

Australian Standard™

AS 2888.3

Methods of testing plastics waste fittings

Method 3: Methods for pressure testing of plastics waste fittings

1 SCOPE

This Standard sets out two methods for pressure testing a plastics waste fitting to establish whether the fitting body is sound, viz hydrostatic pressure and internal air pressure.

2 REFERENCED DOCUMENTS

The following standard is referred to in this standard:

AS

1349 Bourdon Tube Pressure and Vacuum Gauges

3 HYDROSTATIC PRESSURE TEST

3.1 Apparatus

The following apparatus is required:

- (a) *Pressurizing system* A pressurizing system capable of producing the specified test pressure without shock or pulsations.

NOTE: An hydraulic accumulator or pump may be used for this purpose.

- (b) *End connections* The test specimen shall be supported and held in a suitable jig. Openings shall be sealed by means of threaded caps or plugs or a suitable rubber sealing medium, set in plates or plugs located against the ends or in the socket at a depth no greater than 25% of the total socket length. Pressure shall be applied through one of the plugs.

NOTE: External clamping forces may be applied to the fitting to hold the sealing plates or plugs.

- (c) *Pressure gauge.* An industrial pressure gauge of 150 mm minimum diameter, complying with requirements of AS 1349 and capable of indicating the required test pressure to within $\pm 2\%$ of the true value.

NOTE: Digital or analogue pressure gauges which can be shown to provide the required indicating capabilities and have accuracy characteristics at least equal to industrial gauges complying with AS 1349, may be used.

3.2 Test specimen

The test specimen shall be the body of a plastics waste fitting.

3.3 Conditioning and testing

For referee tests the test specimen shall be conditioned in air at a temperature of $20 \pm 2^\circ\text{C}$ for a minimum of 24 h prior to testing in the same controlled environment. For routine tests, the test specimen may be tested at ambient conditions, but not exceeding 38°C .

3.4 Procedure

The procedure shall be as follows:

- (a) Mount the fitting body in a suitable test jig and connect to the pressurizing system.
- (b) Fill the test specimen with water ensuring that all air is excluded. Ensure that the outside of the fitting is free of drops or globules of water.
- (c) Apply test pressure gradually over a period of approximately 15 s, and hold for the test period as specified in the relevant fitting Standard.
NOTE: Adequate guarding should be provided to protect the operator.
- (d) At the completion of the test period and prior to the release of the pressure, examine the test specimen and record any weeping, cracking, leakage or other failure.

3.5 Report

The report shall include the following:

- (a) Size and configuration of fitting tested.
- (b) Test pressure applied to the test specimen.
- (c) Duration of test.
- (d) Any weeping, cracking, leakage or other failure of the test specimen.
- (e) The number of this Australian Standard including method of testing, i.e., 'Hydrostatic pressure test', AS 2888.3.

4 AIR PRESSURE TEST

4.1 Apparatus

The following apparatus is required:

- (a) *Pressurizing system* A device capable of producing the specified air pressure. The device shall be capable of maintaining an accuracy of $\pm 2\%$.
- (b) *End connections* A suitable jig to support and hold the test specimen. Openings shall be sealed by means of threaded caps or plugs or suitable rubber sealing medium set in plates or plugs located against the ends or in the socket at a depth of no greater than 25% of the total socket length. Pressure shall be applied through one of the plugs.
NOTE: External clamping forces may be applied to the fitting to hold the sealing plates on plugs.
- (c) *Testing environment* A water bath of a size suitable for full immersion of the test specimen.

4.2 Test specimen

The test specimen shall be the body of a plastics waste fitting.

4.3 Conditioning and testing

For referee tests, the test specimen shall be conditioned in air at a temperature of $20 \pm 2^\circ\text{C}$ for a minimum of 24 h prior to testing in the same controlled environment. For routine tests, the test specimen may be tested at ambient conditions, but not exceeding 38°C .

4.4 Procedure

The procedure shall be as follows:

- (a) Mount the fitting body in a suitable jig and submerge the fitting and jig into the water bath. The fitting shall not contain any water.