

BS 3165:2009



BSI Standards Publication

Rubber suction hose and hose assemblies with semi-embedded wire helix for fire-fighting purposes – Requirements and test methods

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Contents

Foreword *ii*

1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Classification	2
5	Rubber hose and hose assemblies	2
6	Performance testing	5
7	Hose assemblies	6
8	Marking	7

Annexes

Annex A (normative) Method of test for vacuum resistance with flexing **8**

Annex B (normative) Method of test for flexibility **9**

Bibliography **11**

List of figures

Figure 1 – Longitudinal cross-section of typical Class B hose construction **2**

Figure B.1 – Apparatus for flexibility test **10**

List of tables

Table 1 – Inside diameter of hose and length of soft end **3**

Table 2 – Minimum thickness of hose lining and cover **3**

Table 3 – Minimum tensile strength and elongation at break of rubber lining and cover material **4**

Table 4 – Maximum mass of rubber hose **4**

Table 5 – Hydrostatic pressure requirements **5**

Table 6 – Minimum deflection for flexibility test **6**

Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 12, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI and came into effect on 31 August 2009. It was prepared by Subcommittee FSH/17/8, *Hydrants, hoses and associated water delivery equipment*, under the authority of Technical Committee FSH/17, *Fire brigade equipment*. A list of organizations represented on these committees can be obtained on request to their secretary.

Supersession

Together with BS EN ISO 14557:2002, this British Standard supersedes BS 3165:1986, which is withdrawn.

Relationship with other publications

Requirements for Class A and Class C hoses are specified in BS EN ISO 14557:2002.

Information about this document

This revision was undertaken after the publication of BS EN ISO 14557:2002, which specifies requirements for Class A and Class C hoses and partially superseded BS 3165:1986, to preserve the requirements for Class B hose.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements and test methods for Class B rubber suction hose and suction hose assemblies with a semi-embedded wire helix for fire-fighting purposes. This class of hose is further divided into Type 1 and Type 2 according to the design working pressure (see Clause 4).

NOTE 1 The requirements and test methods for other types of rubber and plastics suction hoses for fire-fighting purposes are specified in BS EN ISO 14557:2002.

This standard is applicable to hoses and hose assemblies that are for use primarily for suction duty but that are also suitable for water delivery.

NOTE 2 All pressures are expressed in megapascals. 1 MPa = 10 bar.

2 Normative references

The following referenced documents are indispensable for the application 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.

BS 336, *Specification for fire hose couplings and ancillary equipment*

BS 3558 (both parts), *Glossary of rubber terms*

BS EN 10244-2, *Steel wire and wire products – Non-ferrous metallic coatings on steel wire – Part 2: Zinc or zinc alloy coatings*

BS EN 10324, *Steel wire and wire products – Hose reinforcement wire*

BS EN ISO 1402, *Rubber and plastics hoses and hose assemblies – Hydrostatic testing*

BS EN ISO 4671:2007, *Rubber and plastics hoses and hose assemblies – Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

BS EN ISO 7233, *Rubber and plastics hoses and hose assemblies – Determination of resistance to vacuum*

BS EN ISO 8033, *Rubber and plastics hoses – Determination of adhesion between components*

BS EN ISO 8330, *Rubber and plastics hoses and hose assemblies – Vocabulary*

BS ISO 37, *Rubber, vulcanized or thermoplastic – Determination of tensile stress-strain properties*

BS ISO 188, *Rubber, vulcanized or thermoplastic – Accelerated ageing and heat resistance tests*

3 Terms and definitions

For the purposes of this British Standard, the terms and definitions given in BS 3558 (both parts) and BS EN ISO 8330 apply.

4 Classification

4.1 Hose and hose assemblies shall be classified as follows:

- a) Type 1: medium duty suction hose with a design working pressure up to and including 0.5 MPa at ambient temperatures in the range $-30\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$;
- b) Type 2: heavy duty suction hose with a design working pressure up to and including 0.75 MPa at ambient temperatures in the range $-30\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$.

5 Rubber hose and hose assemblies

5.1 Construction

Suction hose shall consist of the following components:

- a) an internal semi-embedded wire helix;
- b) a rubber lining;
- c) textile reinforcement;
- d) an embedded wire helix;
- e) a rubber cover.

NOTE An illustration of the longitudinal cross-section of a typical Class B hose is given in Figure 1.

5.2 Wire helices

5.2.1 All helix wire shall conform to BS EN 10324 and shall be galvanized in accordance with BS EN 10244-2.

5.2.2 The wire used for the internal semi-embedded helix shall have a minimum tensile strength of $1\,250\text{ N/mm}^2$.

5.2.3 The wire used for the embedded helix shall have a minimum tensile strength of 650 N/mm^2 .

Figure 1 Longitudinal cross-section of typical Class B hose construction

