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

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

where T_o = 298.15 K. The table gives the coefficients $a(i)$ and values of B at fixed temperature increments, as calculated from this smoothing equation.

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.

Compounds are listed in the modified Hill order (see Introduction), with carbon-containing compounds following those compounds not containing carbon.

A useful compilation of virial coefficient data from the literature may be found in:

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

Compounds Not Containing Carbon

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
Ar	Argon	100	–184
		120	–131
		140	–98
	a(1) = –16	160	–76
	a(2) = –60	80	–60
	a(3) = –10	200	–48
		300	–16
		400	–1
		500	7
		600	12
		700	15
		800	18
		900	20
		1000	22
BF_3	Boron trifluoride	200	–338
		240	–202
		280	–129
	a(1) = –106	320	–85
	a(2) = –330	360	–56
	a(3) = –251	400	–37
	a(4) = –80	440	–23
ClH	Hydrogen chloride	190	–451
		230	–269
		270	–181
	a(1) = –144	310	–132
	a(2) = –325	350	–102
	a(3) = –277	390	–81
	a(4) = –170	430	–66
		470	–54
Cl_2	Chlorine	210	–508
		220	–483

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		230	–457
	a(1) = –303	240	–432
	a(2) = –555	250	–407
	a(3) = 9	260	–383
	a(4) = 329	270	–360
	a(5) = 68	280	–339
		290	–318
		300	–299
		350	–221
		400	–166
		450	–126
		500	–97
		600	–59
		700	–36
		800	–22
		900	–12
F_2	Fluorine	80	–386
		110	–171
		140	–113
	a(1) = –25	170	–73
	a(2) = 21	200	–47
	a(3) = –185	230	–32
	a(4) = 113	260	–25
F_4Si	Silicon tetrafluoride	210	–268
		240	–213
		270	–170
	a(1) = –138	300	–136
	a(2) = –312	330	–108
		360	–84
		390	–64
		420	–47
		450	–32
F_5I	Iodine pentafluoride	320	–2540
		330	–2344
		340	–2172
	a(1) = –3077	350	–2021
	a(2) = –8474	360	–1890
	a(3) = –9116	370	–1775
		380	–1674
		390	–1587
		400	–1510
		410	–1443
F_5P	Phosphorus pentafluoride	320	–162
		340	–143
		360	–127
	a(1) = –186	380	–112
	a(2) = –345	400	–98
		420	–86
		440	–75
		460	–64
F_6Mo	Molybdenum hexafluoride	300	–896
		310	–810
		320	–737

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
	a(1) = –914	330	–677
	a(2) = –2922	340	–627
	a(3) = –4778	350	–586
		360	–553
		370	–527
		380	–506
		390	–491
F_6S	Sulfur hexafluoride	200	–685
		250	–416
		300	–275
	a(1) = –279	350	–190
	a(2) = –647	400	–135
	a(3) = –335	450	–96
	a(4) = –72	500	–68
F_6U	Uranium hexafluoride	320	–1030
		340	–905
		360	–805
	a(1) = –1204	380	–724
	a(2) = –2690	400	–658
	a(3) = –2144	420	–604
		440	–560
F_6W	Tungsten hexafluoride	320	–641
		340	–578
		360	–523
	a(1) = –719	380	–473
	a(2) = –1143	400	–428
		420	–387
		440	–350
		460	–317
H_2	Hydrogen	15	–230
		20	–151
		25	–108
	a(1) = 15.4	30	–82
	a(2) = –9.0	35	–64
	a(3) = –0.2	40	–52
		45	–42
		50	–35
		60	–24
		70	–16
		80	–11
		90	–7
		100	–3
		200	11
		300	15
		400	18
H_2O	Water	300	–1126
		320	–850
		340	–660
	a(1) = –1158	360	–526
	a(2) = –5157	380	–428
	a(3) = –10301	400	–356
	a(4) =–10597	420	–301
	a(5) = –4415	440	–258

