P	230	-305					
Phosphine	H_3P	240	-281					
Phosphine	H_3P	250	-258					
Phosphine	H_3P	260	-235					
Phosphine	H_3P	270	-213					
Phosphine	H_3P	280	-190					
Phosphine	H_3P	290	-166					
Phosphorus(V) fluoride	F_5P	320	-162	-186	-345			
Phosphorus(V) fluoride	F_5P	340	-143					
Phosphorus(V) fluoride	F_5P	360	-127					
Phosphorus(V) fluoride	F_5P	380	-112					
Phosphorus(V) fluoride	F_5P	400	-98					
Phosphorus(V) fluoride	F_5P	420	-86					
Phosphorus(V) fluoride	F_5P	440	-75					
Phosphorus(V) fluoride	F_5P	460	-64					
Propane	C_3H_8	240	-641	-386	-844	-720	-574	
Propane	C_3H_8	260	-527					
Propane	C_3H_8	280	-444					
Propane	C_3H_8	300	-381					
Propane	C_3H_8	320	-331					
Propane	C_3H_8	340	-292					
Propane	C_3H_8	360	-259					
Propane	C_3H_8	380	-232					
Propane	C_3H_8	400	-208					
Propane	C_3H_8	440	-169					
Propane	C_3H_8	480	-138					
Propane	C_3H_8	520	-112					
Propane	C_3H_8	560	-90					
1-Propanol	C_3H_8O	380	-873	-2690	-12040	-16738		
1-Propanol	C_3H_8O	385	-826					
1-Propanol	C_3H_8O	390	-783					
1-Propanol	C_3H_8O	395	-744					
1-Propanol	C_3H_8O	400	-709					
1-Propanol	C_3H_8O	405	-679					
1-Propanol	C_3H_8O	410	-651					
1-Propanol	C_3H_8O	415	-627					
1-Propanol	C_3H_8O	420	-606					
2-Propanol	C_3H_8O	380	-821	-3165	-16092	-24197		
2-Propanol	C_3H_8O	385	-766					
2-Propanol	C_3H_8O	390	-717					
2-Propanol	C_3H_8O	395	-674					
2-Propanol	C_3H_8O	400	-636					
2-Propanol	C_3H_8O	405	-604					
2-Propanol	C_3H_8O	410	-576					
2-Propanol	C_3H_8O	415	-552					
2-Propanol	C_3H_8O	420	-533					
Propene	C_3H_6	280	-395	-347	-727	-325		
Propene	C_3H_6	300	-342					
Propene	C_3H_6	320	-299					
Propene	C_3H_6	340	-262					
Propene	C_3H_6	360	-232					
Propene	C_3H_6	380	-205					
Propene	C_3H_6	400	-183					
Propene	C_3H_6	420	-163					
Propene	C_3H_6	440	-146					
Propene	C_3H_6	460	-131					
Propene	C_3H_6	480	-118					
Propene	C_3H_6	500	-106					
Propyl formate	$C_4H_8O_2$	330	-1496	-2118	-7299	-8851		
Propyl formate	$C_4H_8O_2$	340	-1354					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Propyl formate	$C_4H_8O_2$	350	-1231					
Propyl formate	$C_4H_8O_2$	360	-1126					
Propyl formate	$C_4H_8O_2$	370	-1035					
Propyl formate	$C_4H_8O_2$	380	-957					
Propyl formate	$C_4H_8O_2$	390	-890					
Propyl formate	$C_4H_8O_2$	400	-834					
Pyridine	C_5H_5N	350	-1257	-1765	-3431			
Pyridine	C_5H_5N	360	-1176					
Pyridine	C_5H_5N	370	-1099					
Pyridine	C_5H_5N	380	-1026					
Pyridine	C_5H_5N	390	-957					
Pyridine	C_5H_5N	400	-892					
Pyridine	C_5H_5N	420	-770					
Pyridine	C_5H_5N	440	-659					
Sulfur dioxide	O_2S	290	-465	-430	-1193	-1029		
Sulfur dioxide	O_2S	320	-354					
Sulfur dioxide	O_2S	350	-276					
Sulfur dioxide	O_2S	380	-221					
Sulfur dioxide	O_2S	410	-181					
Sulfur dioxide	O_2S	440	-153					
Sulfur dioxide	O_2S	470	-132					
Sulfur hexafluoride	F_6S	200	-685	-279	-647	-335	-72	
Sulfur hexafluoride	F_6S	250	-416					
Sulfur hexafluoride	F_6S	300	-275					
Sulfur hexafluoride	F_6S	350	-190					
Sulfur hexafluoride	F_6S	400	-135					
