

PCM/Nylon6 복합사 염착특성

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Abstract

Phase change material(PCM) has thermal energy storage and been attracted attention. Latent heat of the organic PCM can keep maintaining temperature when the change of outside energy conditions influence to PCM. Thus, many researchers have interested to thermal energy storage ability and investigated to applications such as thermal storage of solar energy, bioclimatic building, icebank, medical application, clothing industry and so on. Among the many applications, investigation of the PCM in clothing industry is also important because the people has interest functional factor called health-care in the clothing. In addition, PCM can give them mild environment condition such suitable temperature control or humidity. To fabrics, the PCM has various methods such as microcapsule, padding and modified cross-section formation(Sheath/core). Sheath core PCM fabric has a better benefit of durability than other method. However, PCM sheath/core spinning is difficult. In addition, dyeing property is important to use clothing industry due to visual images.

In this study, we investigated dyeing properties of Nylon/PCM sheath/core fabrics. Especially, we observed the relation between dyeing property and PCM including ratio. Various temperature and pH conditions were also studied to optimize dyeing properties as acid dye.

참고문헌

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