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भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS

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भारतीय मानक प्रारूप

नैनो प्रौद्योगिकी – शब्दावली

भाग १ : मूल शब्दावली

(IS 17003 (Part 1) का दूसरा पुनरीक्षण)

Draft Indian Standard

Nanotechnologies – Vocabulary

Part 1 : Core Vocabulary (Second Revision of IS 17003 (Part 1))

(Amalgamation of IS 17003 (Part 1) : 2022, IS 17003 (Part 2) : 2018 and IS/ISO/TS 80004-4 : 2011)

ICS 07.120, ICS 01.040.07

Nanotechnologies Sectional Committee, MTD 33

Last date of comments is 8 August 2024

NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical to ISO/TS 80004-1: 2023 'Nanotechnologies — Vocabulary — Part 1: Core Vocabulary' issued by the International Organization for Standardization (ISO), was adopted by the Bureau of Indian Standards on the recommendation of the Nanotechnologies Sectional Committee and approval of the Metallurgical Engineering Division Council.

This standard was first published in 2010 as IS/ISO/TS 80004-1: 2010 'Nanotechnologies — Vocabulary — Part 1: Core Terms' under single numbering system. Later, some parts of ISO/TS 80004 series were adopted under dual numbering system of IS series IS 17003. Thus, the first revision of this standard was brought out in 2022 to align with ISO/TS 80004-1: 2015 'Nanotechnologies — Vocabulary — Part 1: Core Terms' under dual numbering system. The second revision of this standard was brought out to align with the latest version ISO 80004-1: 2023 'Nanotechnologies — Vocabulary — Part 1: Core Vocabulary' to harmonize it with the latest developments that have taken place at international level.

ISO/TS 80004-1: 2023 was revised by ISO by merger of ISO/TS 80004-1: 2015, ISO/TS 80004-2: 2015, ISO/TS 80004-4: 2011 and ISO/TS 80004-11: 2017 and subsequently these four standards were withdrawn by ISO. Three of these standards, ISO/TS 80004-1: 2015, ISO/TS 80004-2: 2015 and ISO/TS 80004-4: 2011 were

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adopted as Indian Standards as IS 17003 (Part 1): 2015 / ISO/TS 80004-1: 2015, IS 17003 (Part 2): 2018/ ISO/TS 80004-2: 2015 and IS/ ISO/TS 80004-4: 2011 respectively.

With this revision, IS 17003 (Part 2): 2018 and IS/ISO/TS 80004-4: 2011 shall stand withdrawn subsequently.

This standard is published in nine parts. Other parts in the series of ISO/TS 80004 which are adopted as Indian standards are:

| Parts | Title | Adopted as |
|---------|---|---|
| Part 2 | Nano - Objects | IS 17003 (Part 2) : 2018 / ISO/TS 80004-2 : 2015 |
| Part 3 | Carbon Nano-objects | IS 17003 (Part 3) : 2022 / ISO 80004-3 : 2020 |
| Part 4 | Nanostructured Materials | IS/ISO/TS 80004-4 : 2011 |
| Part 5 | Nano bio interface | IS/ISO/TS 80004-5 : 2011 |
| Part 6 | Nano-object characterization | IS 17003 (Part 6): 2024 / ISO/TS 80004-6: 2021 |
| Part 7 | Diagnostics and therapeutics for healthcare | IS/ISO/TS 80004-7 : 2011 |
| Part 8 | Nano manufacturing processes | IS 17003 (Part 8) : 2022 / ISO 80004-8 : 2020 |
| Part 13 | Graphene and related two- dimensional 2D materials | IS 17003 (Part 13) : 2022 / ISO/TS 80004-13 : 2017 |

NOTE — Part 2 and Part 4 shall stand withdrawn after publication of this document.

The text of ISO standard has been approved as suitable for publication as in Indian Standard without deviations. Certain terminologies and conventions are, however, not identical with those used in Indian Standard. Attention is especially drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, it should be read as 'Indian Standard'
- b) Comma (,) has been used as a decimal marker while in Indian Standards the current practice is to use a point (.) as the decimal marker.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2: 2022 'Rules for rounding off

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numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

The scope of the standard is as follows:

SCOPE

This document defines core terms in the field of nanotechnology. This document is intended to facilitate communication between organizations and individuals in industry and those who interact with them.

The complete document/text of ISO/TS 80004-1 : 2023 'Nanotechnologies — Vocabulary — Part 1 : Core Vocabulary' may be made available, on request to:

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