# Adhesion characteristics of kenaf fibers


## ABSTRACT

This chapter presents adhesion mechanisms in relation to bonding of kenaf fibers. Adhesion mechanisms are dependent on the surface characteristics of various materials. In principle, there are three components for adhesion to occur viz: substrates, adhesive matrices, and interfaces. Being porous, the bond formation in natural fibers generally involves three main adhesion mechanisms: mechanical interlocking, adsorption theory, and chemical bonding. Surface interaction between resin polymer matrices and kenaf fibers is an area that requires more concerted efforts. The bonding characteristics of kenaf were evaluated by determining the wettability through contact angle measurement and the buffering capacity. The characterization of the interface between fiber and matrix provides information on the adhesion strength. The diffusion model explains the concept of adhesion by the compatibility between polymers and the movements that occur in the polymer chains. Chemical bonding is the most widely accepted mechanism for explaining adhesion between two surfaces in close contact.