

INTERNATIONAL STANDARD

**ISO
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1994-12-01

Rubber and plastics hoses and hose assemblies — Hydrostatic testing

*Tuyaux et flexibles en caoutchouc et en plastique — Essais
hydrostatiques*



Reference number
ISO 1402:1994(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 1402 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Hoses (rubber and plastics)*.

This third edition cancels and replaces the second edition (ISO 1402:1984), which has been technically revised.

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Rubber and plastics hoses and hose assemblies — Hydrostatic testing

1 Scope

This International Standard specifies 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)