

**Average Chemical Bond Energies (kJ/mole)**

C-H	413	N-H	391	O-H	463	F-F	155
C-C	346	N-N	163	O-O	146		
C-N	305	N-O	201	O-Cl	218	Cl-F	253
C-O	358	N-F	283	O-I	201	Cl-Cl	242
C-F	485	N-Cl	192				
C-S	272	N-Br	243	S-F	284	Br-F	249
C-Cl	339	N-I	169	S-S	226	Br-Cl	216
C-Br	285			S-Cl	253	Br-Br	193
C-I	213	H-H	436	S-Br	218		
		H-F	565	S-I	234	I-F	278
Si-H	328	H-S	347			I-Cl	208
Si-C	301	H-Cl	432	P-H	322	I-Br	175
Si-O	452	H-Br	366	P-O	335	I-I	151
Si-Si	222	H-I	299	P-F	490		
Si-F	582			P-P	201	As-F	484
				P-Cl	326	As-Cl	322
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C=C	610	N=N	418			C≡C	835
C=N	615	N=O	632			C≡N	887
C=O	745					C≡O	1046
		S=O	523				
O=O	498	S=S	418			N≡N	945

$\Delta H_{\text{fus}}$  of water = 0.333 kJ/g     $\Delta H_{\text{vap}}$  of water = 2.26 kJ/g     $c = 2.03 \text{ J/g}\cdot^{\circ}\text{C}$  (ice)     $c = 2.01 \text{ J/g}\cdot^{\circ}\text{C}$  (vapor)

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