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		460	–224
		480	–197
		500	–175
		600	–104
		700	–67
		800	–44
		900	–30
		1000	–20
		1100	–14
		1200	–11
H_3N	Ammonia	290	–302
		300	–265
		310	–236
	a(1) = –271	320	–213
	a(2) = –1022	330	–194
	a(3) = –2715	340	–179
	a(4) = –4189	350	–166
		360	–154
		370	–144
		380	–135
		400	–118
		420	–101
H_3P	Phosphine	190	–457
		200	–404
		210	–364
	a(1) = –146	220	–332
	a(2) = –733	230	–305
	a(3) = 1022	240	–281
	a(4) = –1220	250	–258
		260	–235
		270	–213
		280	–190
		290	–166
He	Helium	2	–172
		6	–48
		10	–24
	a(1) = 12	14	–13
	a(2) = –1	18	–7
		22	–3
		26	–1
		30	1
		50	6
		70	8
		90	10
		110	10
		150	11
		250	12
		650	13
		700	13
Kr	Krypton	110	–363
		120	–307
		130	–263
	a(1) = –51	140	–229
	a(2) = –118	150	–201

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
	a(3) = –29	160	–178
	a(4) = –5	170	–159
		180	–143
		190	–129
		200	–117
		250	–75
		300	–51
		400	–23
		500	–8
		600	2
		700	8
NO	Nitric oxide	120	–232
		130	–176
		140	–138
	a(1) = –12	150	–113
	a(2) = –119	160	–96
	a(3) = 89	170	–83
	a(4) = –73	180	–73
		190	–65
		200	–58
		210	–52
		230	–42
		250	–32
		270	–24
N_2	Nitrogen	75	–274
		100	–161
		125	–104
	a(1) = –4	150	–71
	a(2) = –56	175	–49
	a(3) = –12	200	–34
		225	–24
		250	–15
		300	–4
		400	9
		500	16
		600	21
		700	24
N_2O	Nitrous oxide	240	–219
		260	–181
		280	–151
	a(1) = –130	300	–128
	a(2) = –307	320	–110
	a(3) = –248	340	–96
		360	–85
		380	–76
		400	–68
Ne	Neon	60	–25
		80	–13
		100	–6
	a(1) = 10.8	120	–1
	a(2) = –7.5	140	2
	a(3) = 0.4	160	4
		180	6
		200	7

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		300	11
		400	13
		500	14
		600	15
O_2	Oxygen	90	–241
		110	–161
		130	–117
	a(1) = –16	150	–88
	a(2) = –62	170	–69
	a(3) = –8	190	–55
	a(4) = –3	210	–44
		230	–36
		250	–29
		270	–23
		290	–18
		310	–14
		330	–10
		350	–7
		400	–1
O_2S	Sulfur dioxide	290	–465
		320	–354
		350	–276
	a(1) = –430	380	–221
	a(2) = –1193	410	–181
	a(3) = –1029	440	–153
		470	–132
Xe	Xenon	160	–421
		170	–377
		180	–340
	a(1) = –130	190	–307
	a(2) = –262	200	–280
	a(3) = –87	210	–255
		220	–234
		230	–215
		240	–199
		250	–184
		300	–129
		350	–93
		400	–69
		500	–39
		600	–21
		650	–14

Compounds Containing Carbon

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
$CClF_3$	Chlorotrifluoromethane	240	–369
		290	–237
		340	–165
	a(1) = –223	390	–119
	a(2) = –504	440	–86
	a(3) = –340	490	–60
	a(4) = –291	540	–39