Sulfur hexafluoride	F_6S	450	-96					
Sulfur hexafluoride	F_6S	500	-68					
Tetrachloromethane	CCl_4	320	-1345	-1600	-4059	-4653		
Tetrachloromethane	CCl_4	340	-1171					
Tetrachloromethane	CCl_4	360	-1040					
Tetrachloromethane	CCl_4	380	-942					
Tetrachloromethane	CCl_4	400	-868					
Tetrachloromethane	CCl_4	420	-814					
Tetrafluoromethane	CF_4	250	-137	-88	-238	-70		
Tetrafluoromethane	CF_4	300	-87					
Tetrafluoromethane	CF_4	350	-55					
Tetrafluoromethane	CF_4	400	-32					
Tetrafluoromethane	CF_4	450	-16					
Tetrafluoromethane	CF_4	500	-4					
Tetrafluoromethane	CF_4	600	14					
Tetrafluoromethane	CF_4	700	25					
Tetrafluoromethane	CF_4	800	33					
Tetrafluorosilane	F_4Si	210	-268	-138	-312			
Tetrafluorosilane	F_4Si	240	-213					
Tetrafluorosilane	F_4Si	270	-170					
Tetrafluorosilane	F_4Si	300	-136					
Tetrafluorosilane	F_4Si	330	-108					
Tetrafluorosilane	F_4Si	360	-84					
Tetrafluorosilane	F_4Si	390	-64					
Tetrafluorosilane	F_4Si	420	-47					
Tetrafluorosilane	F_4Si	450	-32					
Toluene	C_7H_8	350	-1641	-2620	-7548	-6349		
Toluene	C_7H_8	360	-1511					
Toluene	C_7H_8	370	-1394					
Toluene	C_7H_8	380	-1289					
Toluene	C_7H_8	390	-1195					
Toluene	C_7H_8	400	-1110					
Toluene	C_7H_8	410	-1034					
Toluene	C_7H_8	420	-965					
Toluene	C_7H_8	430	-903					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	$a(1)$	$a(2)$	$a(3)$	$a(4)$	$a(5)$
Trichlorofluoromethane	CCl_3F	240	-1140	-786	-1428	-142		
Trichlorofluoromethane	CCl_3F	280	-879					
Trichlorofluoromethane	CCl_3F	320	-689					
Trichlorofluoromethane	CCl_3F	360	-545					
Trichlorofluoromethane	CCl_3F	400	-431					
Trichlorofluoromethane	CCl_3F	440	-340					
Trichlorofluoromethane	CCl_3F	480	-265					
Trichloromethane	$CHCl_3$	320	-1001	-1193	-2936	-1751		
Trichloromethane	$CHCl_3$	330	-926					
Trichloromethane	$CHCl_3$	340	-858					
Trichloromethane	$CHCl_3$	350	-797					
Trichloromethane	$CHCl_3$	360	-740					
Trichloromethane	$CHCl_3$	370	-689					
Trichloromethane	$CHCl_3$	380	-642					
Trichloromethane	$CHCl_3$	390	-599					
Trichloromethane	$CHCl_3$	400	-559					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	290	-1041	-999	-1479			
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	310	-943					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	330	-856					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	350	-780					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	370	-712					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	390	-651					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	410	-596					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	430	-546					
1,1,2-Trichloro-1,2,2-trifluoroethane	$C_2Cl_3F_3$	450	-500					
Triethylamine	$C_6H_{15}N$	330	-1562	-2061	-5735	-5899		
Triethylamine	$C_6H_{15}N$	340	-1444					
Triethylamine	$C_6H_{15}N$	350	-1340					
Triethylamine	$C_6H_{15}N$	360	-1249					
Triethylamine	$C_6H_{15}N$	370	-1169					
Triethylamine	$C_6H_{15}N$	380	-1099					
Triethylamine	$C_6H_{15}N$	390	-1037					
