

Australian Standard™

AS 2888.4

Method of testing plastics waste fittings

Method 4: Method for air pressure/vacuum testing of plastics waste fittings

1 SCOPE

This standard sets out the method for determining the resistance of plastics waste fittings to the application of internal air pressure followed by a vacuum.

2 REFERENCED DOCUMENTS

The following standard is referred to in this standard:

AS

1349 Bourdon tube pressure and vacuum gauges

3 APPARATUS

The following apparatus is required:

- (a) *Pressurizing system* A device capable of producing specified air pressure. The device shall be capable of maintaining an accuracy of $\pm 2\%$.
- (b) *End connections* Water-tight connections shall be made to the fitting within the socket, or on the external surface. The seal shall be located not more than one-third of the depth of the socket from the open end of the socket, care being taken that undue pressure is not applied to the fitting.

The test specimen shall be supported and held in a suitable jig so that no external axial force is applied to the specimen in sealing off the openings and branches. Pressure shall be applied through one of the seals. Care shall be taken that apparatus used for testing fittings with screw threads does not cause notching of the thread.

Solvent cement shall not be used to make connections to fittings under test.

- (c) *Vacuum pump* A vacuum pump capable of producing the specified vacuum at a temperature up to 38°C .
- (d) *Pressure/vacuum gauge* A pressure/vacuum gauge complying with the requirements of AS 1349 and capable of indicating the required test pressure/vacuum to within $\pm 2\%$ of the true value.

NOTE: Digital or analogue pressure/vacuum gauges which can be shown to provide indicating capabilities and accuracy characteristics of the same or a higher degree, may be used.

- (e) *Torque wrench* A torque wrench or other device capable of tightening the assembly to the required torque to within $\pm 0.5 \text{ N.m}$.

4 TEST SPECIMEN

The test specimen shall be a complete fitting including any threaded components.

5 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 .

6 PROCEDURE

The procedure shall be as follows:

- (a) Assemble threaded components to the test specimen and tighten to the torque specified in the relevant fitting Standard.
- (b) Apply air test pressure gradually over a period of approximately 15 s and hold for the test period, as specified in the relevant fitting Standard.
- (c) At completion of test period and prior to release of test pressure, examine test specimen and the threaded joint and record any leakage.
- (d) Release air pressure and apply a negative test pressure (vacuum) gradually over a period of 15 s, as specified in the relevant fitting Standard.
- (e) When negative pressure has stabilized within the limits specified in the relevant fitting standard, isolate vacuum pump from test specimen and vacuum gauge, and commence timing.
- (f) Note gauge reading and record any increase in pressure over the test period, as specified in the relevant fitting standard.

7 REPORT

The report shall include the following:

- (a) Size and configuration of fitting tested.
- (b) Tightening torque used.
- (c) Air test pressure applied to the test specimen and duration of test.
- (d) Any leakage from the test specimen or threaded joint.
- (e) Negative test pressure applied to the test specimen and duration of test.
- (f) Any increase in pressure during the test.
- (g) The number of this Australian Standard, i.e., AS 2888.4.