



TEXTILE FINISHING

PROF. KUSHAL SEN

Department of Textile Engineering
IIT Delhi

PRE-REQUISITES : Should have knowledge of fibres, preferably of preparatory processes and dyeing

INTENDED AUDIENCE : Students of first year B.Sc (Physics / Mathematics) and first year B.E courses.

INDUSTRIES APPLICABLE TO : Textile Industry, Particularly Chemical Processing Industry

COURSE OUTLINE:

This course would cover the Science and Application of various finishing processes based on the need and Chemistry of the Fibres, Cellulose based, Protein based and Synthetics. Fundamentals of the techniques and the Chemistry finishing agents, Mechanisms applicable to various finishing techniques. Some introduction to relevant machines and characterization of finished fabrics would also be covered.

ABOUT INSTRUCTOR :

Prof. Kushal Sen is currently a Professor in the Department of Textile Technology, IIT Delhi. Areas of specialization include textile chemical processing, texturing, and structure-property correlations.

COURSE PLAN :

Week 1: Introduction , General classification of finishes, Mechanical finishing; Sanforization

Week 2: Wrinkle-resist finishing, Need, General approach for obtaining finished product

Week 3: Cross-linking agents, Catalysts needed, Process and Evaluation

Week 4: Stiffeners and Softeners

Week 5: Waterproof, Water repellent, Waterproof breathable finishing

Week 6: Flame retardants and Finishing thereof

Week 7: Antimicrobial finishing ; Bio-polishing

Week 8: Soil repellency and Soil release finishing

Week 9: Finishing of wool; Milling, setting, Shrink-resistant finishing, Special finishing of silk

Week 10: Energy efficient technology; Low liquor application and foam finishing

Week 11: Finishing of synthetics; Heat setting , Antistatic and other special finishing

Week 12: Mangles, driers and Stenters