

Australian/New Zealand Standard®

Plastic roof and wall cladding materials— Methods of test

Method 5: Determination of glass fibre content

1 SCOPE This Standard sets out a method for determining the glass fibre content and the residual ash of glass fibre reinforced polyester building sheets.

2 REFERENCED DOCUMENT The following document is referred to in this Standard:

AS
1152 Specification for test sieves
NZS
NZS/BS 410 Specification for test sieves

3 APPARATUS A muffle furnace capable of operating at $625 \pm 25^\circ\text{C}$ is required.

4 TEST SPECIMENS Five test specimens, each not less than 6500 mm^2 in area, shall be cut at random from each sheet in the sample.

5 PROCEDURE The procedure shall be as follows:

- Weigh each test specimen and record the mass (m_1) to the nearest 0.01 g.
- Incinerate the test specimens in a muffle furnace at $625 \pm 25^\circ\text{C}$ to remove the resin.
- On completion of the incineration, weigh the residue (m_2) to the nearest 0.01 g and record it; then examine for the presence of surface tissue and other unburned residue.
- Separate the glass from the ash and filler by selection or washing through a Grade B test sieve made from wire cloth with a nominal aperture size of $355 \mu\text{m}$ complying with AS 1152 or NZS/BS 410, whichever is applicable.
- Collect the glass; dry and weigh.
- Weigh the glass to the nearest 0.01 g and record it.
- Calculate the glass fibre content (GFC) from the following equation:

$$\text{GFC} = \frac{m_2}{m_1} \times 100$$

where

m_1 = mass of test specimen, in grams

m_2 = mass of residue after incineration, in grams

6 REPORT The following information shall be reported:

- (a) The glass fibre content and any other unburned residue, as a percentage by mass of the sheet.
- (b) The presence of any surface tissue.
- (c) The presence of any other unburned residue.
- (d) The percentage of glass, as a percentage by mass of the sheet.
- (e) Reference to this Australian/New Zealand Standard, i.e. AS/NZS 4257.5.

This Joint Australian/New Zealand Standard was prepared by the Joint Technical Committee PL/22, Plastic Building Sheets. It was approved on behalf of the Council of Standards Australia on 8 September 1994 and on behalf of the Council of Standards New Zealand on 17 October 1994 and published on 5 December 1994.

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