

**VARIOUS COTTON AND COTTON BLENDED FABRICS**

This document lists out the essential plant and machinery requirement of core operations involved in the manufacturing of various cotton/cotton blended fabrics. This documents also list out the essential test equipment requirement of various cotton/cotton blended.

**Plant & Machinery Requirement for Spinning (Optional):-**

1. Blending Machine (If blending carried out at Blow Room stage)
2. Blow Room Line
3. Carding Machine
4. Draw Frames
5. Ribbon Lappers + Combers (Where ever Applicable)
6. Fly Frame/speed frame
7. Ring Frame
8. Autoconer or equivalent
9. Parallel Winding
10. Two For One Twisters (TFO)
11. Steam Chamber/Autoclave

Note:-

1. In addition to above, controlled atmosphere of production shop for Humidity & Temperature is an essential requirement.

**Plant and Machinery Requirement for Weaving (Legal Tie up or In-House):-**

1. High Speed Warping machine.
2. Sizing Machine (Must necessary for fabric produced with single ply warp yarn and may not be mandatory for the same with double /multi fold yarns).
3. Shuttle less looms with Dobby attachment to weave firms name or trademark along selvages.

Note:-

1. Controlled Atmosphere of Production shop for humidity & temperatures is an essential requirement.

**Essential Plant and Machinery Requirement for Processing:-**

1. Grey Fabric Inspection Machine
2. Singeing
3. Desizing machine/unit (If sizing has been carried out during weaving operation)
4. Mercerisation (If applicable)
  - a) Chain Type or Slip type mercerization or any advanced machine.
5. Scouring and Bleaching
  - a) Auto/Semi Auto Jiggers/Jumbo Jiggers  
OR
  - b) Open width scouring and Bleaching Plant  
OR
  - c) Continuous scouring and Bleaching Machine (CBR) or any advanced machine.
6. Dyeing
 

FOR POLYESTER COMPONENT

  - a) High Temperature High Pressure (HTHP) Jet Dyeing  
OR
  - b) Pad Dry and Thermosol on Loop Agers  
OR
  - c) Pad Dry and thermosol on Hotflue or any advanced machine.

FOR COTTON COMPONENT

  - a) Auto/Semi Auto Jiggers/Jumbo Jiggers  
OR
  - b) Pad Dry and Developers (CDR)
7. Washing



- a) Auto/Semi Auto Jiggers/Jumbo Jiggers
- OR
- b) Continuous Washers with Dryers
- 8. Printing (Where ever applicable)
  - a) Engraving Department/Exposure Plant
  - b) Rotary Printing Machine
- c) Loop Ager/Ageing Machine      } OR FLASH AGER MACHINE
- d) Oxidation and washing      }
- 9. Finishing
  - a) 4 Chamber (Min) Stenter with padding mangle
  - b) Sanforising/Decatising
- 10. Special Treatment (Whenever applicable)

**Water repellency treatment/Water Proofing/Rot Proofing Plant**

- a) Three Bowl padding Mangle
- b) Drying Range
- c) Curing/Polymerizer
- d) Stenter
- 11. Perching Machine
- 12. Auto Folding Machine
- 13. Rolling Machine

**Note:-**

1. For Weaving process, firm must have valid legal tie up with other firm and valid for at least 03 years. Legal agreement documents shall be submitted by the firm applying for registration. Spinning process shall be optional.
2. An undertaking by the firm having legal agreement for the weaving facilities will be submitted in the requisite format to agree that in the case of securing the order against a tender enquiry, firm will submit the documentary evidence in the form of invoices/e-way bills for utilizing the weaving facility with the legal tie up firm.
3. If the firm does not possess any of the essential Plant & Machinery, then it should not be recommended for registration.
4. Firm must possess valid pollution consent/clearance certificate from respective State Pollution Control Board.

**Essential Test Equipments:-**

1. Measuring scale/ tape for length/width measurement
2. Thickness Gauge for thickness
3. Pick Glass/Counter for ends/picks
4. Weighing Balance for GSM and miscellaneous work
5. Template for shrinkage Test for relaxation shrinkage
6. Tensile Strength tester for Breaking Load
7. Tear Strength tester for Tear Strength
8. Air Permeability tester for Air Porosity (if applicable)
9. Pressure Head Tester for water proofness
10. BWR Tester for water repellancy
11. Spray Rating Tester for water repellancy
12. Digital PH meter for PH value of aqueous extract
13. Scouring loss test apparatus (Soxhlet apparatus, oven and glassware) for scouring loss/various chemical tests
14. Crock meter for dye fastness to rubbing
15. Perspirometer for dye fastness to perspiration
16. Laundrometer for dye fastness to washing
17. Blend Composition test apparatus (Chemical Balance, Oven and Glassware) for blend composition
18. Nature of Dye Testing Facility for dye identification
19. Spectrophotometer (where ever applicable) for LCH and Delta values
20. Light fastness Tester.
21. Pilling Tester



## 22. Crease Recovery Tester

Note:-

1. Outsourcing arrangement with NABL accredited lab is allowed only for the test parameter such as Colour fastness to Light/ Bundesman Water repellency test/Spectrophotometer Tester. In this regard, registering firm shall submit a letter issued from NABL accredited lab to the firm that they are undertaking testing of samples received from the firm and the test parameter is within their scope of accreditation. If the firm does not possess any of the essential test equipments as per requirement of specification except the parameters for which outsourcing from NABL accredited lab has been permitted, then it should not be recommended for registration.
2. Controlled Atmosphere of Laboratory for humidity & temperatures is an essential requirement.
3. The above list of test equipment is illustrative in nature which may or may not be relevant for certain type of fabric. Therefore at the time of registration process, the requirement of test equipment in accordance with test parameters in the specification and the test equipment shall have required range to test the required parameters, to be checked from the firm's submitted documents.
4. Firms to give the declaration for supplying the materials with the same legal tie up firm (Wherever legal tie-up has been permitted) having validity of legal tie up for minimum 03 years.
5. At the time of supply of material by the firm having secured a contract, firm should forward the necessary documents like e-way bill, commercial invoice issued by legal tie up firm along with the firm's own invoice so as to authenticate/verify the receipt of material from the same legal tie up firm.
6. Vendor shall also give an undertaking in the prescribed format regarding complete understanding of specification requirement and other requirement as mentioned in the item.
7. In case of falsification of documents and other instances, firm will be De-registered for the period of 03 years for entire range of products for any category.
8. CV norms are generic in nature and are to be used as criteria for consideration of any firm registered for any item of a particular category. Therefore, if a firm is registered for any item, it will be considered as registered for all the similar items (as notified) falling under that CV norms category.