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GA

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

GA 160-1997

Replacing GA 160-1997

**Non-combustible inorganic compound board
(English Translation)**

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Foreword

This standard 4.4, 4.5, Chapter 6, 7.1 is mandatory, and the rest are recommended.

This standard replaces GA 160-1997 "General Technical Conditions for Non-combustible Inorganic Composite Panels" from the date of implementation.

The main differences between this standard and GA 160-1997 are as follows. the thermal dimensional shrinkage and hygroscopic sagging in GA 160-1997 are eliminated.

Requirements for composite (sandwich) materials in degree and combustion performance; increased dimensional deviation requirements and density of plates with density greater than 1.50 g/cm³ the flexural strength requirements of 1.75g/cm³ sheet and the anti-returnability requirement of glass magnesium plate; the index and test of adjusting the moisture absorption rate method.

The combustion performance of this standard is mainly based on GB 8624-1997 "Classification Method of Combustion Performance of Building Materials";

ISO/T R1896.1991 "Incombustible and fire-retardant fiber reinforced calcium silicate board or cement board", CNS13778A3357 Chemical Cement Board Inspection Method, CNS13777A2266 "Fiber Strengthened Cement Board".

This standard was proposed by the Fire Department of the Ministry of Public Security.

This standard is under the jurisdiction of the 7th Technical Committee of the National Fire Protection Standardization Technical Committee.

This standard was drafted. Sichuan Fire Science Research Institute of the Ministry of Public Security, Guangzhou Yayuan Environmental Protection Materials Co., Ltd.

1 Scope

This standard specifies the definition, classification, requirements, test methods, inspection rules, marking, labeling and storage requirements of non-combustible inorganic composite panels.

This standard applies to non-combustible fiber reinforced cement board, non-combustible fiber reinforced calcium silicate board, glass magnesium board or other non-combustible fiber reinforced Inorganic composite board.

2 Normative references

The terms of the following documents become the terms of this standard by reference to this standard. All dated references, all subsequent this standard is not applicable to amendments (excluding errata content) or revisions. However, it is encouraged whether parties to agreements based on this standard may Use the latest version of these files. For undated references, the latest edition applies to this standard.

GB/T 5464 Test method for non-combustibility of building materials (idt ISO 1182:1990)
 GB/T 7019-1997 Test method for fiber cement products GB 8624-1997 Classification method for burning performance of building materials GB/T 10294 Thermal insulation materials for thermal insulation and determination of their properties - Protection hot plate method (eqv ISO/DIS8302. 1986) JC275-90 Determination method of thermal conductivity of aerated concrete

3 Terms and definitions

The following terms and definitions apply to this standard.

The use of inorganic materials as cementitious materials and the addition of a variety of modified materials, fiber-reinforced composite sheets that meet the non-combustibility requirements (eg, fiber Dimensional reinforced cement board, calcium silicate board, glass magnesium board or other inorganic composite board).

Made of magnesium oxide (MgO), magnesium chloride (MgCl₂) and water (H₂O) ternary system, modified by preparation and modifier, stable performance Magnesium cementitious material, which is made of medium-alkali or alkali-free glass fiber mesh cloth as reinforcing material and light-weight material as filler.

4.1 Classification

According to the density, they are divided into 7 categories, and their categories and basic physical and mechanical properties are shown in Table 1.

Table 1 Category and basic physical and mechanical properties

category

Nominal density

$\rho/(\text{g/cm}^3)$

Dry bending strength/MPa $\leq 7\text{mm}$ $\leq 12\text{mm}$ $\leq 70\text{mm}$ Thermal Conductivity/ $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ 1
1.75 < $\rho \leq 1.45$ ≥ 40 ≥ 35 2 1.50 < $\rho \leq 1.75$ ≥ 20 ≥ 17 ≥ 13 -3 1.25 < $\rho \leq 1.50$ ≥ 11
 ≥ 9 ≥ 8 -