

STANDARDS ASSOCIATION OF AUSTRALIA

AS 2498.2

Australian Standard
METHODS OF TESTING RIGID CELLULAR PLASTICS

AS 2498.2

DETERMINATION OF LINEAR DIMENSIONS*

1 SCOPE. This standard specifies the characteristics and the choice of the measuring equipment and sets out the procedure for determining the linear dimensions of sheets, blocks or test specimens of rigid cellular plastics (flexible and rigid).

2 DEFINITION. For the purposes of this standard, the following definition applies:

Linear dimensions—the shortest distance, measured with an instrument in accordance with Clause 3, between two specific points, between two parallel lines or between two parallel planes, defined by corners, edges or surfaces of the cellular specimen.

3 MEASURING EQUIPMENT. According to the dimensions to be measured and the precision desired, choose the apparatus from the following (see Table 1):

3.1 Dial gauge having a measuring surface of about 10 cm². The gauging pressure shall be 100 ± 10 Pa† and the reading accuracy shall be ± 0.05 mm.

3.2 Micrometer, having a measuring surface with minimum diameter of 5 mm, but in any case not less than five times the average diameter of the cells, permitting reading to an accuracy of ± 0.05 mm.

3.3 Sliding calliper, with a vernier permitting reading to an accuracy of ± 0.1 mm.

3.4 Metal rule or metal tape, graduated in millimetres and permitting reading to an accuracy of ± 0.5 mm.

4 PROCEDURE.

4.1 Choice of Measuring Equipment. The choice of measuring equipment shall be in accordance with the accuracy required corresponding to the dimensions to be measured (see Table 1), as follows:

(a) When an instrument accuracy of ± 0.05 mm is required, a dial gauge (3.1) or micrometer (3.2) shall be used. The micrometer may be used only for specimens with a shape not permitting the use of a dial gauge.

An accuracy of ± 0.05 mm shall not normally be required for dimensions of more than 10 mm.

(b) When an instrument accuracy of ± 0.1 mm is required, a sliding calliper (3.3) shall be used.

This accuracy of ± 0.1 mm shall not normally be required for dimensions of more than 100 mm.

NOTE: In this case, a dial gauge or micrometer may also be used, but then the instrument accuracy need not be better than that of a sliding calliper.

TABLE 1
CHOICE OF MEASURING EQUIPMENT

Range of dimensions	Required accuracy	Instrument recommended		Median of readings rounded to the nearest millimetre
		For normal use	If the shape of the specimen permits	
≤ 10	± 0.05	Dial gauge or micrometer		0.1
$> 10 \leq 100$	± 0.1	Sliding calliper	Micrometer (rigid only) or dial gauge	0.2
> 100	± 0.5	Metal rule or metal tape	Sliding calliper	1

*This method is derived from and is technically identical with ISO 1923.

†Commercial dial gauges that incorporate a spring pressure may not comply with this condition. An example of one design of an appropriate apparatus is given in Appendix A.

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