The aim of this study is to investigate the physical and functional properties of the fabrics after applying the ionic liquid, Firetex to cotton, cotton/polyester and polyester fabrics. According to findings of the experiment, the flame retardancy, water repellency and air permeability values of the Co/PET especially Co fabrics have been improved. The process is cheap and easily applicable in technical textile production when color difference and washing resistance is unimportant.