

Similarly at  $250^{\circ}\text{C}$  &  $3000\text{ kPa}$

$$H_i = 2854.8 \text{ J/g} = 51386.4 \text{ J/mol}$$

$$S_i = 6.2857 \text{ J/g}\cdot\text{K} = 113.1426 \text{ J/mol}\cdot\text{K}$$

$$\frac{f_i}{P} = \text{Exp} \left[ \frac{51386.4 - 53598.6}{8.314 \times (250 + 273)} - \frac{113.14 - 182.95}{8.314} \right]$$

$$= \text{Exp}[-0.508 + 8.396]$$

$$= 2665.1$$

$$\therefore f_i = 2665.1 \text{ kPa}$$

$$\phi_i = \frac{f_i}{P} = \frac{2665.1}{3000} = 0.888$$