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
CCl_2F_2	Dichlorodifluoromethane	250	–769
		280	–570
		310	–441
	a(1) = –486	340	–353
	a(2) = –1217	370	–289
	a(3) = –1188	400	–241
	a(4) = –698	430	–204
		460	–174
CCl_3F	Trichlorofluoromethane	240	–1140
		280	–879
		320	–689
	a(1) = –786	360	–545
	a(2) = –1428	400	–431
	a(3) = –142	440	–340
		480	–265
CCl_4	Tetrachloromethane	320	–1345
		340	–1171
		360	–1040
	a(1) = –1600	380	–942
	a(2) = –4059	400	–868
	a(3) = –4653	420	–814
CF_4	Tetrafluoromethane	250	–137
		300	–87
		350	–55
	a(1) = –88	400	–32
	a(2) = –238	450	–16
	a(3) = –70	500	–4
		600	14
		700	25
		800	33
$CHClF_2$	Chlorodifluoromethane	300	–343
		325	–298
		350	–257
	a(1) = –347	375	–221
	a(2) = –575	400	–188
	a(3) = 187	425	–158
$CHCl_2F$	Dichlorofluoromethane	250	–728
		275	–634
		300	–557
	a(1) = –562	325	–491
	a(2) = –862	350	–434
		375	–385
		400	–343
		425	–305
		450	–271
$CHCl_3$	Trichloromethane	320	–1001
		330	–926
		340	–858
	a(1) = –1193	350	–797
	a(2) = –2936	360	–740
	a(3) = –1751	370	–689
		380	–642

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
		390	–599
		400	–559
CHF_3	Trifluoromethane	200	–433
		220	–350
		240	–288
	a(1) = –177	260	–241
	a(2) = –399	280	–204
	a(3) = –250	300	–174
		320	–151
		340	–132
		360	–116
		380	–103
		400	–91
CH_2Cl_2	Dichloromethane	320	–706
		330	–634
		340	–574
	a(1) = –913	350	–524
	a(2) = –3371	360	–482
	a(3) = –5013	370	–447
		380	–420
		400	–380
		420	–357
CH_2F_2	Difluoromethane	280	–375
		290	–343
		300	–316
	a(1) = –321	310	–294
	a(2) = –754	320	–275
	a(3) = –1300	330	–260
		340	–248
		350	–238
CH_3Br	Bromomethane	280	–645
		290	–596
		300	–551
	a(1) = –559	310	–509
	a(2) = –1324	320	–469
		340	–396
		360	–332
		380	–274
CH_3Cl	Chloromethane	280	–466
		300	–402
		320	–348
	a(1) = –407	340	–304
	a(2) = –887	360	–266
	a(3) = –385	380	–234
		400	–206
		420	–182
		440	–161
		460	–142
		480	–126
		500	–112
		600	–58
CH_3F	Fluoromethane	280	–244

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		300	–205
		320	–174
	a(1) = –209	340	–150
	a(2) = –525	360	–129
	a(3) = –365	380	–112
		400	–99
		420	–87
CH_3I	Iodomethane	310	–725
		320	–646
		330	–582
	a(1) = –844	340	–531
	a(2) = –3353	350	–492
	a(3) = –6590	360	–462
		370	–441
		380	–427
CH_4	Methane	110	–328
		120	–276
		130	–237
	a(1) = –43	140	–206
	a(2) = –114	150	–181
	a(3) = –19	160	–160
	a(4) = –7	170	–143
		180	–128
		190	–116
		200	–105
		250	–66
		300	–43
		350	–27
		400	–16
		500	0
		600	10
CH_4O	Methanol	320	–1431
		330	–1299
		340	–1174
	a(1) = –1752	350	–1056
	a(2) = –4694	360	–945
		370	–840
		380	–741
		390	–646
		400	–557
CH_5N	Methylamine	300	–451
		325	–367
		350	–304
	a(1) = –459	375	–257
	a(2) = –1191	400	–220
	a(3) = –995	425	–192
		450	–170
		500	–140
		550	–122
CO	Carbon monoxide	210	–36
		240	–24
		270	–15
	a(1) = –9	300	–8

