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

GB 28231-2011

General provisions of safety and health for writing boards

书写板安全卫生要求

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Foreword

4.9 of this standard are mandatory, others are recommended. This standard was drafted in accordance with GB/T 1.1-2009 given rules. Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents. This standard is proposed and administered by the People's Republic of China Ministry of Health. This standard by the People's Republic of China Ministry of Health is responsible for interpretation. This standard was drafted. Ministry of Education Graduate Institute of Teaching instrument. The main drafters of this standard. Liu Jichang, Sunzhen Qi, Ma Qiang. Writing board health and

safety requirements

1 Scope

GB 28231-2011 is the Chinese national standard on general provisions of safety and health for writing boards, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 30 December 2011 by the Ministry of Health of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2012. Classification: ICS 13.100, CCS C56. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the teaching writing board (chalkboards and whiteboards) health and safety requirements, tablet appearance quality, structure, classification, installation, Signs, brochures and test methods. This standard applies to all types of schools at all levels tablet used in ordinary classrooms, laboratories and other specialized classrooms. Other teaching activities And communication, notes, publicity, writing board can be used with reference to use. This standard does not apply to notices and electronic memory transmission display writing board. This standard does not involve the electrical control of the tablet, the content may refer to the appropriate electrical safety requirements.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 250 textile color fastness test assessing change in color like the gray card

GB/T 730 Textiles Tests for color fastness Blue wool standards (1-7) level of quality control

GB/T 1710-2008 similar coloring pigment light fastness Methods of measurement

GB/T 3979-2008 object colors

GB 5296.1 General consumer use GB/T 5698 color terms

GB/T 6749-1997 Film color representation

GB/T 9761-2008 Paints and varnishes - Visual comparison of the color

GB/T 15608 Chinese color system

GB/T 16422.2-1999 Plastics - Methods of exposure to laboratory light sources - Part 2.

Xenon arc lamp

GB/T 17657-1999 panels and veneer plywood physical and chemical performance test method
QB/T 2859 whiteboard marker

3 Terms and Definitions

GB/T 5698 defined by the following terms and definitions apply to this document.

3.1 Chalk board chalkboard After writing with chalk, you can wipe the board, and with the backing, a support such as a fixed frame structure.

3.2 Whiteboard whiteboard After whiteboard pen, can wipe light colored board, with backing, a support such as a fixed frame structure.

3.3 Writing surface writingsurface For writing, viewing the surface which wipes and used repeatedly.

3.4 Writing panel writingpanel In the writing pad, the function has a written part.

3.5 Liner liningboard Close to the writing on the back panel, set off from the support, silencers, shock effect of the plate.

3.6 Backplane rearboard In the single-sided tablet used to protect the lining of the board.

3.7 Writing plate frame boardframe Directly connected with the writing panel and lining the four sides and with the support of the combined structure.

3.8 Fixed tablet fixedboard The body of the tablet or tablet (slide, etc.) fixed to the writing on the wall plate. (See Appendix A)

3.9 Mobile tablet mobileboard You can move from one floor to another in the writing pad. (See Appendix A)

3.10 Sliding tablet slidingboard Writing can be performed parallel slide plate in a horizontal or vertical direction. (See Appendix A)

3.11 Rotary tablet pivotingboard Mounted on a horizontal or vertical axis, can be pivoting writing board. (See Appendix A)

3.12 Fan-type writing board wingedboard Writing consists of a main board and one or more fan board assembly from the writing pad. (See Appendix A)

3.13 Fan plate wing Having both positive and negative writing surface writing board, by a hinge connection, you can rotate around a vertical direction.

3.16 Determination of formaldehyde release

--- drier value thedesiccator testvalue (For Formaldehyde emission) Determination of the specimen with a drier released in the absorbing liquid (distilled water) in the amount of

formaldehyde. [GB 18580-2001, terms and definitions 3.2]

4 Requirements

4.1.1 Color chalk board Color chalk board by B.1 method for the determination should be. writing surface is achromatic who lightness (V) should N3/or less; the writing surface to have color Color, its hue (H) as GB/T in 15608 7.5GY-5BG, lightness (V) of

2.5 to 4.0, and chroma (C) is

4.1.2 white color White color determined by the method according to Appendix B.1 lightness (V) should N8.5/or more.

4.2 Gloss

4.2.1 chalk board writing surface was measured by a method B.2 gloss 12 gloss units should be less, because there should be no reason for chalk board itself Glare.

4.2.2 Determination of the whiteboard writing surface gloss according to B.2 methods should be 35 gloss units or more.

4.3 Adhesion

4.3.1 Press B.3.1 method of determining the writing on the chalk board or plaster made of calcium carbonate chalk white, should feel smooth, full, strokes Uniform, sharp lines.

4.3.2 Press B.3.2 method of determining, on a whiteboard with whiteboard pen, should stitch smooth, even strokes, no disconnection phenomenon.

4.4 Wiping

4.4.1 B.3.1 lines are drawn with a dry wipe chalk eraser back and forth twice, there should be no residual clear handwriting; wet chalk eraser Wipe the chalk board, at 1m distance observation, there should be no deposition of chalk remnants.

4.4.2 B.3.2 drawn line, place 1min after a dry or wet wipe whiteboard rub back and forth twice, observed at 1m distance should not leave residues Keep writing; place 50min with a dry or wet wipe whiteboard rub back and forth twice, at 1m distance observation, should not leave residues handwriting.

4.5 chalk board surface roughness Using a surface roughness profile measurement, taken at random five-point sampling length 2.5mm, the average of five points should be Ra 1.6 μ m ~ 3.2 μ m.

4.6 chalkboards wear Chalk eraser to add 4.9N vertical force at the chalk board writing surface wipe back and forth 10,000 times, after the wear surface roughness of not less than Ra1.6 μ m.