ONLINE ISSN : 1880-1986
PRINT ISSN : 1346-8235

Journal of Textile Engineering
Vol. 53 (2007) , No. 6 245-248

Surface Frictional Properties of Silk/Nylon Blended Nanofiber Assemblies

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(Received September 11, 2007)
(Accepted for publication October 15, 2007)

Abstract: The silk fibroin/nylon 66 blended nanofiber webs were made by the electrospinning process and investigate the effect of blend ratio on the structure and surface properties of electrospun nanofiber assemblies. T_g of silk fibroin and nylon 66 blends in DSC curves shifted to that of nylon when the nylon content increased. With the increase of silk blend ratio, the decrease of the fiber diameter was observed. The mean coefficient of friction (MIU) was measured by KES surface tester. The obvious effect of fiber diameter on MIU was not found in the fiber diameter range of 50 to 270nm. Maximum values of MIU were observed for the silk/nylon blend ratio of 50/50%.

Key Words: Electrospinning, Surface friction, Silk/nylon blend

Masanori AKADA, Masaya KOTAKI, Masanori SATO and Sachiko SUKIGARA, J. Text. Eng., Vol. **53**, p.245 (2007) .

JOI JST.JSTAGE/jte/53.245