

**CARDING OF MICROFIBERS**

Yoon J. Hwang, William Oxenham and Abdelfattah M. Seyam  
Nonwovens Cooperative Research Center  
North Carolina State University

**Abstract**

*Microfibers, used alone or in blends, have created considerable interest in the apparel industry because of their potentially greater comfort and functionality. Additionally, their lower diameter, greater surface area and flexibility offer many applications in areas of nonwovens such as filtration, man-made leather, protective clothing, and wipes. Unfortunately the properties of microfibers that make them attractive for the above applications are also the same properties that lead to difficulties in processing.*

*The paper is an account of systematic experimental investigation into the processing of microfibers on a flat card. The effects of fiber and carding parameters on web quality were determined by assessing the nep content and fiber length after carding. Statistical analyses of the data indicate that all the main parameters studied have an influence on web quality. Furthermore it is shown that there is a strong correlation between the incidents of neps and the increase in short fiber content during carding. An additional observation is that the generation of neps was not uniform across the width of the card and appeared to be influenced by variation in the fiber loading on the doffer across the card.*

**KEYWORDS:** carding, flat card, card setting, neps, microfibers, fiber length, short fiber content, fiber loading

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