

MAURITIAN  
STANDARD

MS EN  
**16436-1:2014**  
(incorporating A1:2015 and A2:2018)

First edition  
2019-07-27

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**Rubber and plastics hoses,  
tubing and assemblies for  
use with propane and  
butane and their mixture in  
the vapour phase  
-Part 1: Hoses and tubings**

ICS: 23.040.70

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**Mauritius Standards Bureau**

**Moka**

This national standard is the identical implementation of EN 16436-1:2018 and is adopted with the permission of CEN, Avenue Marnix 17, B-1000 Brussels, Belgium.

## National Foreword

This Mauritian Standard is identical with the European Norm **EN 16436-1+Amd 1: 2015 and Amd 2: 2018, Rubber and plastics hoses, tubing and assemblies for use with propane and butane and their mixture in the vapour phase- Part 1: Hoses and tubings**. It was adopted by the Mauritius Standards Bureau on the recommendation of the **Mechanical Engineering Standards Committee** through its **Subcommittee on LPG appliances** and approved by the **Standards Council** on **27 June 2019**. It was notified in the **Government Gazette** on **27 July 2019\***.

For the purpose of this standard the following changes should be made:

- the words 'European Norm' should be replaced by 'Mauritian Standard';
- the 'decimal comma' should be replaced by 'decimal point'.

### General notice no 1373 of 2019



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*Mauritius Standards Bureau  
Villa Road  
Moka  
Mauritius*

*Telephone + (230) 433 3648  
Fax + (230) 433 5051/ 433 5150  
E-mail msb@intnet.mu*

English Version

## Rubber and plastics hoses, tubing and assemblies for use with propane and butane and their mixtures in the vapour phase - Part 1: Hoses and tubings

Tuyaux, tubes et flexibles en caoutchouc et en plastique pour utilisation avec le propane, le butane et leurs mélanges en phase vapeur - Partie 1: Tuyaux et tubes

Gummi- und Kunststoffschläuche und -Schlauchleitungen mit und ohne Einlage zur Verwendung mit Propan, Butan und deren Gemischen in der Gasphase - Teil 1: Schläuche mit und ohne Einlage

This European Standard was approved by CEN on 6 March 2014 and includes Amendment 1 approved by CEN on 1 October 2015 and Amendment 2 approved by CEN on 13 May 2018.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 16436-1:2014+A2:2018) has been prepared by Technical Committee CEN/TC 181 “Dedicated liquefied petroleum gas appliances”, the secretariat of which is held by AFNOR.

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 March 2019, and conflicting national standards shall be withdrawn at the latest by March 2019.

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

This document includes Amendment 1, approved by CEN on 2015-10-01 and Amendment 2, approved by CEN on 2018-05-13.

This document supersedes <sup>A2</sup> EN 16436-1:2014+A1:2015 <sup>A2</sup>.

The start and finish of text introduced or altered by amendment is indicated in the text by tags <sup>A1</sup> <sup>A1</sup> and <sup>A2</sup> <sup>A2</sup>.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies the characteristics and performance requirements for tubing and hoses made of either rubber or plastics for use with commercial propane and commercial butane and mixtures thereof, in the vapour phase, for connection of appliances, from:

- pressurized gas container to a regulating device,
- pressurized gas container to an appliance,
- regulating device to an appliance, and
- regulating device to installation pipework,

in environments of a temperature range from  $-30\text{ °C}$  to  $+70\text{ °C}$ . Working pressures are from 0 bar to 30 bar.

Three classes are defined in Table 1 according to the maximum working pressures and minimum ambient temperatures.

This European Standard only covers the tubing or hose part of assemblies. The assemblies themselves will be covered by EN 16436-2.

This European Standard does not apply to hoses for:

- welding purposes (see EN ISO 3821, EN 1327);
- propulsion purposes;
- LPG transfer purposes (see EN 1762).

## 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 ISO 176, *Plastics — Determination of loss of plasticizers — Activated carbon method (ISO 176)*

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

EN ISO 4080, *Rubber and plastics hoses and hose assemblies — Determination of permeability to gas (ISO 4080)*

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

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

EN ISO 10619-2, *Rubber and plastics hoses and tubing - Measurement of flexibility and stiffness — Part 2: Bending tests at sub-ambient temperatures (ISO 10619-2)*