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**BS EN ISO 7840:2013**



**BSI Standards Publication**

## **Small craft — Fire-resistant fuel hoses (ISO 7840:2013)**

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This British Standard is the UK implementation of EN ISO 7840:2013. It supersedes BS EN ISO 7840:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GME/33, Small craft.

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.

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

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

Date	Text affected
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## EUROPÄISCHE NORM

July 2013

ICS 47.080

Supersedes EN ISO 7840:2004

English Version

## Small craft - Fire-resistant fuel hoses (ISO 7840:2013)

Petits navires - Tuyaux souples pour carburant résistants  
au feu (ISO 7840:2013)

Kleine Wasserfahrzeuge - Feuerwiderstandsfähige  
Kraftstoffschläuche (ISO 7840:2013)

This European Standard was approved by CEN on 8 June 2013.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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## Foreword

This document (EN ISO 7840:2013) has been prepared by Technical Committee ISO/TC 188 "Small craft".

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 January 2014, and conflicting national standards shall be withdrawn at the latest by January 2014.

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 7840:2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 7840:2013 has been approved by CEN as EN ISO 7840:2013 without any modification.

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## Annex ZA (informative)

### Relationship between this Standard and the Essential Requirements of EU Directive 94/25/EC as amended by Directive 2003/44/EC

By agreement between ISO and CEN, this CEN annex is included in the DIS and the FDIS but will not appear in the published ISO standard.

This Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 94/25 EC as amended by Directive 2003/44/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

**Table ZA.1 — Correspondence between this Standard and EU Directive 94/25/EC  
as amended by Directive 2003/44/EC**

Clause(s)/sub-clause(s) of this standard	Essential Requirements (ERs) of EU Directive 94/25/EC as amended by Directive 2003/44/EC	Qualifying remarks/Notes
All clauses	Annex I A, Clause 5.1.1, Inboard Engine  Annex I A, Clause 5.2.1, Fuel system, General  Annex I A, Clause 5.6.1, Fire protection, General  Annex II, Components, 4	This standard is relevant in respect of fuel filling lines and fuel vent lines installed both inside and outside the engine compartment.  It does not apply to hoses installed entirely within the splash well and connected directly to an outboard engine.

**WARNING:** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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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. [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. [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.

The committee responsible for this document is ISO/TC 188, *Small craft*.

This fourth edition cancels and replaces the third edition (ISO 7840:2004), which has been technically revised, mainly concerning test liquids in [5.2](#) to cover hoses' long-term resistance to petrol fuel mixed with ethanol as well as diesel fuel mixed with Fatty Acid Methyl Esters (FAME).

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# Small craft — Fire-resistant fuel hoses

## 1 Scope

This International Standard specifies general requirements and physical tests for fire-resistant hoses for conveying petrol or petrol blended with ethanol and diesel fuel or diesel fuel blended with FAME, designed for a working pressure not exceeding 0,34 MPa for hoses with nominal bore up to and including 10 mm and 0,25 MPa for hoses up to 63 mm inner diameter in craft of hull length up to 24 m.

It applies to hoses for small craft with permanently installed fuel systems. It does not apply to hoses entirely within the splash well at the stern of the craft connected directly to an outboard engine.

Specifications for non-fire-resistant fuel hoses are given in ISO 8469<sup>[1]</sup>. Specifications for permanently installed fuel systems are given in ISO 10088.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3:1973, *Preferred numbers — Series of preferred numbers*

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 1817:2011, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 7233:2006, *Rubber and plastics hoses and hose assemblies — Determination of resistance to vacuum*

ISO 7326:2006, *Rubber and plastics hoses — Assessment of ozone resistance under static conditions*

ISO 10088:—<sup>1)</sup>, *Small craft — Permanently installed fuel systems*

EN 14214:2008+Amd.1:2009, *Automotive fuels — Fatty acid methyl esters (FAME) for diesel engines — Requirements and test methods*

## 3 General requirements

Hoses complying with this International Standard shall present a non-porous, smooth inner surface, free from defects and chemical contaminants.

Hoses shall demonstrate suitability for marine use by complying with the requirements of the tests in [Clause 5](#). They shall be marked according to [Clause 6](#).

## 4 Nominal bore

[Table 1](#) gives some of the inner diameters based on series R 10 of ISO 3:1973. Tolerances shall conform to ISO 1307 or the values given in [Table 1](#).

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1) To be published.