

Stoichiometry, Enthalpy, and Heat

1. How much heat will be released when 6.44 g of sulfur reacts with excess O_2 according to the following equation?



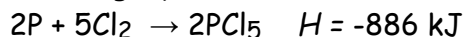
2. How much heat will be released when 4.72 g of carbon reacts with excess O_2 according to the following equation?



3. How much heat will be absorbed when 38.2 g of bromine reacts with excess H_2 according to the following equation?



4. How much heat will be released when 1.48 g of chlorine reacts with excess phosphorus according to the following equation.

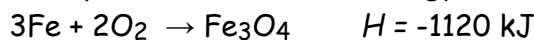


5. What mass of propane, C_3H_8 must be burned in order to produce 76,000 kJ of energy? $C_3H_8 + 5 O_2 \rightarrow 3 CO_2 + 4 H_2O \quad H = -2200 \text{ kJ}$

6. How much heat will be absorbed when 13.7 g of nitrogen reacts with excess O_2 according to the following equation?



7. What mass of iron must react to produce 3600 kJ of energy?



8. How much heat will be released when 12.0 g of H_2 reacts with 76.0 g of O_2 according to the following equation? (when one reactant runs out the reaction stops)

