TECHNICAL REPORT

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

# CEN/TR 14473

November 2020

ICS 23.020.35

Supersedes CEN/TR 14473:2014

English Version

# Transportable gas cylinders - Porous materials for acetylene cylinders

Bouteilles à gaz transportables - Matières poreuses pour bouteilles à acétylène

Ortsbewegliche Gasflaschen - Poröse Materialien für Acetylenflaschen

This Technical Report was approved by CEN on 2 November 2020. It has been drawn up by the Technical Committee CEN/TC 23.

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, Turkey 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**



Ref. No. CEN/TR 14473:2020 E

# Contents

Page

## European foreword

This document (CEN/TR 14473:2020) has been prepared by Technical Committee CEN/TC 23 "Transportable gas cylinders", the secretariat of which is held by BSI.

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 supersedes CEN/TR 14473:2014.

Compared to the previous version, the following changes apply:

a) data of further porous materials has been added;

b) the structure of the document has been changed:

   — Clause 7 contains data for porous materials for acetylene cylinders approved to TPED evaluation of conformity at time of manufacture;

   — Clause 8 contains data for porous materials for acetylene cylinders reassessed in accordance with TPED;

   — Clause 9 contains data for porous materials for individual acetylene cylinders and that are type approved based on national regulations;

c) the document has been aligned with the current principles and rules for the structure and drafting of CEN and CENELEC documents.

For amendments or changes to this report, an application shall be made to the Secretariat of CEN/TC 23, with a copy of the documentation based on which the acetylene cylinders are placed on the market (type approval by the competent authority or conformity assessment in accordance with Directive 2010/35/EU (TPED)).

# Introduction

This document contains data and information about monolithic porous materials for acetylene cylinders.

It does not contain information about non-monolithic porous materials.

In International Standards, weight is equivalent to a force, expressed in newton. However, in common parlance the word “weight” continues to be used to mean “mass”, but this practice is deprecated (ISO 80000-4).

In this document the unit bar is used, due to its universal use in the field of technical gases. It should, however, be noted that bar is not an SI unit, and that the according SI unit for pressure is Pa (1 bar = $10^5$ Pa = $10^5$ N/$m^2$).

Pressure values given in this document are given as gauge pressure (pressure exceeding atmospheric pressure) unless noted otherwise.

# 1 Scope

This document contains information about monolithic porous materials used in individual acetylene cylinders and in acetylene cylinder bundles in Europe. It does not claim to be exhaustive.

NOTE Where there is any conflict between this document and any applicable regulation, the regulation always takes precedence.

# 2 Normative references

There are no normative references in this document.

# 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

# 4 Source and nature of the data about the listed porous materials

The data contained in the tables in Clauses 7 and 8 are derived from the documentation based on which the acetylene cylinders were placed or still are on the market (type approval by the competent authority or conformity assessment in accordance with TPED) and according to which they are operated. In some cases a type approval or a TPED-certificate might no longer be valid but the cylinders that are already on the market still may be used. For this purpose, information on old porous materials is provided.

NOTE 1 The documentation provided was examined carefully before including the according information into this Technical Report. Nevertheless, there might be discrepancies to the actual approval, e.g. because more recent amendments exist which were not made available at the time of preparing this document. In some cases not all information was available in the documents provided and consequently the according information is missing (for example the maximum top clearance or the working pressure).

Acetylene cylinders that were reassessed in accordance with TPED may be filled with the filling values conforming to the reassessment certificate throughout the EU. It should be noted that these values might deviate from those of prior national approvals which still apply to those cylinders that were not reassessed according to TPED.

Where no official documentation could be made available to CEN/TC 23/WG 31, the data for the porous material is added with a note, that this information is shared by expert/porous material manufacturer as extracted from the official documentation, but has not been presented to the working group. This is of especial note in the case of reassessed acetylene cylinders, since every user can ask for a specific reassessment.

Clause 7 contains information on porous materials for acetylene cylinders approved to TPED. It also contains information on filling conditions for acetylene cylinder bundles in accordance with EN ISO 13088:2012. The same filling ratio applies for the whole EU.

Clause 9 contains information on porous materials used in individual acetylene cylinders and cylinder bundles that were type approved based on national regulations and/or standards.

If several years are indicated for the approval or certification, they refer to according amendments in addition.