

HEIGHT OF FOAM RISE TEST

Application

This procedure determines the height of rise of polyurethane foams prepared by mixing of polyols (Component A) and isocyanate (Component B).

Apparatus Required

Laboratory Oven

Blue M POM 2066 (Matheson) or equivalent.

Stirring Motor

Capable of 3000 rpm, minimum.

Stirring Motor Clamp

Talboys Support Stand

Stirring Rod

300 mm long, 51 mm diameter propeller.

Band Saw

Balance Scale

500 gm range accurate to 0.1 gm.

Paper Cups

Bottom diameter 60 mm, top diameter 79 mm, height 95 mm, 300 mL capacity.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Date	Action	Revisions
2001 01 30	Revised	Editorial – no technical change A. Cockman
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Procedure

1. Make suitable preparations to run three samples for each determination to be made.
2. Into clean dry paper cups, weigh out 65 g of the polyol resin (Component A).
3. Into the cups, one at a time (Steps 3 through 6) weigh 10 g of the isocyanate (Component B), being careful not to allow the material to deposit on the sides of the cup, and immediately proceed with Step 4.
4. With the stirrer motor running at 3000 rpm, place the sample under the spindle for 20 seconds while scraping the sides of the container with a wooden spatula.

Note: Immerse mixer blade in methylene chloride.
5. Allow dwell time of two minutes from the end of mix cycle.
6. After two minute dwell, put cup into oven for 8 minutes at 95 +/- 2 °C.
7. Allow 30 minutes for material to cool to 23 +/- 2 °C.
8. Using the band saw, slice the cup and cut sample into two equal portions.

Calculations

Measure the height of the three samples from the bottom of the foam bun to the point of maximum rise.

The three samples must agree on height of rise to within 10 %.

Note: Any sample with large voids (i.e., 13 mm) from entrapped air must be discarded and a new sample made up.

Report

1. Sample Identification
2. Temperature of Samples
3. Height of Rise
4. Observer and Date

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.