



Co-catalyst System Flame Retardant Treatment for Cotton

Dr KAN Chi-wai, Associate Professor, The Institute of Textiles and Clothing

Fabrics made from cellulosic fibres, such as cotton and linen will burn easily with a high flame velocity. Many flame retardant (FR) agents and methods of application have been developed in attempts to produce FR textile materials. However, the FR agents are not efficiently fixed to the cotton fibres unless they are used in combination with a resin and catalyst.

Now, the use of co-catalyst can effectively enhance the flame retardant effect and minimise the side effects of flame retardant treatment. The finishing formulation (recipe) proposed in this invention was applied to cotton fabric by conventional pad-dry-cure finishing techniques. With the use of co-catalyst system in the flame retardant treatment, it can reduce the curing temperature and time used for flame retardant treatment, and retain good flame retardant property of cotton fabric even at a lower curing temperature and shorter curing time. It can also minimize the reduction in tearing strength and whiteness of cotton fabric after flame retardant treatment.







Catalyst







PolyU ITDO

Food Safety Consortium

itdo@polyu.edu.hk



Innovation and Technology Development Office 創新及科技發展處

Contact UsIr Steven LAM, Manager, Innovation and Technology Development OfficeT (852) 3400 2864E steven.tf.lam@polyu.edu.hk

Copyright © 2018 The Hong Kong Polytechnic University

in

in

 \succ