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
	a(2) = –58	330	–3
	a(3) = –18	360	1
		420	7
		480	11
CO_2	Carbon dioxide	220	–244
		240	–204
		260	–172
	a(1) = –127	280	–146
	a(2) = –288	300	–126
	a(3) = –118	320	–108
		340	–94
		360	–81
		380	–71
		400	–62
		500	–30
		600	–13
		700	–1
		800	7
		900	12
		1000	16
		1100	19
CS_2	Carbon disulfide	280	–932
		310	–740
		340	–603
	a(1) = –807	370	–504
	a(2) = –1829	400	–431
	a(3) = –1371	430	–375
$C_2Cl_2F_4$	1,2-Dichloro-1,1,2,2-tetrafluoroethane	300	–801
		320	–695
		340	–608
	a(1) = –812	360	–536
	a(2) = –1773	380	–475
	a(3) = –963	400	–423
		420	–379
		440	–341
		460	–307
		480	–279
		500	–253
$C_2Cl_3F_3$	1,1,2-Trichloro-1,2,2-trifluoroethane	290	–1041
		310	–943
		330	–856
	a(1) = –999	350	–780
	a(2) = –1479	370	–712
		390	–651
		410	–596
		430	–546
		450	–500
C_2H_2	Ethyne	200	–573
		210	–500
		220	–440
	a(1) = –216	230	–390
	a(2) = –375	240	–349
	a(3) = –716	250	–315

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
		260	–287
		270	–263
C_2H_3N	Ethanenitrile	330	–3468
		340	–2971
		350	–2563
	a(1) = –5840	360	–2233
	a(2) = –29175	370	–1970
	a(3) = –47611	380	–1765
		390	–1610
		400	–1499
		410	–1425
C_2H_4	Ethene	240	–218
		270	–172
		300	–139
	a(1) = –140	330	–113
	a(2) = –296	360	–92
	a(3) = –101	390	–76
		420	–63
		450	–52
$C_2H_4Cl_2$	1,2-Dichloroethane	370	–812
		390	–716
		410	–635
	a(1) = –1362	430	–566
	a(2) = –3240	450	–508
	a(3) = –2100	470	–458
		490	–416
		510	–379
		530	–347
		550	–319
		570	–295
C_2H_4O	Ethanal	290	–1352
		320	–927
		350	–654
	a(1) = –1217	380	–482
	a(2) = –4647	410	–375
	a(3) = –5725	440	–314
		470	–283
$C_2H_4O_2$	Methyl methanoate	320	–821
		330	–744
		340	–677
	a(1) = –1035	350	–620
	a(2) = –3425	360	–571
	a(3) = –4203	370	–528
		380	–492
		390	–461
		400	–435
C_2H_5Cl	Chloroethane	320	–634
		360	–450
		400	–330
	a(1) = –777	440	–249
	a(2) = –2205	480	–195
	a(3) = –1764	520	–157

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		560	–131
		600	–114
C_2H_6	Ethane	200	–409
		220	–337
		240	–284
	a(1) = –184	260	–242
	a(2) = –376	280	–209
	a(3) = –143	300	–181
	a(4) = –54	320	–159
		340	–140
		360	–123
		380	–109
		400	–96
		500	–52
		600	–24
C_2H_6O	Ethanol	320	–2710
		330	–2135
		340	–1676
	a(1) = –4475	350	–1317
	a(2) = –29719	360	–1043
	a(3) = –56716	370	–843
		380	–705
		390	–622
C_2H_6O	Dimethyl ether	275	–536
		280	–517
		285	–499
	a(1) = –455	290	–482
	a(2) = –965	295	–465
		300	–449
		305	–433
		310	–418
C_2H_7N	Dimethylamine	310	–606
		320	–563
		330	–523
	a(1) = –662	340	–487
	a(2) = –1504	350	–454
	a(3) = –667	360	–423
		370	–395
		380	–369
		390	–345
		400	–322
C_2H_7N	Ethylamine	300	–773
		310	–710
		320	–654
	a(1) = –785	330	–604
	a(2) = –2012	340	–558
	a(3) = –1397	350	–517
		360	–480
		370	–447
		380	–416
		390	–389
		400	–363
C_3H_6	Cyclopropane	300	–383

