General Chemistry Combustion

Substance	Combustion Reaction	Enthalpy of Combustion, $\Delta H°_{298}$(kJ mol^{-1})
Carbon	$C(s) + ½O_2(g) \longrightarrow CO(g)$ $C(s) + O_2(g) \longrightarrow CO_2(g)$	-111 -394
Hydrogen	$H_2(g) + ½O_2(g) \longrightarrow H_2O(g)$ $H_2(g) + ½O_2(g) \longrightarrow H_2O(l)$	-242 -286
Magnesium	$Mg(s) + ½O_2(g) \longrightarrow MgO(s)$	-602
Sulfur	$S(s) + O_2(g) \longrightarrow SO_2(g)$	-297
Carbon monoxide	$CO(g) + ½O_2(g) \longrightarrow CO_2(g)$	-283
Methane	$CH_4(g) + 2O_2(g) \longrightarrow CO_2(g) + 2H_2O(g)$	-802
Acetylene	$C_2H_2(g) + 5/2O_2(g) \longrightarrow 2CO_2(g) + H_2O(g)$	-1256
Methanol	$CH_3OH(l) + 3/2O_2(g) \longrightarrow CO_2(g) + 2H_2O(g)$	-638
Isooctane	$C_8H_{18}(l) + 25/2O_2(g) \longrightarrow 8CO_2(g) + 9H_2O(g)$	-5460