

12. Using Eq. 24-11, the surface charge density is

$$\sigma = E\varepsilon_0 = (2.3 \times 10^5 \text{ N/C}) \left( 8.85 \times 10^{-12} \frac{\text{C}^2}{\text{N}\cdot\text{m}^2} \right) = 2.0 \times 10^{-6} \text{ C/m}^2 .$$