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
		310	–356
		320	–332
	a(1) = –388	330	–310
	a(2) = –861	340	–290
	a(3) = –538	350	–272
		360	–256
		370	–241
		380	–227
		390	–215
		400	–204
C_3H_6	Propene	280	–395
		300	–342
		320	–299
	a(1) = –347	340	–262
	a(2) = –727	360	–232
	a(3) = –325	380	–205
		400	–183
		420	–163
		440	–146
		460	–131
		480	–118
		500	–106
C_3H_6O	2-Propanone	300	–1996
		320	–1522
		340	–1198
	a(1) = –2051	360	–971
	a(2) = –8903	380	–806
	a(3) = –18056	400	–683
	a(4) = –16448	420	–586
		440	–506
		460	–437
		480	–375
C_3H_6O	Ethyl methanoate	330	–1003
		340	–916
		350	–839
	a(1) = –1371	360	–771
	a(2) = –4231	370	–712
	a(3) = –4312	380	–660
		390	–614
C_3H_6O	Methyl ethanoate	320	–1320
		330	–1186
		340	–1074
	a(1) = –1709	350	–980
	a(2) = –6348	360	–903
	a(3) = –9650	370	–840
		380	–789
		390	–749
C_3H_7Cl	1-Chloropropane	310	–1001
		340	–772
		370	–614
	a(1) = –1121	400	–501
	a(2) = –3271	430	–417
	a(3) = –3786	460	–352
	a(4) = –1974	490	–302

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		520	–261
		550	–227
		580	–198
C_3H_8	Propane	240	–641
		260	–527
		280	–444
	a(1) = –386	300	–381
	a(2) = –844	320	–331
	a(3) = –720	340	–292
	a(4) = –574	360	–259
		380	–232
		400	–208
		440	–169
		480	–138
		520	–112
		560	–90
C_3H_8O	1-Propanol	380	–873
		385	–826
		390	–783
	a(1) = –2690	395	–744
	a(2) = –12040	400	–709
	a(3) = –16738	405	–679
		410	–651
		415	–627
		420	–606
C_3H_8O	2-Propanol	380	–821
		385	–766
		390	–717
	a(1) = –3165	395	–674
	a(2) = –16092	400	–636
	a(3) = –24197	405	–604
		410	–576
		415	–552
		420	–533
C_3H_9N	Trimethylamine	310	–675
		320	–628
		330	–585
	a(1) = –737	340	–547
	a(2) = –1669	350	–512
	a(3) = –986	360	–480
		370	–450
C_4H_8	1-Butene	300	–624
		320	–539
		340	–470
	a(1) = –633	360	–413
	a(2) = –1442	380	–366
	a(3) = –932	400	–327
		420	–294
C_4H_8O	2-Butanone	310	–2056
		320	–1878
		330	–1712
	a(1) = –2282	340	–1555

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
	a(2) = –5907	350	–1407
		360	–1267
		370	–1135
$C_4H_8O_2$	Propyl methanoate	330	–1496
		340	–1354
		350	–1231
	a(1) = –2118	360	–1126
	a(2) = –7299	370	–1035
	a(3) = –8851	380	–957
		390	–890
		400	–834
$C_4H_8O_2$	Ethyl ethanoate	330	–1543
		340	–1385
		350	–1254
	a(1) = –2272	360	–1144
	a(2) = –8818	370	–1055
	a(3) = –13130	380	–982
		390	–923
		400	–878
$C_4H_8O_2$	Methyl propanoate	330	–1588
		340	–1444
		350	–1319
	a(1) = –2216	360	–1211
	a(2) = –7339	370	–1117
	a(3) = –8658	380	–1037
		390	–968
		400	–908
C_4H_9Cl	1-Chlorobutane	330	–1224
		370	–898
		410	–691
	a(1) = –1643	450	–551
	a(2) = –4897	490	–449
	a(3) = –6178	530	–371
	a(4) = –3718	570	–309
C_4H_{10}	Butane	250	–1170
		280	–863
		310	–668
	a(1) = –735	340	–536
	a(2) = –1835	370	–442
	a(3) = –1922	400	–371
	a(4) = –1330	430	–315
		460	–270
		490	–232
		520	–199
		550	–171
C_4H_{10}	2-Methylpropane	270	–900
		300	–697
		330	–553
	a(1) = –707	360	–450
	a(2) = –1719	390	–374
	a(3) = –1282	420	–317
		450	–273

