Australian Standard®

# 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 ± 0.5 percent 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 ± 0.5 percent 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 documents below 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

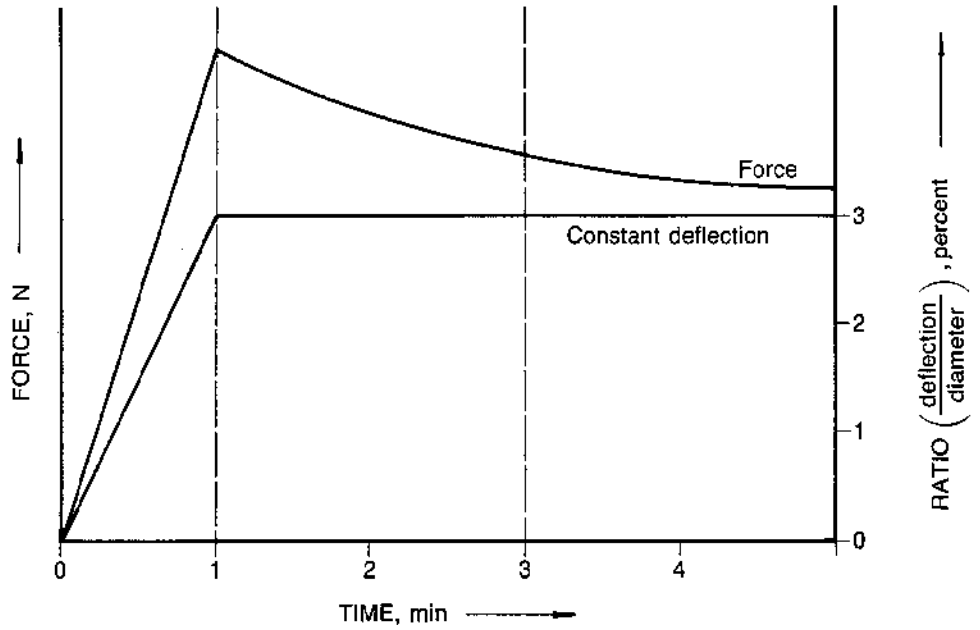


FIGURE 1 GRAPH FROM CONSTANT DEFLECTION TEST