



Specific heat of octane

The combustion of a fuel leads to heating of the gas produced in the reaction. The heating can be calculated using the heat capacity (or specific heat).

$$q = n_{\text{oct}} c_{p,\text{oct}} (T_f - T_i)$$

$$q = m_{\text{oct}} s_{\text{oct}} (T_f - T_i)$$

For octane, $c_p = 255.7 \text{ J/mol/K}$. What is the s (the specific heat)?