



BSI Standards Publication

LPG equipment and accessories — Composite piping for use with LPG in liquid phase and vapour pressure phase — Design and manufacture

National foreword

This British Standard is the UK implementation of EN 17613:2022.

The UK participation in its preparation was entrusted to Technical Committee PVE/19, LPG containers and their associated fittings.

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

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2022
Published by BSI Standards Limited 2022

ISBN 978 0 539 15024 7

ICS 23.040.01

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 September 2022.

Amendments/corrigenda issued since publication

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

English Version

LPG equipment and accessories - Composite piping for use
with LPG in liquid phase and vapour pressure phase -
Design and manufacture

Équipements pour gaz de pétrole liquéfié et leurs
accessoires - Canalisations composites pour GPL en
phase liquide et phase vapeur - Conception et
fabrication

Flüssiggas-Geräte und Ausrüstungsteile - Verrohrung
aus Verbundwerkstoffen zum Einsatz mit LPG in der
Flüssig- und Gasdruck-Phase - Auslegung und
Herstellung

This European Standard was approved by CEN on 22 May 2022.

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 24 August 2022.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



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

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

Contents

Page

European foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Materials.....	7
5 Design criteria	7
6 Environmental considerations.....	7
7 Testing.....	7
7.1 General.....	7
7.1.1 Introduction	7
7.1.2 Number of samples.....	7
7.1.3 Combined tests.....	8
7.1.4 Protocol for retesting.....	8
7.1.5 Summary of tests	8
7.2 Test methods	9
7.2.1 Internal burst pressure test	9
7.2.2 Hydrostatic strength test.....	9
7.2.3 Fatigue test	9
7.2.4 Fitting pull-out test.....	10
7.2.5 Puncture test.....	10
7.2.6 Permeation test.....	10
7.2.7 LPG compatibility test	13
7.3 Static electricity	13
7.3.1 General.....	13
7.3.2 Classification of pipe	13
7.3.3 Requirements for insulating plastic pipe systems.....	13
8 Marking pipe and connectors	13
9 Manuals.....	14
9.1 Product manual	14
9.2 Installation manual	14
10 Records	14
Bibliography.....	15

European foreword

This document (EN 17613:2022) has been prepared by Technical Committee CEN/TC 286 “LPG equipment and accessories”, the secretariat of which is held by NSAI.

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 February 2023, and conflicting national standards shall be withdrawn at the latest by February 2023.

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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

Introduction

This document calls for the use of substances and procedures that may be injurious to health and/or the environment if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations at any stage.

This document is intended for users who take on the responsibility for the manufacturing of composite pipe.

Protection of the environment is a key political issue in Europe and elsewhere. For CEN/TC 286 this is covered in CEN/TS 16765 [1] and this Technical Specification should be read in conjunction with this document. This document provides guidance on the environmental aspects to be considered regarding equipment and accessories produced for the LPG industry and the following is addressed:

- a) design;
- b) manufacture;
- c) packaging;
- d) use and operation; and
- e) disposal.

It is recommended that manufacturers develop an environmental management policy. For guidance see EN ISO 14004 [2]. It has been assumed in the drafting of this document that the execution of its provisions is entrusted to appropriately qualified and experienced people.

All pressures are gauge pressures unless otherwise stated.

NOTE This document uses measurement of material properties, dimensions and pressures. All such measurements are subject to a degree of uncertainty due to tolerances in measuring equipment, etc. It could be beneficial to refer to the leaflet “measurement uncertainty leaflet (SP INFO 2000 27 uncertainty.pdf)” [9].