

Tension & Elongation of Elastic Fabrics

The purpose of this test is to measure the tension and elongation of wide or narrow elastic fabrics made from natural or man-made elastomers - alone or in combination with other textile yarns. The test is commonly used for brassieres, foundation garments and swimsuit materials.

Procedure: extend conditioned sample to a load and return to zero. Repeat three times total. Capture test data including tension load and elongation.

Requirements

- Control test machine at 20 ipm or 12 ipm for low elongation fabrics
- Cycle Tensile load to desired level (typically 20 to 30 pounds)
- Capture load / displacement curve
- Band Clamps with anvil diameters 0.5 inch or 0.25 inch. Length not less than 3 inches.
- Wide width clamps.
- Gage marks on sample 10 inches apart.
- Test Report Requirements
 - Loop tension at Extension of 30, 50 & 70%
 - Peak tension value
 - Specimen width
 - TestResources machine specifications
 - Crosshead speed
 - Standard deviation

Recommendation

- 650M System with load cell and head adapter for extended travel.
- ZPM Software for real time curves
- G Series Band Clamps
- D4964 Report program

