This memo provides physical property data for all the components in the case-study. Table 1 contains pure-component property values.

Models for Temperature-Dependent Pure-Component Properties (see Table 2)

Ideal Gas Heat Capacity (J kmol\(^{-1}\) K\(^{-1}\)):

\[
C_{p,ig} = A_1 + A_2 T + A_3 T^2 + A_4 T^3 + A_5 T^4 + A_6 T^5 \quad A_7 \leq T \leq A_8 \\
= A_9 + A_{10} T^{A_{11}} \quad T < A_7
\]

Extended-Range Antoine Equation for Vapor Pressure (N m\(^{-2}\)):

\[
\ln P = B_1 + \frac{B_2}{T + B_3} + B_4 T + B_5 \ln T + B_6 T^{B_7} \quad B_8 \leq T \leq B_9
\]

Binary Wilson Model for Activity Coefficients (see Table 3)

The liquid interactions between components \(i\) and \(j\) are represented by the Wilson liquid solution model in the following form:

\[
\ln \gamma_i = 1 - B_i - \sum_{j=1}^{n} e^{a_j + \frac{b_j}{T}} x_j \\
B_i = \ln \left[ \frac{n}{\sum_{j=1}^{n} e^{a_j + \frac{b_j}{T}} x_j} \right]
\]

where \(\gamma_i\) denotes the activity coefficient of component \(i\), \(a_{ij}\) and \(b_{ij}\) represent binary interaction parameters between component pairs \((i, j)\), and \(T\) denotes the temperature (in kelvins) of the system. All available binary interaction parameters are shown in Table 3.