

Which of these substances has the highest vapor pressure at room temperature: n-octane, n-decane, or cyclohexane (C_6H_{12})?

Which of these substances has the lowest vapor pressure at room temperature - CH_3OCH_3 , propanone or propanol?

Which of these substances has the highest normal boiling point - hexanone, aminohexane, or 1,5-diaminopentane?

Which of these substances has the highest normal boiling point: 1,1-dichlorohexane, nonane or heptanol?

These four questions refer to the solid-liquid-gas phase diagram on the right.

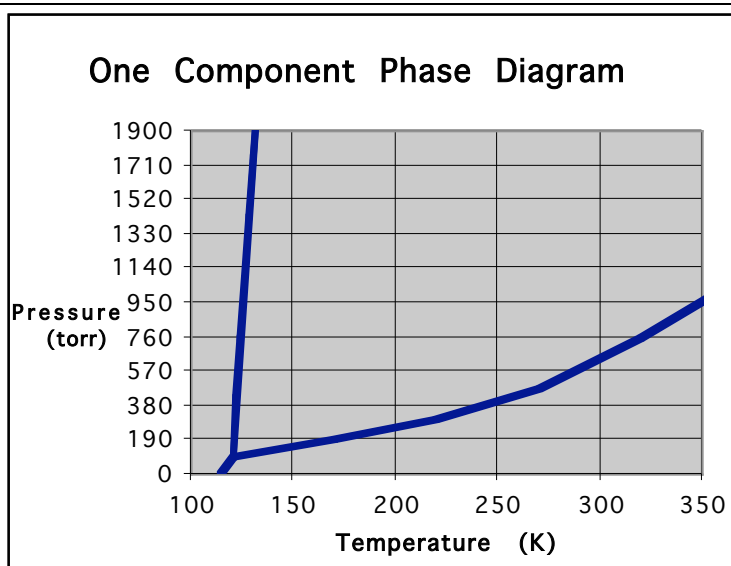
[$0^\circ C = 273 K$; $1 \text{ atm} = 760 \text{ torr}$]

What temperature is the normal boiling point of this substance?

What state does this substance exist in at $25^\circ C$ and 1 atm ?

At what temperature and pressure is the triple point of this substance?

What is the equilibrium vapor pressure of this substance at $250 K$?



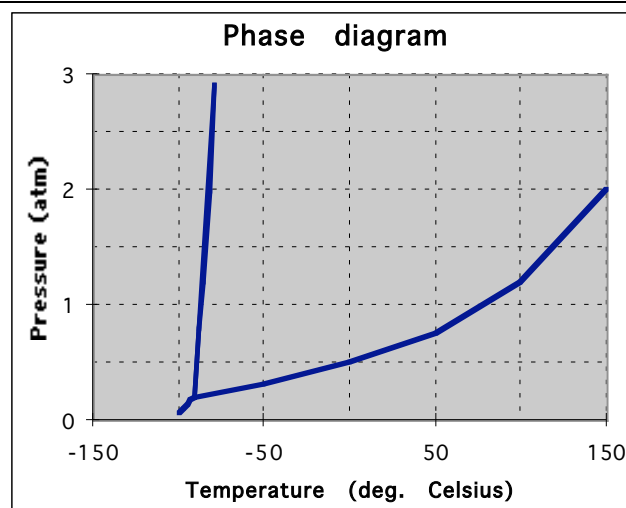
These four questions refer to the solid-liquid-gas phase diagram on the right.

What temperature is the normal boiling point of this substance?

What state does this substance exist in at $100^\circ C$ and 1 atm ?

What temperature is the normal melting point of this substance?

What is the equilibrium vapor pressure of this substance at $25^\circ C$?



Calculate the heat for melting 454 g of aluminum metal. $\Delta H^\circ_{\text{fusion}} = 10.7 \text{ kJ/mol}$ for aluminum.

Calculate the heat for melting 454 g of copper metal. $\Delta H^\circ_{\text{fusion}} = 13.3 \text{ kJ/mol}$ for copper.

Calculate the heat for vaporizing 100.0 g of liquid water. $\Delta H^\circ_{\text{vapor}} = 40.7 \text{ kJ/mol}$

Calculate the heat for condensing 454 g of propane vapor. $\Delta H^\circ_{\text{vapor}} = 18.8 \text{ kJ/mol}$.

Calculate the heat for vaporizing 100.0 g of liquid methanol. $\Delta H^\circ_{\text{vapor}} = 34.5 \text{ kJ/mol}$

Calculate the heat for deposition of 454 g of silicon vapor. $\Delta H^\circ_{\text{sublim}} = 451 \text{ kJ/mol}$