

ICS 91.060.50
CCS Q 74



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

GB/T 11793.1-1989

Replacing GB/T 11793.1-1989; GB/T 11793.2-1989; GB/T 11793.3-1989

**Test methods on mechanical and weathering properties for
unplasticized polyvinyl chloride (PVC-U) doors and windows
(English Translation)**

Issued on: December 24, 2008

Implemented on: October 1, 2009

Issued by: Standardization Administration of China

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Foreword

This standard replaces GB/T 11793.1-1989 "PVC plastic window building physical performances", GB/T 11793.2-1989 "PVC plastic windows mechanical properties, weather resistance and technical conditions", GB/T 11793.3-1989 "plastic windows mechanical properties, weather resistance test methods." this standard and GB/T 11793.1-1989, GB/T 11793.2-1989, GB 11793.3-1989 main differences are as follows.

- Remove the GB T 11793.1-1989, GB/T content/11793.2-1989, preserving the GB/T 11793.3-1989 of main content;
- Increased requirements for mechanical properties test project sequence;
- Increasing the relevant test methods for unplasticized polyvinyl chloride (PVC-U) plastic door;
- Increasing the locking device (handle) switching force test;
- Switch fatigue tests modified to repeated opening and closing performance test;
- Modify the results of experiment and calculation method of the mechanical properties of welded angle destructive;
- Artificial aging test by the aging time of 1000h modify the sample received cumulative radiation energy M class 8GJ/m², S class 12GJ/m²; modify test after aging double V Charpy impact strength and color change spectrophotometer assay;
- Natural weathering test is modified by exposure to two years to receive a sample accumulated in the UV wavelength range between 300nm ~ 800nm Radiant energy of light and visible light. M class 8GJ/m², S class 12GJ/m²; aging test after adjustment for the double V simply supported beam Impact strength and color changes in a spectrophotometer assay;
- Added Appendix A "calculated radiation intensity artificial aging tests and exposure time measurement", B "China's major gas Appendix Designate the type. " the Standard

Appendix A, Appendix B is an informative annex.

The standard proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China.

This standard is under the jurisdiction of Housing and Urban products and components and parts of products Standardization Technical Committee of Ministry of Construction.

This standard drafting unit. China Academy of Building Research.

Participated in the drafting of this standard. Vicat Plastics (Shanghai) Co., Ltd., the National Chemical Building Materials Testing Center (Construction test unit).

1 Scope

This standard specifies the unplasticized polyvinyl chloride (PVC-U) plastic doors and windows (hereinafter referred to as the plastic doors and windows) mechanical properties and weatherability term and definitions, test methods and test reports.

This standard applies to unplasticized polyvinyl chloride (PVC-U) profiles produced by the mechanical properties of building doors and windows and weather resistance testing.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2918 plastic sample conditioning and testing of the standard environment GB/T 3681-2000 Plastics atmospheric exposure test methods GB/T 14155-2008 entire door jamb Soft heavy body impact test GB/T 22632-2008 doors anti-collision performance hard object detection method GB/T 16422.2-1999 Plastics - Methods of exposure to laboratory light sources - Part 2. Xenon arc lamp JG/T 192-2006 repeatedly opening and closing doors and windows performance test method ISO 179-1:2000 Determination of strength Charpy impact plastic ---

3 Terms and Definitions

The following terms and definitions apply to this standard.

Sash opening degree of the restriction device.

Material mounted at a fixed angle or angle change with the seasons of the test stand in a natural environment of long-term exposure.

Doors and windows open and close several times under the effect of maintaining normal function of the capacity to affect the normal use of deformation does not occur, and failure Damaged expressed repeatedly opening and closing times.

Mechanical Properties Test Method 4 windows

4.1 Test items and the order

Mechanical properties of various types of plastic window pilot project are shown in Table 1; the order of the pilot project should be in accordance with the locking device (handle) power switch, window open Off force, overhang hoist, warping or bending, twisting, diagonal deformation, spreaders, open the stopper, repeatedly starting and closing performance, vigorously closed sequentially.