

8.1: Prelude to Phase Equilibrium

From the very elementary stages of our journey to describe the physical nature of matter, we learn to classify matter into three (or more) phases: solid, liquid, and gas. This is a fairly easy classification system that can be based on such simple ideas as shape and volume.

Phase	Shape	Volume
Solid	Fixed	Fixed
Liquid	Variable	Fixed
Gas	Variable	Variable

As we have progressed, we have seen that solids and liquids are not completely incompressible as they may have non-zero values of κ_T . And we learn that there are a number of finer points to describing the nature of the phases about which we all learn in grade school. In this chapter, we will employ some of the tools of thermodynamics to explore the nature of phase boundaries and see what we can conclude about them.

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