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I.S. EN 13483:2013

Rubber and plastic hoses and hose assemblies with internal vapour recovery for measured fuel dispensing systems - Specification

I.S. EN 13483:2013

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English Version

Rubber and plastic hoses and hose assemblies with internal vapour recovery for measured fuel dispensing systems - Specification

Tuyaux et flexibles en caoutchouc et en plastique à récupération interne de vapeur pour systèmes de livraison mesurée de carburant - Spécification

Gummi- und Kunststoffschläuche und -schlauchleitungen mit innenliegender Gasrückführung für Zapfsäulen an Tankstellen - Anforderungen

This European Standard was approved by CEN on 25 April 2013.

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Contents	Page
Foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Classification.....	6
5 Materials and construction	6
5.1 Fuel hose	6
5.2 Vapour hose	7
5.3 Vapour tubing.....	7
5.4 Vapour recovery fuel hose assembly	7
6 Pressure requirements.....	7
7 Dimensions and tolerances	7
7.1 Diameters and bend radii.....	7
7.2 Minimum thickness of lining and cover of the fuel hose	8
7.3 Concentricity	8
7.4 Tolerance on cut lengths	8
8 Physical properties.....	8
8.1 Compounds	8
8.2 Finished hoses/tubing.....	9
8.3 Hose assembly.....	11
9 End fittings	11
10 Type tests	12
11 Frequency of testing	13
12 Marking	13
12.1 Hoses	13
12.2 End fittings	13
12.3 Hose assemblies.....	13
Annex A (normative) Test method for determination of low temperature class resistance at – 30 °C (for normal temperature class) and –40 °C (for low temperature class)	14
A.1 Test piece	14
A.2 Apparatus	14
A.3 Test method.....	14
Annex B (normative) Test method for pressure requirements of vapour recovery hoses and tubes	15
B.1 Principle	15
B.2 Test method.....	15
Annex C (normative) Test method for determination of change in length due to swelling	16
C.1 Principle.....	16
C.2 Test method.....	16
Annex D (normative) Test method for determination of pressure loss.....	17
D.1 Vapour tubing/hose	17
D.2 Fuel hose	17
Annex E (normative) Method for determination of adhesion between components	18
E.1 Dry adhesion	18
E.2 Adhesion after contact with fuel	18

Annex F (normative) Test method for the determination of low temperature flexibility	19
F.1 Test piece	19
F.2 Apparatus	19
F.3 Test method	19
Annex G (normative) Test method for the determination of rate of fuel permeation	21
G.1 Test piece	21
G.2 Apparatus	21
G.3 Test method	21
Annex H (normative) Test method for flammability	22
H.1 Test piece	22
H.2 Apparatus	22
H.3 Test method	22
Annex I (normative) Test method for the determination of leakage (leak test)	24
Annex J (normative) Test method for fatigue strength under reversed bending stresses (flex test).....	25
J.1 Apparatus and test piece	25
J.2 Test method	25
J.3 Test observations and report	26
Annex K (normative) End-fitting pull-off test	27
K.1 Test piece	27
K.2 Apparatus	27
K.3 Test method	27
Annex L (normative) Test frequency for type tests and routine tests.....	28
Annex M (informative) Test frequency for production acceptance tests	30
Bibliography.....	32

Foreword

This document (EN 13483:2013) 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 13483:2005.

Compared with EN 13483:2005, the following fundamental changes have been made:

- a) In Table 3 "Physical properties of compounds" the compound "Thermoplastic" has been added.
- b) In Annex L the testing of the ozone resistance has been deleted.
- c) The normative references have been updated.

WARNING — Persons using this document should be familiar with normal laboratory practice. This document 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.

1 Scope

This European Standard specifies the requirements and test methods for verification for hose assemblies with vapour recovery for delivery systems on petrol filling stations.

The hose assemblies with vapour recovery for delivery systems on petrol filling stations need to be capable of withstanding anticipated mechanical, thermal and chemical stressing and be resistant to the combustible liquids used in these applications as well as their vapour and vapour air mixtures. It is imperative that the assemblies be constructed in such a way that actions during normal operation cannot give rise to dangerous electrostatic charges nor that there will be any reduction in the performance of the vapour recovery.

The assemblies are intended for use at ambient temperatures between -30 °C and $+55\text{ °C}$ for normal temperature class and -40 °C and $+55\text{ °C}$ for low temperature class at a working pressure $\leq 16\text{ bar}^{1)}$.

Hoses can be constructed from rubber or thermoplastic elastomer (TPE) and this document specifies the requirements for three types of hoses in two grades and two classes of hose assemblies for measured fuel dispensing systems, including oxygenated fuels ($\leq 15\%$ oxygenated compounds) with internal vapour recovery tubing or hose.

NOTE This European Standard is not applicable to multi chamber fuel dispensing hoses.

As part of the certification of a new dispenser, testing of fuel samples in accordance with EN 228 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 10691-1)*

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

1) 1 bar = 0,1 MPa

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