$$\Lambda_0(\theta) = \theta^{0.5} \sum_{i=1}^{4} n_i^{\mathrm{o}} \, \theta^{i-1} \, , \tag{3.5}$$

where $\theta = T/T^*$ with $T^* = 647.26$ K; the coefficients n_i^{o} are listed in Table 3.4. The correlation equation for the second function of Eq. (3.4), $\Lambda_1(\delta)$, reads

$$\Lambda_1(\delta) = n_1 + n_2\,\delta + n_3 \exp\left[n_4 \left(\delta + n_5\right)^2 \right] , \tag{3.6}$$

where $\delta = \rho/\rho^*$ and $\theta = T/T^*$ with $\rho^* = 317.7$ kg m^{-3} and $T^* = 647.26$ K. The coefficients n_i are given in Table 3.5. The function $\Lambda_2(\delta,\theta)$ is defined by

$$\begin{aligned} \Lambda_2(\delta,\theta) = {} & \left(n_1\theta^{-10} + n_2\right)\delta^{1.8} \exp\left[n_3\left(1-\delta^{2.8}\right)\right] \\ & + n_4\, A\delta^B \exp\left[\left(\frac{B}{1+B}\right)\left(1-\delta^{1+B}\right)\right] \\ & + n_5 \exp\left[n_6\,\theta^{1.5} + n_7\,\delta^{-5}\right] , \end{aligned} \tag{3.7}$$

where $\delta = \rho/\rho^*$ and $\theta = T/T^*$ with $\rho^* = 317.7$ kg m^{-3} and $T^* = 647.26$ K, and A and B according to Eqs. (3.7a) and (3.7b). The functions A and B have the form

$$A(\theta) = \begin{cases} (\Delta\theta)^{-1} & \text{for } \theta \ge 1 \\ n_9\,(\Delta\theta)^{-0.6} & \text{for } \theta < 1 \end{cases} , \tag{3.7a}$$

$$B(\theta) = 2 + n_8\,(\Delta\theta)^{-0.6} \tag{3.7b}$$

$$\text{with} \qquad \Delta\theta = \left|\theta - 1\right| + n_{10} \, . \tag{3.7c}$$

The coefficients n_i of Eqs. (3.7) and (3.7a) to (3.7c) are listed in Table 3.6.

Table 3.4 Coefficients of Eq. (3.5)

i	n_i^{o}	i	n_i^{o}
1	$0.102\,811 \times 10^{-1}$	3	$0.156\,146 \times 10^{-1}$
2	$0.299\,621 \times 10^{-1}$	4	$-0.422\,464 \times 10^{-2}$

Table 3.5 Coefficients of Eq. (3.6)

i	n_i	i	n_i
1	$-0.397\,070$	4	$-0.171\,587$
2	$0.400\,302$	5	$0.239\,219 \times 10^{1}$
3	$0.106\,000 \times 10^{1}$		