USEFUL DEFINITIONS:

Breaking force = The maximum force a material can stand before it breaks.

Tenacity/stress = $\frac{\text{Breaking force in N or cN.}}{\text{Linear density in tex, dtex or denier}}$

Count/ Lea Strength Product = Breaking force of a hank of yarn [lbs] X linear density in count

Elongation = The length by which a material will extend beyond its original length.

% extension/strain = $\frac{\text{The extended length – original length x 100}}{\text{original length x 1}}$

Initial modulus = Measures resistance to extension under low forces.

Hookean Region or Elastic Region = In this region, stress is proportional to strain therefore the material recovers all extension, it is elastic.

Yield point = This is the end of the elastic region.

Primary creep = Recovery after extension with time.

Secondary creep = Non-recoverable extension [permanent deformation].

Relaxation = Continued extension without the further application of force.