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

GB/T 28886-2023

Plastic windows and doors for buildings

建筑用塑料门窗

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Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting: This document replaces GB/T 28886-2012 "Plastic doors for construction" and GB/T 28887-2012 "Plastic windows for construction", and is consistent with Compared with GB/T 28886-2012 and GB/T 28887-2012, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

---Added classification by energy-saving performance (see 4:1:3);

---Added general requirements (see 5);

--- Added relevant technical requirements for materials (see 5:2, 5:1 of GB/T 28886-2012 and 5:1 of GB/T 28887-2012);

---Added accompanying files (see 9:2);

---Deleted the informative appendix Calculation method of wind pressure resistance and deflection of building exterior windows (see GB/T 28886-2012 and GB/T 28887- Appendix B of:2012);

---Deleted the normative appendix "Calculation of minimum destructive force of welding angle" (see Appendix C of GB/T 28886-2012 and GB/T 28887- Appendix C of:2012);

---Added a normative appendix "Technical Requirements for Reinforced Steel" (see Appendix B): Please note that some content in this document may be subject to patents:

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Xuemei, He Jingzi, Kang Zhuang, Lou Maoyuan, Yang Bin: The previous versions of the documents replaced by this document are as follows:

---GB/T 28886-2012;

---GB/T 28887-2012: Plastic doors and windows for construction

1 Scope

GB/T 28886-2023 is the product standard for PVC and other plastic windows and doors in buildings. They dominate residential construction because they insulate well and need no painting, and they fail in ways that are peculiar to the material: the profile is a hollow extrusion whose stiffness depends on internal steel reinforcement that cannot be seen once installed, the material moves substantially with temperature so corner welds carry real stress, and it degrades under ultraviolet light unless the compound is formulated for it. None of that is visible to a buyer comparing two windows that look identical, and the difference appears five years later as sagging sashes, failed welds and yellowed frames. This document specifies the classification, specifications, series and markings for plastic doors and windows used in construction, the general requirements and technical requirements, the test methods, the inspection rules, and the marking and accompanying documentation. Under ICS 91.060.50 and CCS P32, it is written for window and door manufacturers and their profile suppliers, for architects and contractors specifying them, and for the construction quality inspection bodies who verify what was installed.

This document specifies the classification, specifications, series and markings, general requirements, technical requirements, test methods, and inspection regulations for plastic doors and windows used in construction: Rules, markings and accompanying documents, packaging, transportation and storage: This document applies to PVC-U plastic doors and PVC-U plastic windows for construction:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 2518 Continuous hot-dip galvanized and zinc alloy coated steel sheets and strips
GB/T 3098:

21 Mechanical properties of fasteners stainless steel self-tapping screws GB/T 5237:

1 Aluminum alloy building profiles Part 1: Base material GB/T 5237:

2 Aluminum alloy building profiles Part 2: Anodized profiles GB/T 5237:

3 Aluminum alloy building profiles Part 3: Electrophoretic painted profiles GB/T 5237:

4 Aluminum alloy building profiles Part 4: Powder-coated profiles GB/T 5237:

5 Aluminum alloy building profiles Part 5: Painted profiles

GB/T 5823 Terminology for building doors and windows

GB/T 5824 Building door and window opening size series

GB/T 6723 General cold-formed open section steel

GB/T 6728 Cold-formed hollow sections for structural use

GB/T 7106 Testing method for airtightness, watertightness and wind pressure resistance of building exterior doors and windows

GB/T 8484 Testing method for thermal insulation performance of exterior doors and windows of buildings

GB/T 8485 Classification and detection method of airborne sound insulation performance of building doors and windows

GB/T 8814 Unplasticized polyvinyl chloride (PVC-U) profiles for doors and windows

GB/T 9158 Testing method for mechanical properties of building doors and windows

GB/T 11253 Carbon structural steel cold-rolled steel plates and steel strips

GB/T 11793 Test methods for mechanical properties and weather resistance of unplasticized polyvinyl chloride (PVC-U) plastic doors and windows

GB/T 11944 Insulated glass

GB/T 11976 Lighting performance classification and detection methods of building exterior windows

GB/T 14155 Impact test of soft and heavy objects on whole doors