

Bond Strengths

Average bond energies, ΔH° at 25°

Diatomic Molecules			Polyatomic Molecules		
	kcal/mol	kJ/mol		kcal/mol	kJ/mol
H—H	104.2	436	C—H	99	414
F—F	37.5	157	C—C	83	347
Cl—Cl	58.0	243	C=C	146	610
Br—Br	46.3	194	C≡C	200	836
I—I	36.5	153	C—O	86	359
H—F	135.9	568	C=O ¹	192	803
H—Cl	103.1	432	C=O ²	166	694
H—Br	87.4	366	C=O ³	176	736
H—I	71.4	299	C=O ⁴	179	748
O=O	119.1	498	C—N	73	305
N≡N	225.9	945	C=N	147	615
			C≡N	213	890
			C—F	116	485
			C—Cl	81	339
			C—Br	68	284
			C—I	51	213
			O—H	111	464
			O—O	35	146
			O—Cl	52	217
			O—Br	48	201
			N—H	93	389
			N—N	39	163
			N—O	53	221
			N=N	100	418
			N=O	145	606
			S—H	83	339
			S—S	54	226

1=Carbon dioxide, 2=Formaldehyde, 3=Aldehydes, 4=Ketones

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