

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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**A PROJECT REPORT ON
“SOME STUDIES ON COMFORT PROPERTIES OF FLAME
RETARDANT FINISHED SILK BLENDED FABRICS”**

(SPONSERD BY K.S.C.S.T)

Submitted in partial fulfillment of the requirement for the award of degree of

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IN
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ABSTRACT

Two varieties of silk union fabrics i.e silk/cotton and silk/polyester were finished with commercially available flame retardant using pad dry cure technique in an effort to study the effect of flame retardant finish on comfort properties of these fabrics. Finishing was done at two different concentrations. Major comfort related properties like air permeability, moisture regain(MR), water repellency, flexural rigidity(FR), drape co-efficient(DC), specific handle force(SHF), and fabric crease recovery angle(CRA), were found for both treated and untreated fabrics. Flame related properties like char length (time taken for burning of known length of fabric) and limiting oxygen index (LOI) was found for both the fabrics. It was found that the used flame retardant finish was effective on both the fabrics in imparting flame retardency. Both burning time and LOI got increased as a result of finishing and rate of increase in these properties was concentration dependent. There was some reduction in comfort properties as a result of finishing. Fabric became comparatively less air and water permeable and more harsh after treatment. So it is suggested that the treatment at low concentration is preferable. It was also found that the used flame retardant finish is more effective on silk/cotton fabric than silk/polyester fabric. To see the durability of the finish the flame related properties were tested after 5 washes. It was found that there was some reduction in burning time and LOI showing that the used finish was not completely durable. CRA of fabric is improved showing that fabric becomes more wrinkle resistant after finishing.