

This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

**BS EN ISO 6224:2011**



BSI Standards Publication

# Thermoplastics hoses, textile-reinforced, for general-purpose water applications — Specification (ISO 6224:2011)

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

*raising standards worldwide™*



This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

This British Standard is the UK implementation of EN ISO 6224:2011. It supersedes BS EN ISO 6224:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/66/-/1, Rubber and plastics tubing, hoses and hose assemblies - Industrial, chemical and petrochemical applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

© BSI 2011

ISBN 978 0 580 65919 5

ICS 23.040.70

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

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2011.

#### **Amendments issued since publication**

Date	Text affected
------	---------------

---

This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

## EUROPÄISCHE NORM

October 2011

ICS 23.040.70

Supersedes EN ISO 6224:2008

English Version

## Thermoplastics hoses, textile-reinforced, for general-purpose water applications - Specification (ISO 6224:2011)

Tuyaux en matières thermoplastiques à armature textile d'usage général pour l'eau - Spécifications (ISO 6224:2011)

Kunststoffschläuche mit Textileinlage für allgemeine Anwendungen mit Wasser - Anforderung (ISO 6224:2011)

This European Standard was approved by CEN on 30 September 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

## Foreword

This document (EN ISO 6224:2011) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 6224:2008.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### Endorsement notice

The text of ISO 6224:2011 has been approved by CEN as a EN ISO 6224:2011 without any modification.

This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

Foreword .....	iv
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Classification</b> .....	<b>2</b>
<b>5 Materials and construction</b> .....	<b>2</b>
<b>6 Dimensions</b> .....	<b>2</b>
<b>6.1 Inside diameters and tolerances on inside diameter</b> .....	<b>2</b>
<b>6.2 Concentricity</b> .....	<b>3</b>
<b>6.3 Tolerance on length</b> .....	<b>3</b>
<b>6.4 Minimum wall thickness</b> .....	<b>3</b>
<b>7 Physical properties</b> .....	<b>3</b>
<b>7.1 Thermoplastic materials</b> .....	<b>3</b>
<b>7.2 Finished hoses</b> .....	<b>4</b>
<b>8 Type, routine and production testing</b> .....	<b>4</b>
<b>9 Test certificate/report</b> .....	<b>4</b>
<b>10 Marking</b> .....	<b>5</b>
<b>11 Recommendations for packaging and storage</b> .....	<b>5</b>
<b>Annex A (normative) Type testing and routine testing</b> .....	<b>6</b>
<b>Annex B (informative) Recommended tests for production testing</b> .....	<b>7</b>

This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 6224 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Hoses (rubber and plastics)*.

This fourth edition cancels and replaces the third edition (ISO 6224:2005), which has been technically revised. The main changes are as follows:

- Table 1 includes four additional inside diameters (4 mm, 6 mm, 8 mm and 9 mm) for each type of hose;
- in Table 3, the requirement for the minimum adhesion between components has been raised from 1,5 kN/m to 2,0 kN/m;
- annexes giving schedules for type, routine and production testing have been added.

This is a preview of "BS EN ISO 6224:2011". [Click here to purchase the full version from the ANSI store.](#)

# Thermoplastics hoses, textile-reinforced, for general-purpose water applications — Specification

**WARNING** — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate health and safety practices and to ensure compliance with any national regulatory conditions.

## 1 Scope

This International Standard specifies the requirements for general-purpose textile-reinforced thermoplastics water-discharge hoses.

Three types of hose are specified according to their operating duty requirements, i.e. their ambient and water temperature ranges:

- ambient temperatures:  $-10\text{ °C}$  to  $+60\text{ °C}$ ;
- water temperature during operation:  $0\text{ °C}$  to  $+60\text{ °C}$ .

NOTE At water temperatures above  $23\text{ °C}$  and particularly above  $40\text{ °C}$ , the maximum working pressure will be reduced.

These hoses are not intended to be used for conveyance of potable (drinking) water, for washing-machine inlets, as fire-fighting hoses, for special agricultural machines or as gardening hoses for the consumer market.

## 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.

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

ISO 176:2005, *Plastics — Determination of loss of plasticizers — Activated carbon method*

ISO 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

ISO 1307, *Rubber and plastics hoses — Hose sizes, minimum and maximum inside diameters, and tolerances on cut-to-length hoses*

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

ISO 4671, *Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

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

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 8331, *Rubber and plastics hoses and hose assemblies — Guidelines for selection, storage, use and maintenance*

ISO 10619-1:—<sup>1)</sup>, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature*

1) To be published. (Revision of ISO 1746:1998)