9.2.7.1 Basic Definitions

Critical temperature (T_c)

The maximum temperature at which a gas can be converted into a liquid by an increase in pressure.

Critical pressure (p_c)

The minimum pressure which would suffice to liquefy a substance at its critical temperature. Above the critical pressure, increasing the temperature will not cause a fluid to vaporize to give a two-phase system.

Critical point

The characteristic temperature (T_c) and pressure (p_c) above which a gas cannot be liquefied.

Supercritical fluid

The defined state of a compound, mixture or element above its critical pressure (p_c) and critical temperature (T_c).

Reduced temperature (T_r)

The ratio of the temperature (T) in the system to the critical temperature (T_c)
$T_r = T/T_c$

Reduced pressure (p_r)

The ratio of the pressure in the system (p) to the critical pressure (p_c).
$p_r = p/p_c$