



Computational Modeling of Mechanical Performance in Thermally Point Bonded Nonwovens

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ABSTRACT

Several theoretical models have been proposed in the past for predicting the basic mechanical properties of thermally point bonded nonwovens from structural features of the constituents. However, the role of bond geometry, distribution and related fiber properties were not taken into account. We have developed a mechanics based model to help understand the behavior of point bonded materials as a function of various structural and process variables.

KEYWORDS: Image Analysis, Orientation Distribution Function (ODF), Bond Geometry, Image Simulation, Computational Modeling

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