5.1 Classification

To specify the topics of this chapter we now define the adjectives of the mixtures:

- Simple mixture are binary mixtures for which no chemical reactions take place.
- Ideal mixtures are mixtures for which for all their properties (except for the entropy) holds that Property(mixture) = $\sum$ [Properties(components)].
  Entropy and Gibbs energy are larger and smaller for the ideal mixture, respectively. For ideal gas mixtures no interactions exist at all. For mixtures of ideal liquids A and B there are no excess interactions compared to the pure liquid components, BUT there are interactions A-A $\approx$ B-B $\approx$ A-B, otherwise no liquid state would exist. But the interaction A-B is identical to A-A and B-B.
- For real mixtures also caloric effects are allowed. Thus the difference between real and ideal mixture is based on the fact that the interactions A-B are different from A-A and B-B.