

TEST METHOD LTD 06

ELASTICS: LOAD, ELONGATION & RECOVERY

PURPOSE	To determine the stress exerted on a woven or knitted elastic quality through incremental extension. Also, to determine total elongation based on a predetermined load and immediate recovery.
APPARATUS	1. Instron CRE tensile tester or equivalent with a low range load cell (approx. 45 kg or 100 lbs).
TEST SPECIMENS	Cut six specimens measuring 6" in length.
METHOD	<ol style="list-style-type: none"> 1. Test in the standard atmosphere for textile testing of 70 +/- 2° F (21 +/- 1° C) and 65% +/- 2% relative humidity. Condition web for four hours prior to testing. 2. Using a steel ruler, center a 4" bench mark along the 6" length on all three specimens. 3. Chart Speed 10 inches/minute Cross Head Speed 10 inches/minute Jaw Clamps 3 inch width Gauge Length 4 inches 4. Take one specimen and align the 4 inch marking between the jaw clamps. Tighten the top clamp and tare the load to zero. Tighten the bottom clamp without applying pressure (taking note of the load at the test start, it's best to repeat this as close to this load as possible for each additional sample). Elongate the specimen to the specified load and return to zero extension. Repeat a second cycle on the specimen and record load in pounds at 20%, 40%, 60% and 80%. Also record total elongation at the specified load as a percent. Return to zero load and calculate immediate recovery. Repeat this test on two additional specimens and average the test results.

TEST METHOD LTD 06 Cont.

LOAD, ELONGATION & RECOVERY

<p>SPECIFIED LOADS</p>	<table border="0"> <tr> <td><u>Width:</u></td> <td><u>Cycle to a load of:</u></td> </tr> <tr> <td>1 to 15 millimeters</td> <td>1.50 kg (3.3 lbs.)</td> </tr> <tr> <td>16 to 50 millimeters</td> <td>4.25 kg (9.35 lbs.)</td> </tr> <tr> <td>Over 50 millimeters</td> <td>7.50 kg (16.5 lbs.)</td> </tr> </table> <p><i>Note:</i> If the maximum load is achieved prior to 80% extension, record the extension results at that point, return to zero extension, and record recovery %.</p>	<u>Width:</u>	<u>Cycle to a load of:</u>	1 to 15 millimeters	1.50 kg (3.3 lbs.)	16 to 50 millimeters	4.25 kg (9.35 lbs.)	Over 50 millimeters	7.50 kg (16.5 lbs.)
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<p>RESULT</p>	<p>Load = Load value in pounds at 20%, 40%, 60% and 80% elongation on the second cycle.</p> <p>Elongation = Percent extension at the specified load on the second cycle.</p> <p>Recovery = $\frac{\text{Elongated Length (in.)} - \text{Recovered Length}}{\text{Elongated Length (in.)} - \text{Orig. Gauge Length}} \times 100$</p> <p>Example = $\frac{6.0" - 4.2"}{6.0" - 4.0"} \times 100 = 90.0\%$ recovery</p>								
<p>REPORT</p>	<p>Report load, elongation and recovery properties by the outlined test methods.</p>								

This information is given in good faith by Limited Brands who accept no responsibility for any accidents that may occur when carrying out the above test, or when handling or using any of the equipment mentioned. You are accordingly required to rely on your own technical advisors.