

Species Name	Formula	$\Delta_f H^\circ(0\text{ K})$	$\Delta_f H^\circ(298.15\text{ K})$	Uncertainty	Units	Relative Molecular Mass	ATcT ID
Carbon monoxide	CO (g)	-113.802	-110.522	± 0.026	kJ/mol	28.01010 \pm 0.00085	630-08-0*0

Contribution (%)	Reaction	Measured Quantity
63.5	C (graphite) + CO ₂ (g) \rightarrow 2 CO (g)	$\Delta_r G^\circ(1165\text{ K}) = -33.545 \pm 0.058\text{ kJ/mol}$
4.3	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(298.15\text{ K}) = -393.464 \pm 0.024\text{ kJ/mol}$
3.6	CO ₂ (g) \rightarrow CO (g) + O+ (g)	$\Delta_r H^\circ(0\text{ K}) = 19.0701 \pm 0.0010 (\times 1.114)\text{ eV}$
3.1	CO (g) + 1/2 O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(303.15\text{ K}) = -282.974 \pm 0.116\text{ kJ/mol}$
2.3	C (graphite) + CO ₂ (g) \rightarrow 2 CO (g)	$\Delta_r G^\circ(1236.8\text{ K}) = -46.195 \pm 0.3\text{ kJ/mol}$
1.9	CO (g) + 1/2 O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(293.15\text{ K}) = -283.036 \pm 0.146\text{ kJ/mol}$
1.8	CO (g) + 1/2 O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r G^\circ(1173\text{ K}) = -180.655 \pm 0.150\text{ kJ/mol}$
1.7	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(298.15\text{ K}) = -393.468 \pm 0.038\text{ kJ/mol}$
1.7	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(298.15\text{ K}) = -393.462 \pm 0.038\text{ kJ/mol}$
1.2	CO ₂ (g) \rightarrow [CO]+ (g) + O (g)	$\Delta_r H^\circ(0\text{ K}) = 19.4687 \pm 0.0010 (\times 1.915)\text{ eV}$
1.1	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(298.15\text{ K}) = -94.051 \pm 0.011\text{ kcal/mol}$
0.8	CO (g) \rightarrow C+ (g) + O (g)	$\Delta_r H^\circ(0\text{ K}) = 22.3713 \pm 0.0015\text{ eV}$
0.8	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(298.15\text{ K}) = -393.462 \pm 0.056\text{ kJ/mol}$
0.6	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(298.15\text{ K}) = -393.498 \pm 0.062\text{ kJ/mol}$
0.6	C (graphite) + O ₂ (g) \rightarrow CO ₂ (g)	$\Delta_r H^\circ(303.15\text{ K}) = -393.447 \pm 0.064\text{ kJ/mol}$
0.5	CO (g) + H ₂ O (g) \rightarrow CO ₂ (g) + H ₂ (g)	$\Delta_r G^\circ(893\text{ K}) = -6.369 \pm 0.283\text{ kJ/mol}$