

Australian Standard™

Methods for testing flexible cellular polyurethane

Method 4: Determination of apparent density of flexible cellular polyurethane sheeting up to 13 mm thick

PREFACE

This Standard was prepared by the Standards Australia Committee PL/36, Flexible Polyurethane, to supersede AS 2282.4 — 1979.

METHOD

1 SCOPE This Standard sets out a method for determining the apparent density of flexible cellular polyurethane sheeting up to 13 mm in thickness.

2 REFERENCED DOCUMENTS The documents below are referred to in this Standard.

AS

2282 Methods for testing flexible cellular polyurethane

2282.2 Method 2: Measurement of dimensions of test specimens

3 PRINCIPLE The apparent density is determined by weighing a known volume of material and dividing the mass by the measured volume.

4 APPARATUS The following apparatus is required:

- (a) Balance capable of weighing to an accuracy of 0.5 percent or 0.01 grams.
- (b) Suitable measuring instruments for determining the dimensions of the test piece in accordance with AS 2282.2.

5 TEST PIECES The determination shall be made on three representative pieces, cut by a band knife or other suitable means, to regular dimensions of not less than 200 mm × 200 mm × the thickness of the part.

NOTE: After the dimensions of the test pieces have been measured, the test pieces may be cut to facilitate weighing.

6 PROCEDURE The procedure shall be as follows:

- (a) Measure the dimensions of the test piece in millimetres, in accordance with AS 2282.2 to an accuracy of ± 1 percent and calculate the volume.
- (b) Weigh the test pieces to an accuracy of 0.5 percent and express its mass in grams.

7 CALCULATION The apparent density D of each test piece, in kilograms per cubic metre, is given by the following equation:

$$D = 10^6 \times \frac{m}{V}$$

where

m = mass of the test piece, in grams

V = volume of the test piece, in cubic millimetres.

8 REPORT The report shall include the following information:

- (a) The average of three determinations, in kilograms per cubic metre.
- (b) The number of this Australian Standard, i.e. AS 2282.4.