

NEW INSIGHT ON THE MOISTURE VAPOR TRANSPORT IN COTTON NONWOVEN FABRICS**Arvind Purushothaman****Appachi Arunachalam****Seshadri Ramkumar****The Institute of Environmental and Human Health****Texas Tech University****Lubbock, Texas****Abstract**

Nonwoven industry is entering into the next generation and is focusing on apparel grade products and sustainable materials. Recently, there have been some significant development in the cotton industries to develop refined cotton products using hydroentanglement process. There are opportunities for cotton not only in both bleached and unbleached wipes sector, but also as liner materials with or without additional functionalities in military fabrics. In all these applications, Moisture Vapor Transport Rate (MVTR) will be a critical factor in determining the use of lightweight cotton nonwovens in chemical and biological protection suits.

This paper will present, new findings from the comfort evaluation study of lightweight cotton nonwovens. As comfort is a complex phenomenon, preliminary focus is on the evaluation of MVTR through lightweight cotton nonwovens. More specifically, this paper will present results on the: Data on the suitability and reliability of BS 7209 for evaluating MVTR of nonwoven fabrics.