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
		480	–240
		510	–215
$C_4H_{10}O$	1-Butanol	350	–1693
		360	–1544
		370	–1402
	a(1) = –2629	380	–1268
	a(2) = –6315	390	–1141
		400	–1021
		420	–796
		440	–593
$C_4H_{10}O$	2-Methyl-1-propanol	390	–1076
		400	–979
		410	–887
	a(1) = –2269	420	–800
	a(2) = –5065	430	–716
		440	–636
$C_4H_{10}O$	2-Butanol	380	–1110
		390	–1005
		400	–906
	a(1) = –2232	410	–811
	a(2) = –5209	420	–721
$C_4H_{10}O$	2-Methyl-2-propanol	380	–924
		390	–827
		400	–736
	a(1) = –1952	410	–649
	a(2) = –4775	420	–567
$C_4H_{10}O$	Diethyl ether	280	–1550
		300	–1199
		320	–954
	a(1) = –1226	340	–776
	a(2) = –4458	360	–638
	a(3) = –7746	380	–525
	a(4) = –10005	400	–428
		420	–340
$C_4H_{11}N$	Diethylamine	320	–1228
		330	–1134
		340	–1056
	a(1) = –1522	350	–988
	a(2) = –5204	360	–926
	a(3) = –15047	370	–868
	a(4) = –28835	380	–812
		390	–755
		400	–697
C_5H_5N	Pyridine	350	–1257
		360	–1176
		370	–1099
	a(1) = –1765	380	–1026
	a(2) = –3431	390	–957
		400	–892
		420	–770
		440	–659

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
C_5H_{10}	Cyclopentane	300	–1049
		305	–1015
		310	–981
	a(1) = –1062	315	–949
	a(2) = –2116	320	–918
C_5H_{10}	1-Pentene	310	–966
		320	–898
		330	–836
	a(1) = –1055	340	–780
	a(2) = –2377	350	–729
	a(3) = –1189	360	–681
		370	–638
		380	–598
		390	–561
		400	–527
		410	–495
$C_5H_{10}O$	2-Pentanone	330	–2850
		340	–2420
		350	–2076
	a(1) = –4962	360	–1804
	a(2) = –26372	370	–1595
	a(3) = –46537	380	–1440
		390	–1332
C_5H_{12}	Pentane	300	–1234
		310	–1130
		320	–1038
	a(1) = –1254	330	–957
	a(2) = –3345	340	–884
	a(3) = –2726	350	–818
		400	–579
		450	–436
		500	–348
		550	–294
C_5H_{12}	2-Methylbutane	280	–1263
		290	–1166
		300	–1079
	a(1) = –1095	310	–1001
	a(2) = –2503	320	–931
	a(3) = –1534	330	–867
		340	–810
		350	–757
		400	–557
		450	–424
C_5H_{12}	2,2-Dimethylpropane	300	–916
		310	–843
		320	–780
	a(1) = –931	330	–724
	a(2) = –2387	340	–674
	a(3) = –2641	350	–629
	a(4) = –1810	360	–590
		370	–554
		380	–521
		390	–492

