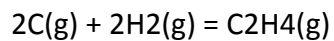


## Answer on Question#64387 - Chemistry - General Chemistry

Ethene is a common compound used in the production of plastics for plastic bottles. Using the following data, calculate the  $\Delta H_{\text{rxn}}$  for ethene.  $2\text{C}(\text{g}) + 2\text{H}_2(\text{g}) \rightarrow \text{C}_2\text{H}_4(\text{g})$

### Solution:



$$\Delta H_{\text{rxn}} = \Delta H^0_{\text{C}_2\text{H}_4} - 2\Delta H^0_{\text{C}(\text{g})} = 52,5 \text{ kJ}\cdot\text{mol}^{-1} - 2 \cdot 715,1 \text{ kJ}\cdot\text{mol}^{-1} = -1377,7 \text{ kJ}\cdot\text{mol}^{-1}$$

### Answer:

$$\Delta H_{\text{rxn}} = 1377,7 \text{ kJ}\cdot\text{mol}^{-1}.$$

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