

Table 1: Heats of formation for common combustion species

Substance	Composition	W (g/mol)	$\Delta_f H^\circ$ (kJ/mol)
<i>Products</i>			
water, gas	H ₂ O(g)	18.0	-241.83
water, liquid	H ₂ O(l)	18.0	-285.83
carbon dioxide	CO ₂ (g)	44.0	-393.52
carbon monoxide	CO(g)	28.0	-110.53
carbon, gas	C(g)	12.0	716.67
hydrogen chloride	HCl(g)	36.5	-92.31
ammonia	NH ₃ (g)	17.0	-45.90
<i>Radicals and Intermediates</i>			
oxygen (atomic)	O	16.0	249.17
nitrogen (atomic)	N	14.0	472.69
hydrogen (atomic)	H	1.0	218.00
hydroxyl	OH	17.0	38.99
nitrogen oxide	NO	30.0	90.29
imidogen	NH	15.0	376.56
methyl	CH ₃	15.0	145.69
formyl	HCO	29.0	43.51
formaldehyde	CH ₂ O	30.0	-115.90
hydrogen peroxide	H ₂ O ₂	34.0	-136.11
hydroperoxo	HO ₂	33.0	2.09
<i>Hydrocarbon Fuels (gas phase)</i>			
methane	CH ₄	16.0	-74.85
ethane	C ₂ H ₆	28.0	-84.68
propane	C ₃ H ₈	44.0	-103.85
butane	C ₄ H ₁₀	54.0	-126.15
octane	C ₈ H ₁₈	114.0	-208.45

