

Combustible	Formula	Mol wt	Sp gr (air = 1)	BP, °C	C _{st} (in air), vol pct	ΔH _i (25° C), kcal/mol	ΔH _c (net, 25° C), kcal/mol	Flash- point, °C	Minimum AIT, °C	Flammable limits	
										L ₂₅ , vol pct	U ₂₅ , vol pct
BORON COMPOUNDS											
Diborane	B ₂ H ₆	27.67	0.96	-93	6.53	7.5	478	NA	~40	0.8	88
Tetraborane	B ₄ H ₁₀	53.32	1.84	16	3.67	NA	NA	NA	NA	.4	NA
Pentaborane	B ₅ H ₉	63.12	2.18	58	3.37	15.0	1,030	NA	NA	.42	NA
Decaborane	B ₁₀ H ₁₄	122.22	4.23	213	1.87	8.0 (s)	NA	NA	NA	.2	NA
MISCELLANEOUS GASES											
Hydrogen	H ₂	2.02	0.07	-253	29.53	0	57.8	NA	520	4.0	75
Deuterium	D ₂	4.03	NA	-250	29.53	0	NA	NA	NA	4.9	75
Ammonia	NH ₃	17.03	.59	-33	21.83	-11.0	75.7	NA	650	15	28
Carbon monoxide	CO	28.01	.97	-192	29.53	-26.4	67.6	NA	609	12.5	74
Natural gas (Pittsburgh)	Mixture	~17	~.6	NA	~8.6	NA	NA	NA	~500	~4.8	~13.5
Natural gas (others)	Mixture	~17	.6-.7	NA	8.5-10	NA	NA	NA	480-630	3.8-6.5	13-17
Coal gas	Mixture	NA	.4-.5	NA	15.5-18	NA	NA	NA	NA	~5.3	~32

NA Not available. l liquid. g gas. s solid. oc open cup.

¹Flammability data represent the values selected from the various publications cited in the text. The flammability limits (L₂₅ and U₂₅) are mainly from references 11, 54, 72, and 110; minimum autoignition temperatures (AIT's) from references 23, 72, 110, and 112; and flashpoints from references 1, 35, 72, and 110. Flashpoints are generally closed-cup values; AIT's refer to incipient flame combustion; and L₂₅ and U₂₅ limits refer to combustible vapor-air mixtures at 25° ± 5° C. Most ΔH_i data are from references 91, 100, and 105 with combustible in gaseous state. Both C_{st} and ΔH_c are calculated values for ideal combustion to H₂O, CO₂, SO₂, B₂O₃, N₂, HCl, or HBr. Boiling points (BP), specific gravities (Sp gr), and molecular weights (mol wt) are from handbook references 72 and 105.

²Calculated.

³45° to 55° C.

⁴80° to 95° C.

⁵Temperature uncertain (>25° C).

⁶100° to 115° C.

⁷120° to 135° C.

⁸160° to 175° C.

⁹140° to 155° C.

¹⁰200° C.

¹¹90% solution.

Kuchta, J. M. (1985). Investigation of fire and explosion accidents in the chemical, mining, and fuel-related industries-a manual. Bulletin 680, U.S. Bureau of Mines.