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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44535-2024

Plastics - Determination of linear dimensions of test specimens

塑料 试样线性尺寸的测定

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is modified to adopt ISO 16012:2015 "Determination of linear dimensions of plastic test specimens".

Compared with ISO 16012:2015, this document has the following structural adjustments.

4.6 and 5.3 correspond to 5.4 of ISO 16012:2015; a) 5.4 corresponds to 5.3 of ISO 16012:2015; b) 5.5 corresponds to the same content of 5.5 and 5.6 in ISO 16012:2015; c) 5.6 corresponds to 5.5 in ISO 16012:2015; d) 5.7 corresponds to 5.6 in ISO 16012:2015; e) 5.8 corresponds to 5.7 in ISO 16012:2015; f) 5.9 corresponds to 5.8 in ISO 16012:2015.g) the technical differences between this document and ISO 16012:2015 and their reasons are as follows.

ISO 3611 (see 4.2) was replaced by the normative reference GB/T 1216 to adapt to my country's technical conditions and increase operability; a) the normative reference GB/T 21389 replaced ISO 13385-1 (see 4.3) to adapt to my country's technical conditions and increase operability.

Sexuality;

The normative reference GB/T 18761 replaced ISO 13102 (see 4.4.1) to adapt to my country's technical conditions and increase operability.

Sexuality;

The description of the scope of applicable samples in 5.1 of ISO 16012:2015 has been deleted to reduce duplication of content; d) ISO 291 (see 5.1) was replaced with the normative reference GB/T 2918 to adapt to my country's technical conditions and increase operability; e) Change the applicability of the vernier caliper in Table 1 from "Not usable" to "Not recommended" (see 5.1) to meet the actual usage conditions; f) ISO 3650 (see 5.3) was replaced by the normative reference GB/T 6093 to adapt to my country's technical

conditions and increase operability; g) Added the normative reference GB/T 8170 (see 5.4) to improve the operability of calculation and eliminate ambiguity; h) Change some descriptions in 5.8 into notes to make the standard text coherent and easier to understand and use. i) the following editorial changes were made to this document.

The informative reference GB/T 37426-2019 replaces ISO 20753:2018 (see Chapter 1); a) the informative reference GB/T 2941-2006 replaces ISO 23529:2010 (see Chapter 1); b) the informative reference GB/T 17037.1-2019 replaces ISO 294-1:1996/Amd.2:2005 (see Appendix B Note); c) Add a note to 5.1 to facilitate the understanding and use of the standard text; d) Examples are added in 5.8 to facilitate the understanding and use of the standard text. e)

1 Scope

This document specifies the measuring instruments, procedures, and reporting for the determination of linear dimensions of rigid plastic specimens.

This document applies to the specimens specified in GB/T 37426-2019 and/or other specimens with a thickness ranging from 0.4 mm to 6.4 mm.

Sample.

Note: For the measurement of specimen dimensions of semi-hard materials ($70 \text{ MPa} \leq E \leq 700 \text{ MPa}$), see Chapter 7 of GB/T 2941-2006.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies.

in this document.

GB/T 1216 Outside Micrometer GB/T 2918 Standard environment for conditioning and testing of plastic specimens (GB/T 2918-2018, ISO 291:2008, MOD) GB/T 6093 Geometrical Specifications (GPS) Length Standard Gauge Blocks (GB/T 6093-2001, ISO 3650:1998, MOD) GB/T 8170 Rules for rounding off values and expression and determination of limit values GB/T 18761 Electronic digital indicator GB/T 21389 Vernier, dial and digital calipers GB/T 39543 Design and metrological characteristics of lever dial indicators (GB/T 39543-2020, ISO 9493:2010, IDT) GB/T 39547 Design and metrological characteristics of mechanical indicating meters (GB/T 39547-2020, ISO 463:2006, IDT)

3 Terms and definitions

The following terms and definitions apply to this document.

Linear dimension

The shortest distance between any two points selected on a plastic specimen.

Thickness

Ideally, the smaller side dimension of the rectangular cross section perpendicular to the longitudinal direction of the strip specimen.

Width

Ideally, the larger side dimension of the rectangular cross section perpendicular to the longitudinal direction of the strip specimen.

length

The dimension between two parallel cross sections perpendicular to the longitudinal direction of the strip specimen.