International Standard 1403

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Rubber hoses for water, general purpose — Specification

Tuyaux en caoutchouc pour l'eau, à usages généraux — Spécifications

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 1403 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

This second edition cancels and replaces the first edition (ISO 1403-1976), of which clauses 1 to 4, sub-clause 5.2 and clauses 6 and 7 have been technically revised.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Rubber hoses for water, general purpose — Specification

1 Scope and field of application

This International Standard specifies the minimum acceptance requirements for the satisfactory performance of three types of general purpose rubber water hose for use at up to 60 °C:

Type 1 — Low pressure: Designed for a maximum working pressure of 0,6 MPa (6 bar) for all sizes.

Type 2 — Medium pressure: Designed for a maximum working pressure of 1,0 MPa (10 bar) for sizes up to and including 50 mm nominal bore.

Type 3 — High pressure: Designed for a maximum working pressure of 2,5 MPa (25 bar) for sizes up to and including 25 mm nominal bore.

NOTE — These hoses should not be used for conveying potable (drinking) water.

The list of nominal bore sizes given in table 1, based on the R 10 series of preferred numbers (see ISO 3), is not intended to be restrictive and does not preclude the manufacture of sizes outside this list which may be the subject of individual national standards.

2 References

ISO 3, *Preferred numbers — Series of preferred numbers.*

ISO 37, *Rubber, vulcanized — Determination of tensile stress-strain properties.*

ISO 188, *Rubber, vulcanized — Accelerated ageing or heat-resistance tests.*

ISO 1307, *Rubber and plastics hoses — Bore diameters and tolerances on length.*

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

ISO 7326, *Rubber and plastics hoses — Assessment of ozone resistance under static conditions.*

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

ISO 8033, *Rubber and plastics hose — Determination of adhesion between components.*

3 Construction

The hose shall consist of

— a rubber lining;

— a reinforcement of natural or synthetic fibres;

— a rubber cover.

4 Sizes and tolerances

4.1 Nominal bore

The bore of the hose shall be in accordance with the nominal dimensions and tolerances given in table 1, which is in accordance with ISO 1307.

Table 1 — Nominal bores and tolerances

Values in millimetres

Nominal bore	Tolerance
10	± 0,75
12,5	± 0,75
16	± 0,75
20	± 0,75
25	± 1,25
31,5	± 1,25
40	± 1,50
50	± 1,50
63	± 1,50
80	± 2,00
100	± 2,00

NOTE — If special cases call for extra sizes:

a) for smaller or larger dimensions, further numbers shall be chosen from the R 10 series of preferred numbers (see ISO 3) with tolerances as specified in ISO 1307;

b) for intermediate dimensions, numbers shall be chosen from the R 20 series of preferred numbers (see ISO 3), with the tolerances as for the next larger bore size from the R 20 series.