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

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**Calcium silicate thermal insulation
(English Translation)**

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1 Scope

This standard specifies the terms and definitions, classification, requirements, test methods, inspection rules, marking, packaging, transportation and storage of calcium silicate thermal insulation products.

This standard applies to calcium silicate thermal insulation products for all types of equipment, kilns, pipes and their accessories whose hot surface temperature is not higher than 1000°C.

Note: If calcium silicate insulation products are used below ambient temperature, special measures are recommended.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB/T 191 Packaging, Storage and Transportation Graphic Mark GB/T 4132 Thermal insulation materials and related terms GB/T 5464 Test method for non-combustibility of building materials GB/T 5486-2008 Test method for inorganic rigid thermal insulation products GB 8624-2012 Classification of burning performance of building materials and products GB/T 10294 Determination of steady-state thermal resistance and related characteristics of thermal insulation materials. Protective hot plate method GB/T 10295 Determination of steady-state thermal resistance and related characteristics of thermal insulation materials by calorimeter method GB/T 10296 Determination of the steady-state heat transfer characteristics of thermal insulation materials by the round tube method GB/T 10297 Determination of thermal conductivity of non-metallic solid materials Hot wire method GB/T 10299 Test method for hydrophobicity of thermal insulation materials GB/T 14402 Determination of combustion performance of building materials and products GB/T 17393 Specification for Thermal Insulation Materials for Covering Austenitic Stainless Steel GB/T 30806 Test method for dimensional stability of thermal insulation products for construction under specified temperature and humidity conditions HJ/T 206-2005 Technical requirements for environmental labeling products asbestos-free construction products JC/T

618 The chemical analysis method of soluble chloride, fluoride, silicate and sodium ion in thermal insulation material

3 Terms and definitions

The following terms and definitions defined in GB/T 4132 apply to this document.

Through crack

Penetrate cracks in any direction (length, width or thickness) of the product.

4.1 Variety

4.1.1

According to the highest use temperature of the material, it is divided into type I (650°C) and type II (1000°C).

4.1.2

According to the product density, Type I is divided into No. 240, No. 220 and No. 170, and Type II is divided into No. 270, No. 220, No. 170 and No. 150. If special density products are needed, it can be executed according to the agreement between the supplier and the buyer.

4.2 Shape

According to the shape of the product, it is divided into flat plate, curved plate and tube shell.

4.3 Product marking

The order in the mark is product name, variety, shape, length×width (inner diameter)×thickness, number of this standard.

The highest operating temperature is represented by I and II, and the flat plate, tube shell, and curved plate are represented by P, G and H respectively.

Example.

The plate with a length of 600mm, a width of 300mm, and a thickness of 60mm with a maximum operating temperature of 1000°C is marked as.

5.1.1 Appearance defects

5.1.1.1

There shall be no missing edges with a length exceeding 30mm and a depth exceeding 10mm, and there shall be no edges exceeding 20mm in length and a depth exceeding

10mm.

10mm missing corner.

5.1.1.2

Edge damage with a depth of not more than 3mm and corner damage with a depth of not more than 4mm are not counted as appearance defects.

5.1.1.3

The total number of defects between the sizes specified in 5.1.1.1 and 5.1.1.2 shall not exceed 4, and the missing corners shall not exceed 2.

5.1.1.4

There should be no through cracks.

5.1.2 Thickness uniformity

The deviation between the local thickness and the average thickness of the product at any measurement position shall not exceed 3mm.

5.1.3 Verticality deviation

5.1.3.1

The deviation of verticality in the length and width directions of plate products shall not be greater than 6mm/m, and the deviation of verticality in the thickness direction shall not exceed 2mm/m.

5.1.3.2

The deviation of the verticality of the ends of the tube and shell products shall not exceed 3mm/m.

5.1.4 Bend

5.1.4.1

The bending of flat products should not exceed 0.5% of the length (or width) or 3mm, whichever is greater.

5.1.4.2

The longitudinal bending of arc-shaped plates and shell products should not exceed 0.5% of the product length or 3mm, whichever is greater.

5.2 Size tolerance

Based on the marked nominal size, the allowable deviation of the product size should meet the requirements of Table 1.