

Unit Quiz - Phase Diagrams

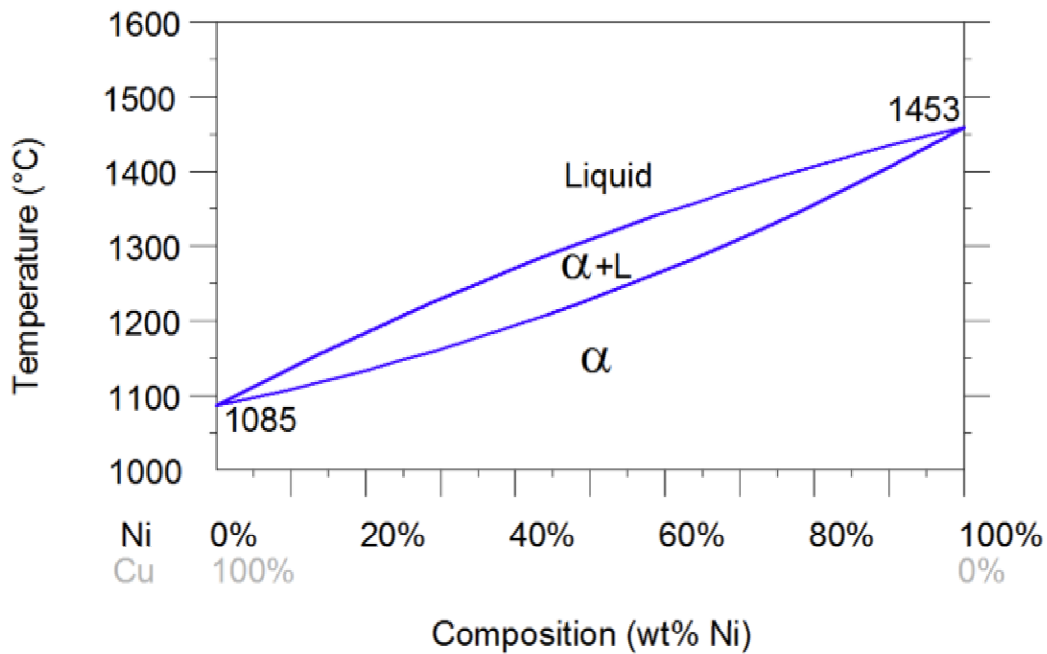
Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ____ 1. In a solution, the component present in greater quantity is known as the _____.
 a. Solvent
 b. Solute
 c. Solid solution
 d. Equilibrium phase diagram
- ____ 2. The point of maximum concentration of solute atoms that may dissolve in the solvent to form a solid solution is known as the _____.
 a. Solvent
 b. Solute
 c. Solubility limit
 d. Solidus
- ____ 3. _____ is the condition of a system in which competing influences are balanced.
 a. Solubility limit
 b. Equilibrium
 c. Solvus
 d. Solidus

Use the diagram below to answer the following questions.

Copper-Nickel Phase Diagram



- ____ 4. What is the melting point of pure Nickel?
 a. 1453° C
 b. 1085° C
 c. 0° C (at sea level)
 d. (1453° C + 1085° C)/2

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- _____ 5. What are the solid phases in the diagram?
- a. Alpha Only
 - b. Alpha + L
 - c. Alpha, beta, and gamma
 - d. Beta only
- _____ 6. If an alloy consisting of 60% Ni and 40%Cu is heated to approximately 1300°C, will the liquid component contain more or less copper than the solid component?
- a. More
 - b. Less
 - c. Depends on time at that temperature
 - d. Alpha
- _____ 7. If an alloy consisting of 60% Ni and 40%Cu is heated to approximately 1300°C, it will be in a _____ state.
- a. Slush-like
 - b. Liquid
 - c. Solid
 - d. Beta
- _____ 8. Solders are often identified as “eutectic” in composition. This refers to what property?
- a. Ability to melt easily
 - b. High strength
 - c. Corrosion resistance
 - d. Ferrous metal content