Triethylamine	$C_6H_{15}N$	400	-983					
Trifluoromethane	CHF_3	200	-433	-177	-399	-250		
Trifluoromethane	CHF_3	220	-350					
Trifluoromethane	CHF_3	240	-288					
Trifluoromethane	CHF_3	260	-241					
Trifluoromethane	CHF_3	280	-204					
Trifluoromethane	CHF_3	300	-174					
Trifluoromethane	CHF_3	320	-151					
Trifluoromethane	CHF_3	340	-132					
Trifluoromethane	CHF_3	360	-116					
Trifluoromethane	CHF_3	380	-103					
Trifluoromethane	CHF_3	400	-91					
Trimethylamine	C_3H_9N	310	-675	-737	-1669	-986		
Trimethylamine	C_3H_9N	320	-628					
Trimethylamine	C_3H_9N	330	-585					
Trimethylamine	C_3H_9N	340	-547					
Trimethylamine	C_3H_9N	350	-512					
Trimethylamine	C_3H_9N	360	-480					
Trimethylamine	C_3H_9N	370	-450					
Tungsten(VI) fluoride	F_6W	320	-641	-719	-1143			
Tungsten(VI) fluoride	F_6W	340	-578					
Tungsten(VI) fluoride	F_6W	360	-523					
Tungsten(VI) fluoride	F_6W	380	-473					
Tungsten(VI) fluoride	F_6W	400	-428					
Tungsten(VI) fluoride	F_6W	420	-387					
Tungsten(VI) fluoride	F_6W	440	-350					
Tungsten(VI) fluoride	F_6W	460	-317					
Uranium(VI) fluoride	F_6U	320	-1030	-1204	-2690	-2144		
Uranium(VI) fluoride	F_6U	340	-905					

Name	Mol. Form.	T/K	B/cm^{3}mol^{-1}	a(1)	a(2)	a(3)	a(4)	a(5)
Uranium(VI) fluoride	F_6U	360	-805					
Uranium(VI) fluoride	F_6U	380	-724					
Uranium(VI) fluoride	F_6U	400	-658					
Uranium(VI) fluoride	F_6U	420	-604					
Uranium(VI) fluoride	F_6U	440	-560					
Water	H_2O	300	-1126	-1158	-5157	-10301	-10597	-4415
Water	H_2O	320	-850					
Water	H_2O	340	-660					
Water	H_2O	360	-526					
Water	H_2O	380	-428					
Water	H_2O	400	-356					
Water	H_2O	420	-301					
Water	H_2O	440	-258					
Water	H_2O	460	-224					
Water	H_2O	480	-197					
Water	H_2O	500	-175					
Water	H_2O	600	-104					
Water	H_2O	700	-67					
Water	H_2O	800	-44					
Water	H_2O	900	-30					
Water	H_2O	1000	-20					
Water	H_2O	1100	-14					
Water	H_2O	1200	-11					
Xenon	Xe	160	-421	-130	-262	-87		
Xenon	Xe	170	-377					
Xenon	Xe	180	-340					
Xenon	Xe	190	-307					
Xenon	Xe	200	-280					
Xenon	Xe	210	-255					
Xenon	Xe	220	-234					
Xenon	Xe	230	-215					
Xenon	Xe	240	-199					
Xenon	Xe	250	-184					
Xenon	Xe	300	-129					
Xenon	Xe	350	-93					
Xenon	Xe	400	-69					
Xenon	Xe	450	-39					
Xenon	Xe	600	-21					
Xenon	Xe	650	-14					
o-Xylene	C_8H_{10}	380	-2046	-5632	-22873	-28900		
o-Xylene	C_8H_{10}	390	-1848					
o-Xylene	C_8H_{10}	400	-1681					
o-Xylene	C_8H_{10}	410	-1543					
o-Xylene	C_8H_{10}	420	-1428					
o-Xylene	C_8H_{10}	430	-1335					
o-Xylene	C_8H_{10}	440	-1261					
m-Xylene	C_8H_{10}	380	-2082	-5808	-23244	-27607		
m-Xylene	C_8H_{10}	390	-1865					
m-Xylene	C_8H_{10}	400	-1679					
m-Xylene	C_8H_{10}	410	-1521					
m-Xylene	C_8H_{10}	420	-1388					
m-Xylene	C_8H_{10}	430	-1276					
m-Xylene	C_8H_{10}	440	-1184					
p-Xylene	C_8H_{10}	380	-2043	-4921	-16843	-16159		
p-Xylene	C_8H_{10}	390	-1851					
p-Xylene	C_8H_{10}	400	-1680					
p-Xylene	C_8H_{10}	410	-1529					
p-Xylene	C_8H_{10}	420	-1395					
p-Xylene	C_8H_{10}	430	-1276					
p-Xylene	C_8H_{10}	440	-1171					