SLOVENSKI STANDARD
SIST-TS CEN ISO/TS 80004-3:2021

01-januar-2021

Nadomešča:

SIST-TS CEN ISO/TS 80004-3:2015

Nanotehnologije - Slovar - 3. del: Ogljikovi nanogradniki (ISO/TS 80004-3:2020)

Nanotechnologies - Vocabulary - Part 3: Carbon nano-objects (ISO/TS 80004-3:2020)

Nanotechnologien - Fachwörterverzeichnis - Teil 3: Kohlenstoff-Nanoobjekte (ISO/TS 80004-3:2020)

Nanotechnologies - Vocabulaire - Partie 3: Nano-objets carbonés (ISO/TS 80004-3:2020)

Ta slovenski standard je istoveten z: CEN ISO/TS 80004-3:2020

ICS:

01.040.07	Naravoslovne in uporabne vede (Slovarji)	Natural and applied sciences (Vocabularies)
07.120	Nanotehnologije	Nanotechnologies

SIST-TS CEN ISO/TS 80004-3:2021 en,fr,de

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN ISO/TS 80004-3

November 2020

ICS 01.040.07; 07.120

Supersedes CEN ISO/TS 80004-3:2014

English Version

Nanotechnologies - Vocabulary - Part 3: Carbon nano-objects (ISO/TS 80004-3:2020)

Nanotechnologies - Vocabulaire - Partie 3: Nano-objets carbonés (ISO/TS 80004-3:2020)

Nanotechnologien - Fachwörterverzeichnis - Teil 3: Kohlenstoff-Nanoobjekte (ISO/TS 80004-3:2020)

This Technical Specification (CEN/TS) was approved by CEN on 26 October 2020 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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 ISO/TS 80004-3:2020 E

Contents

Page

European foreword

This document (CEN ISO/TS 80004-3:2020) has been prepared by Technical Committee ISO/TC 229 "Nanotechnologies" in collaboration with Technical Committee CEN/TC 352 “Nanotechnologies” the secretariat of which is held by AFNOR.

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 ISO/TS 80004-3:2014.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: 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 the United Kingdom.

Endorsement notice

The text of ISO/TS 80004-3:2020 has been approved by CEN as CEN ISO/TS 80004-3:2020 without any modification.

TECHNICAL SPECIFICATION

ISO/TS 80004-3

Second edition
2020-11

Nanotechnologies — Vocabulary —

Part 3: Carbon nano-objects

Nanotechnologies — Vocabulaire —

Partie 3: Nano-objets carbonés

Reference number
ISO/TS 80004-3:2020(E)

COPYRIGHT PROTECTED DOCUMENT

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared jointly by Technical Committee ISO/TC 229, *Nanotechnologies*, and Technical Committee IEC/TC 113, *Nanotechnology for electrotechnical products and systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 352, *Nanotechnologies*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement). The draft was circulated for voting to the national bodies of both ISO and IEC.

This second edition cancels and replaces the first edition (ISO/TS 80004-3:2010), which has been technically revised throughout.

A list of all parts in the ISO/TS 80004 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In the last three decades, various new forms of nanoscale carbon materials, including fullerenes, graphene and carbon nanotubes, have been discovered, synthesized and manufactured. These are promising materials for many industrial fields associated with nanotechnologies because of their unique electronic, electromagnetic, thermal, optical and mechanical properties.

In the context of increasing scientific knowledge and a growing number of technical terms in the field of nanotechnologies (see the Bibliography), the purpose of this document is to define important terms and concepts for carbon nano-objects in a precise and consistent manner, while clarifying their interrelationship, as well as their relationship, to existing terms previously used for conventional carbon materials.

This document belongs to a multi-part vocabulary covering the different aspects of nanotechnologies. Most of the definitions in this document are deliberately determined so as to be in harmony with a rational hierarchical system of terminology under development for nanotechnologies, although in some cases the hierarchical approach needs to be compromised due to the specific usage of individual terms. ISO/TS 80004-13 further complements this document by providing terms and definitions for graphene and related two-dimensional (2D) materials. A subset of these terms is only noted herein.