General Properties of Connective Tissue Homogeneous materials, such as steel, display the same? mechanical behavior no matter from what direction forces are applied.This highly viscoelastic behavior of articular cartilage is mainly due to two mechanisms: (a) the frictional drag force of interstitial fluid flow through the porous solid matrix (i.e., the flow dependent mechanism).With the mechanical load, the interstitial fluid is redistributed through the pores of the permeable solid matrix, resulting in predominantly viscoelastic behavior.?In contrast, heterogeneous connective tissues display very different behavior, depending on the nature and direction of applied forces, and are called anisotropic.Biomechanics of .Articular Cartilage AC consists of two phases: a fluid phase and a solid phase