Australian Standard™

Methods of test for hose made from elastomeric materials

Method 5: Hydrostatic pressure

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee RU/1, Industrial Hose, to supersede AS 1180.5—1993, *Methods of test for hose made from electrostatic materials,* Method 5: *Hydrostatic pressure*. It is based on and reproduced from ISO 1402:1994, *Rubber and plastic hoses and hose assemblies—Hydrostatic testing*. This Standard is being produced as an Australian only Standard.

The objective of this Standard is to provide safe methods of testing.

In some parts of this Standard, the Australian requirements differ from the ISO Standard. To accommodate these differences, a marginal bar is placed alongside the ISO text, and Appendix ZZ details the Australian specifications for the deviations.

The term 'normative' has been used in this Standard to define the application of the Appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

The differences between this edition and the 1993 edition are as follows:

(a) The test assembly or test pieces are conditioned at a standard temperature of 23 ±2°C immediately prior to testing.

(b) A warping requirement for hose has been included.

As this Standard is reproduced from an International Standard, the following applies:

(i) The number of this Standard appears on the cover and title page while the International Standard number appears only on the cover.

(ii) In the source text 'this International Standard' should read 'this Australian Standard'.

(iii) A full point substitutes for a comma when referring to a decimal marker.

(iv) The reference to International Standards should be replaced by the equivalent Australian Standards, as follows:

ISO		AS	
471	Rubber—Times, temperatures and humidities for conditioning and testing	1683	Methods of test for rubber
		1683.20	Method 20: Standard temperatures, humidities and times for conditioning and testing test pieces
4671	Rubber and plastic hose assemblies—Methods of measurement of dimensions	1180	Methods of test for hose made from elastomeric materials
		1180.1	Method 1: Dimensions

NOTES

METHOD

Rubber and plastics hoses and hose assemblies — Hydrostatic testing

1 Scope

This International Standard specified methods for the hydrostatic testing of rubber and plastics hoses and hose assemblies, including methods for the determination of dimensional stability.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 471:—[1)] *Rubber — Times, temperatures and humidities for conditioning and testing.*

ISO 4671:1984, *Rubber and plastics hose and hose assemblies — Methods of measurement of dimensions.*

ISO 7751:1991, *Rubber and plastics hoses and hose assemblies — Ratios of proof and burst pressure to design working pressure.*

3 General

Unless otherwise specified, all tests shall be carried out at standard temperature (see ISO 471).

4 Apparatus

4.1 Pressure source, capable of applying pressure at the rate specified in 6.2.2, up to the required test pressure.

4.2 Calibrated pressure gauge or **pressure transducers with digital readouts**, chosen for each test so that the test pressure is between 15 % and 85 % of the full-scale reading.

In the interest of accuracy, calibrated pressure gauges or pressure transducers with digital readouts shall be checked at frequent intervals and the fitting of restrictors is recommended to minimize shock damage.

4.3 Sliding vernier callipers or **micrometer**, and **measuring tape**.

5 Test pieces

5.1 Hose assemblies

When hose assemblies are to be tested, the manufactured assembly length shall be used for the test.

5.2 Hoses

The hydrostatic pressure and burst tests shall be carried out on a hose test piece with a minimum free length, excluding end fittings and end reinforcements, of 600 mm when deformation is to be measured and 300 mm when it is not.

1) To be published. (Combination and revision of ISO 471:1983 and ISO 1826:1981)