

|                         |          |                       |          |
|-------------------------|----------|-----------------------|----------|
| w                       | 0.344    | R (J/mol.K)           | 8.314    |
| Tc (K)                  | 647.3    | T (K)                 | 573.15   |
| Pc (bar)                | 220.48   | P (bar)               | 70       |
| Pr                      | 0.317489 |                       |          |
| Tr                      | 0.885447 |                       |          |
| B0                      | -0.42969 |                       |          |
| B1                      | -0.14771 |                       |          |
| Bhat                    | -0.4805  |                       |          |
| Z                       | 0.82771  |                       |          |
| B (m <sup>3</sup> /mol) | -0.00012 |                       |          |
| V (m <sup>3</sup> /mol) | 0.000563 | V(m <sup>3</sup> /kg) | 0.031303 |
| Vsteam (m               | 0.0442   |                       |          |

$$Z = 1 + \frac{BP}{RT} = 1 + \hat{B} \frac{P_r}{T_r}$$

$$\hat{B} = \frac{BP_c}{RT_c} = B^0 + \omega B^1$$

$$B^0 = 0.083 - \frac{0.422}{T_r^{1.6}}$$

$$B^1 = 0.139 - \frac{0.172}{T_r^{4.2}}$$