

Module 6: Surface Adhesion Characteristics

- Name the constant used to characterize Van der Waal's (VdW) force of adhesion between a particle and a surface. What is this constant dependent on, and how is it affected when water replaces air as the intervening medium?
- For the cases of (a) sphere to surface, (b) cylinder to surface and (c) sphere to sphere adhesion by Van der Waals forces, state the effect of particle size and distance of separation on the force of adhesion. How are these affected by the presence of an intervening fluid medium?
- Describe three types of electrostatic forces of adhesion between particles and surfaces, and state the effect of particle size and distance of separation on these forces. How are these affected by the presence of an intervening fluid medium?
- What role do surface roughness and surface deformability play with respect to the Van der Waals forces of particle adhesion?