

Australian Standard™

AS 3572.10

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

Method 10: Determination of the initial ring stiffness of glass filament reinforced plastics pipes

1 SCOPE

This Standard sets out two alternative methods for determining the initial ring stiffness of glass filament reinforced plastics (GRP) pipes. Either a constant deflection or a constant load test method may be used.

NOTE: The constant deflection method is to be the referee method used in the case of a dispute.

2 PRINCIPLE

A section of pipe is subjected to a compressive load and the initial ring stiffness is determined from the load-deflection relationship. The principles of the alternative tests are as follows:

- (a) *Constant deflection test* A diametral, compressive load is applied to the specimen so that a deflection of $3.0 \pm 0.5\%$ is reached within 60 ± 10 s. The deflection is maintained for a further 2 min, and the load and deflection are measured at the end of this interval (see Figure 1).
- (b) *Constant load test.*

A diametral compressive load is applied to the specimen so that a deflection of $3.0 \pm 0.5\%$ is reached within 60 ± 10 s. The load is then maintained for a further 2 min, and the load and the deflection are measured at the end of this interval (see Figure 2).

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS	
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