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
		400	–464
		450	–357
		500	–279
		550	–218
C_6H_6	Benzene	290	–1588
		300	–1454
		310	–1335
	a(1) = –1477	320	–1231
	a(2) = –3851	330	–1139
	a(3) = –3683	340	–1056
	a(4) = –1423	350	–983
		400	–712
		450	–542
		500	–429
		550	–349
		600	–291
C_6H_7N	2-Methylpyridine	360	–1656
		370	–1523
		380	–1404
	a(1) = –2940	390	–1297
	a(2) = –8813	400	–1202
	a(3) = –7809	410	–1117
		420	–1040
		430	–972
C_6H_7N	3-Methylpyridine	380	–1819
		390	–1612
		400	–1448
	a(1) = –6304	410	–1322
	a(2) = –30415	420	–1230
	a(3) = –44549	430	–1166
C_6H_7N	4-Methylpyridine	380	–1787
		390	–1578
		400	–1417
	a(1) = –6553	410	–1297
	a(2) = –32873	420	–1214
	a(3) = –49874	430	–1163
C_6H_{12}	Cyclohexane	300	–1698
		320	–1391
		340	–1170
	a(1) = –1733	360	–1007
	a(2) = –5618	380	–883
	a(3) = –9486	400	–786
	a(4) = –7936	420	–707
		440	–641
		460	–584
		480	–534
		500	–488
		520	–446
		540	–406
		560	–368
C_6H_{12}	Methylcyclopentane	305	–1447
		315	–1357

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	T/K	B/cm^3 mol^{-1}
		325	–1272
	a(1) = –1512	335	–1192
	a(2) = –2910	345	–1117
C_6H_{14}	Hexane	300	–1920
		310	–1724
		320	–1561
	a(1) = –1961	330	–1424
	a(2) = –6691	340	–1309
	a(3) = –13167	350	–1209
	a(4) = –15273	360	–1123
		370	–1046
		380	–978
		390	–916
		400	–859
		410	–806
		430	–707
		450	–616
$C_6H_{15}N$	Triethylamine	330	–1562
		340	–1444
		350	–1340
	a(1) = –2061	360	–1249
	a(2) = –5735	370	–1169
	a(3) = –5899	380	–1099
		390	–1037
		400	–983
C_7H_8	Toluene	350	–1641
		360	–1511
		370	–1394
	a(1) = –2620	380	–1289
	a(2) = –7548	390	–1195
	a(3) = –6349	400	–1110
		410	–1034
		420	–965
		430	–903
C_7H_{14}	1-Heptene	340	–1781
		350	–1651
		360	–1532
	a(1) = –2491	370	–1424
	a(2) = –6230	380	–1324
	a(3) = –3780	390	–1233
		400	–1150
		410	–1073
C_7H_{16}	Heptane	300	–2782
		320	–2297
		340	–1928
	a(1) = –2834	360	–1641
	a(2) = –8523	380	–1415
	a(3) = –10068	400	–1233
	a(4) = –5051	420	–1085
		440	–963
		460	–862
		480	–775
		500	–702

VIRIAL COEFFICIENTS OF SELECTED GASES (continued)

Mol. form.	Name	*T*/K	*B*/cm^3 mol^{-1}
		540	–583
		580	–490
		620	–416
		660	–355
		700	–304
C_8H_{10}	1,2-Dimethylbenzene	380	–2046
		390	–1848
		400	–1681
	a(1) = –5632	410	–1543
	a(2) = –22873	420	–1428
	a(3) = –28900	430	–1335
		440	–1261
C_8H_{10}	1,3-Dimethylbenzene	380	–2082
		390	–1865
		400	–1679
	a(1) = –5808	410	–1521
	a(2) = –23244	420	–1388
	a(3) = –27607	430	–1276
		440	–1184
C_8H_{10}	1,4-Dimethylbenzene	380	–2043
		390	–1851
		400	–1680
	a(1) = –4921	410	–1529
	a(2) = –16843	420	–1395
	a(3) = –16159	430	–1276
		440	–1171
C_8H_{16}	1-Octene	360	–2147
		370	–2000
		380	–1861
	a(1) = –3273	390	–1729
	a(2) = –6557	400	–1604
		410	–1485
C_8H_{18}	Octane	300	–4042
		350	–2511
		400	–1704
	a(1) = –4123	450	–1234
	a(2) = –13120	500	–936
	a(3) = –16408	550	–732
	a(4) = –8580	600	–583
		650	–468
		700	–375