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**Rubber and plastics hoses and hose  
assemblies — Ratios of proof and  
burst pressure to maximum working  
pressure**

*Tuyaux et flexibles en caoutchouc et en plastique — Rapports des  
pressions d'épreuve et de rupture à la pression maximale de service*

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## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*.

This third edition cancels and replaces the second edition (ISO 7751:1991), which has been technically revised. It also incorporates the Amendment ISO 7751:1991/Amd.1:2011.

The main changes are as follows:

- the term “design working pressure” has been replaced by “maximum working pressure” throughout the text in accordance with ISO 7751:1991/Amd.1:2011;
- a new category (hoses for delivery of cement, concrete, plaster and grout) has been added.

# Rubber and plastics hoses and hose assemblies — Ratios of proof and burst pressure to maximum working pressure

## 1 Scope

This document specifies ratios of proof pressure and minimum burst pressure to maximum working pressure for various categories of hose service.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1402, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

## 4 Proof pressure ratio

The methods and procedures to perform the proof tests are specified in ISO 1402.

The ratio of proof pressure to maximum working pressure shall, unless otherwise specified, in the relevant hose/hose assembly product standard, be in accordance with [Table 1](#), which states the pressures for guidance only. When the hose product standard specifies different pressures, these pressures shall be used when testing the hoses.

## 5 Minimum burst pressure ratio

The methods and procedures to perform the burst tests are specified in ISO 1402.

The ratio of minimum burst pressure to maximum working pressure shall, unless otherwise specified, in the relevant hose/hose assembly product standard, be in accordance with [Table 1](#).

**Table 1 — Ratios of proof and minimum burst pressure to maximum working pressure**

No.	Type of service (for guidance only)	Ratio of proof pressure to maximum working pres- sure	Ratio of minimum burst pressure to maximum working pressure
1	Water hose, maximum working pressure 1 MPa (10 bar)	1,5	3,0
2	Hose for all other liquids, solid materials suspended in liquids or air, and water hose, maximum working pressure more than or equal to 1 MPa (10 bar)	2,0	4,0
3	Hose for compressed air and other gases	2,0	4,0
4	Hose for liquid media that change into the gaseous state when subjected to a reduction in pressure, i.e. released to atmosphere	2,5	5,0
5	Steam hose	5,0	10,0
6	Jetting hose	1,5	2,5
7	Hoses for the delivery of cement, concrete, plaster and grout	1,5	2,0

NOTE The ratios of proof and minimum burst pressures stated in [Table 1](#) are intended to be used for guidance only, when the hose product standard concerned does not specify these pressures for the various types and classes of hoses and hose assemblies covered by that standard.