STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 2498.7—1993
Methods of testing rigid cellular plastics
Method 7: Determination of volume percentage of open and closed cells

RECONFIRMATION NOTICE

Major stakeholders of this publication have reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 03 August 2020.

NOTES

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Reconfirmed 2020

Australian Standard®

Methods of testing rigid cellular plastics

Method 7: Determination of volume percentage of open and closed cells

METHOD

1 SCOPE This Standard sets out a method for determining the volume percentage of open and closed cells of rigid cellular plastics by measurement; first of the geometrical volume and then of the impenetrable volume of test specimens. This method also permits taking into consideration (for use as a correction) the volume of cells opened during test specimen preparation by cutting. The results given by this Method can be used for comparative purposes only.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
2498 Methods of testing rigid cellular plastics
2498.1 Method 1: Sampling and conditioning
2498.2 Method 2: Determination of linear dimensions

3 DEFINITIONS For the purposes of this Standard, the following definitions apply.

3.1 Geometrical surface (S)—the total surface of the test specimen determined by measuring its geometrical dimensions.

3.2 Geometrical volume (V_g)—the volume of the test specimen determined by measuring its geometrical dimensions.

3.3 Geometrical surface to volume ratio (r)—the ratio S/V_g for the test specimen.

3.4 Impenetrable volume (V_i)—the volume of the test specimen into which air cannot penetrate and from which gas cannot escape, under the test conditions.

3.5 Apparent volume percentage of open cells (ω_r)—determined by the following ratio:

$$\frac{V_g - V_i}{V_g} \times 100$$

It includes the cells opened during cutting of a test specimen having a geometrical surface (S) and a geometrical volume (V_g), and depends on the nature of the cellular plastic under test and on the geometrical surface to volume ratio (r) of the test specimen.

3.6 Corrected volume percentage of open cells (ω_o)—the apparent volume percentage of open cells (ω_r) corrected to take into account the cells opened during preparation of test specimens by cutting.

It is the limit of the apparent volume percentage (ω_r) as the geometrical surface to volume ratio (r) approaches zero.