Equilibrium constant, K

$$\Box G^o = w_{max} = -nF\Box^o = -712 \text{ kJ} = -RT \ln K$$

$$\ln K = \frac{-nF\xi^o}{-RT} = \frac{-712 \text{ kJ}}{-8.314 \times 10^{-3} \times 298} = 287$$

$$K = e^{287}$$