

Australian Standard™

AS 3572.13

Plastics—Glass filament reinforced plastics (GRP)—Methods of test

Method 13: Determination of the initial longitudinal tensile strength of glass filament reinforced plastics pipes

1 SCOPE

This Standard sets out two methods for determining the initial longitudinal tensile strength and percentage elongation at failure of glass filament reinforced plastics (GRP) pipes.

The initial longitudinal tensile strength may be determined by either Method 13A or Method 13B.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1984 Vernier callipers (metric series)

2102 Micrometre callipers for external measurements

3572 Plastics —Glass filament reinforced plastics (GRP) —Methods of test

3572.1 Method 1: Preparation of glass filament reinforced plastics test specimens

3572.4 Method 4: Determination of the dimensions of glass filament reinforced plastics pipes

3572.8 Method 8: Determination of long-term ring stiffness of glass filament reinforced plastics pipes

3 METHOD 13A

3.1 Principle

A specimen cut from the pipe parallel to the axis of the pipe is subjected to a tensile force. Force and elongation at rupture are measured.

3.2 Apparatus

The following apparatus is required:

- (a) A tensile testing machine capable of indicating the force applied to the test specimen with an accuracy of ± 0.01 mm. The machine shall be equipped with a means of measuring the elongation of the test specimen during the test and with an accuracy of $\pm 1\%$ of the indicated value.
- (b) Micrometer complying with AS 2102 or vernier callipers complying with AS 1984.

3.3 Number of test specimens

Five test specimens shall be tested.