This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN 1360:2013

Rubber and plastic hoses and hose assemblies for measured fuel dispensing systems - Specification

© CEN 2013 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN 1360:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:
EN 1360:2005

This document is based on:
EN 1360:2013

Published:
26 June, 2013

This document was published under the authority of the NSAI and comes into effect on:
26 June, 2013

ICS number:
23.040.70
75.200

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W **NSAI.ie**

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

I.S. EN 1360:2013

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1360

June 2013

ICS 23.040.70; 75.200

Supersedes EN 1360:2005

English Version

Rubber and plastic hoses and hose assemblies for measured fuel dispensing systems - Specification

Tuyaux et flexibles en caoutchouc et en plastique pour distribution mesurée de carburant - Spécifications

Zapfstellenschläuche und -schlauchleitungen aus Gummi und Kunststoff - Anforderungen

This European Standard was approved by CEN on 25 April 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

© 2013 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 1360:2013: E

This is a free page sample. Access the full version online.

Contents

Page

Foreword 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 5

4 Classification 6

5 Materials and construction 6

6 Pressure requirements 6

7 Dimensions and tolerances 6
7.1 Internal diameters and bend radii 6
7.2 Minimum thickness of lining and cover 7
7.3 Concentricity 7
7.4 Tolerance on cut lengths 7

8 Physical properties 7
8.1 Compounds 7
8.2 Finished hose 9
8.3 Hose assembly 10

9 End fittings 10

10 Type tests 11

11 Frequency of testing 11

12 Marking 11
12.1 Hoses 11
12.2 End fittings 11
12.3 Hose assemblies 12

Annex A (normative) **Test method for determination of low temperature resistance at –30 °C (for normal temperature class) and –40 °C (for low temperature class)** 13
A.1 Test piece 13
A.2 Apparatus 13
A.3 Test method 13

Annex B (normative) **Method for the determination of adhesion between components** 14
B.1 Dry adhesion 14
B.2 Adhesion after contact with fuel 14

Annex C (normative) **Test method for the determination of low temperature flexibility** 15
C.1 Test piece 15
C.2 Apparatus 15
C.3 Test method 15

Annex D (normative) **Test method for the determination of fuel permeation** 17
D.1 Test piece 17
D.2 Apparatus 17
D.3 Test method 17

Annex E (normative) **Test method for flammability** 18
E.1 Test pieces 18
E.2 Apparatus 18
E.3 Test method 18

Annex F (normative) **End-fitting pull-off test** 20

This is a free page sample. Access the full version online.

F.1 Test piece **20**
F.2 Apparatus **20**
F.3 Test method **20**

Annex G (normative) **Test method for the determination of leakage (leak test)** **21**

Annex H (normative) **Test method for fatigue strength under reversed bending stress (flex test)** **22**
H.1 Apparatus and test pieces **22**
H.2 Test method **22**
H.3 Test observations and report **23**

Annex I (normative) **Test frequency for type tests and routine tests** **24**

Annex J (informative) **Test frequency for production acceptance tests** **26**

Bibliography **28**

This is a free page sample. Access the full version online.

Foreword

This document (EN 1360:2013) has been prepared by 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 December 2013, and conflicting national standards shall be withdrawn at the latest by December 2013.

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 1360:2005.

Compared with EN 1360:2005, the following fundamental changes were made:

a) In Table 1 hoses with nominal bores of 35 and 50 have been included;

b) The normative references have been updated.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

This is a free page sample. Access the full version online.

1 Scope

This European Standard specifies minimum requirements and test methods for verification for three types of hoses in two grades and two classes of hose assemblies used for measured fuel dispensing, including oxygenated fuels (up to a maximum of 15 % oxygenated compounds).

The assemblies are intended for use at ambient temperatures between –30 °C and +55 °C for normal temperature class and –40 °C and +55 °C for low temperature class at a working pressure ≤ 16 bar[1)].

As part of the certification of a new dispenser, testing of fuel samples in accordance with EN 228 and EN 590 should be carried out at least eight weeks after the first use of the equipment to avoid unrepresentative sulphur content results.

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.

EN 26801, *Rubber or plastics hoses — Determination of volumetric expansion (ISO 6801)*

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

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

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

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

EN ISO 8031:2009, *Rubber and plastics hoses and hose assemblies — Determination of electrical resistance and conductivity (ISO 8031:2009)*

EN ISO 8033, *Rubber and plastics hose — Determination of adhesion between components (ISO 8033)*

EN ISO 8330:2008, *Rubber and plastics hoses and hose assemblies — Vocabulary (ISO 8330:2007)*

EN ISO 10619-1, *Rubber or plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature (ISO 10619-1)*

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

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

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

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

ISO 4649:2010, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 8330:2008 apply.

1) 1 bar = 0,1 MPa

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation