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Conteúdo

1

$$\begin{pmatrix} Q & + \\ -F_{A0} \sum \theta_i \bar{C_{p}}_i (T - T_0) & + \\ -F_{A0} \left(\Delta H^{\circ}_{R T_R} + \sum \theta_i \bar{C_{p}}_i (T - T_0) \right) X & \end{pmatrix} = 0$$

2

$$X = \frac{\sum \theta_i \bar{C_p}_i (T - T_0)}{-\left(\Delta H_R^{\circ}(T_R) + \sum \theta_I C_{p\,i}(T - T_0)\right)}$$

$$X = \frac{C_{p\,A} + \theta_C C_{p\,c}(T - T_0)}{-\Delta H_R}$$

3

$$V = \frac{F_{A0}\,X}{-r_A}; \qquad \tau = \frac{C_{A0}\,X}{-r_A}$$

4

$$k = k_0 \exp\left(-Ea/RT\right)$$

Lei de Arrhenius

$$k_{(T)} = k_{(T_R)} \exp\left(-\frac{Ea}{R}(T^{-1} - T_R^{-1})\right)$$

Lei de Vant Hoff

$$k_e = k_{e\,(T_R)} \exp\left(-\frac{\Delta H}{R}(T^{-1} - T_R^{-1})\right)$$

5

$$V = F_{A0} \int_0^X \frac{\mathrm{d}X}{-r_A}$$

6 Simpson

$$\int_{X_0}^{X_2} f(x)\ \mathrm{d}X = \frac{h}{3}\left(f_{(X_0)} + 4\,f_{(X_1)} + f_{(X_2)}\right);$$

$$h = \frac{x_2 - x_0}{2}; \quad x_1 = x_0 + h = \frac{x_2 + x_0}{2}$$

7

$$Q^{\circ} - F_{A0} \sum \theta_I \, C_{pi}(T - T_0) - F_{A0} \, \Delta H_R \, X = 0$$

8

$$G_{(T)} = -\Delta H_{R\,(T)}\, X$$

9

$$R_{(T)} = \begin{cases} (C_{p\,A} + \theta_I\, c_{p\,I})(T - T_0) & \text{Adiabática} \\ \frac{U_A}{F_{A\,0}}(T - T_0) + \sum \theta_i\, C_{p\,i}(T - T_0) & \end{cases}$$

10

$$-\Delta H_R^\circ X = (C_{p\,A} + \theta_I\, c_{p\,I})(T - T_0)$$