

## Problem 1.4

Explain why the definition of an adiabatic wall in Sec. 1.2 specifies that the wall be rigid and impermeable.

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### Solution

Having a rigid and impermeable wall between system A and system B ensures that any changes that occur are only due to a temperature difference. Because the wall is rigid and impermeable, a pressure difference and a concentration difference between the systems will not change the properties of either, respectively.