

**Table C.2: Heat Capacities of Solids<sup>†</sup>**

Constants for the equation  $C_P/R = A + BT + DT^{-2}$   
 $T$  (kelvins) from 298 K to  $T_{\max}$

Chemical species	$T_{\max}$	$C_{P_{298}}/R$	$A$	$10^3 B$	$10^{-5} D$
CaO	2000	5.058	6.104	0.443	-1.047
CaCO <sub>3</sub>	1200	9.848	12.572	2.637	-3.120
Ca(OH) <sub>2</sub>	700	11.217	9.597	5.435	
CaC <sub>2</sub>	720	7.508	8.254	1.429	-1.042
CaCl <sub>2</sub>	1055	8.762	8.646	1.530	-0.302
C (graphite)	2000	1.026	1.771	0.771	-0.867
Cu	1357	2.959	2.677	0.815	0.035
CuO	1400	5.087	5.780	0.973	-0.874
Fe ( $\alpha$ )	1043	3.005	-0.111	6.111	1.150
Fe <sub>2</sub> O <sub>3</sub>	960	12.480	11.812	9.697	-1.976
Fe <sub>3</sub> O <sub>4</sub>	850	18.138	9.594	27.112	0.409
FeS	411	6.573	2.612	13.286	
I <sub>2</sub>	386.8	6.929	6.481	1.502	
LiCl	800	5.778	5.257	2.476	-0.193
NH <sub>4</sub> Cl	458	10.741	5.939	16.105	
Na	371	3.386	1.988	4.688	
NaCl	1073	6.111	5.526	1.963	
NaOH	566	7.177	0.121	16.316	1.948
NaHCO <sub>3</sub>	400	10.539	5.128	18.148	
S (rhombic)	368.3	3.748	4.114	-1.728	-0.783
SiO <sub>2</sub> (quartz)	847	5.345	4.871	5.365	-1.001

<sup>†</sup> Selected from K. K. Kelley, *U.S. Bur. Mines Bull.* 584, 1960;  
 L. B. Pankratz, *U.S. Bur. Mines Bull.* 672, 1982.

**Table C.3: Heat Capacities of Liquids<sup>†</sup>**

Constants for the equation  $C_P/R = A + BT + CT^2$   
 $T$  from 273.15 to 373.15 K

Chemical species	$C_{P_{298}}/R$	$A$	$10^3 B$	$10^6 C$
Ammonia	9.718	22.626	-100.75	192.71
Aniline	23.070	15.819	29.03	-15.80
Benzene	16.157	-0.747	67.96	-37.78
1,3-Butadiene	14.779	22.711	-87.96	205.79
Carbon tetrachloride	15.751	21.155	-48.28	101.14
Chlorobenzene	18.240	11.278	32.86	-31.90
Chloroform	13.806	19.215	-42.89	83.01
Cyclohexane	18.737	-9.048	141.38	-161.62
Ethanol	13.444	33.866	-172.60	349.17
Ethylene oxide	10.590	21.039	-86.41	172.28
Methanol	9.798	13.431	-51.28	131.13
<i>n</i> -Propanol	16.921	41.653	-210.32	427.20
Sulfur trioxide	30.408	-2.930	137.08	-84.73
Toluene	18.611	15.133	6.79	16.35
Water	9.069	8.712	1.25	-0.18

<sup>†</sup> Based on correlations presented by J. W. Miller, Jr., G. R. Schorr, and C. L. Yaws, *Chem. Eng.*, vol. 83(23), p. 129, 1976.