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

GB/T 25998-2020

Replacing GB/T 25998-2010

Mineral wool decorating and acoustic ceilings

矿物棉装饰吸声板

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Table of Contents

1	Scope
2	Normative references
3	Terms and definitions
3.1	Mineral wool decorating and acoustic ceilings
3.2	Wet-process ceilings
3.3	Dry-process ceilings
3.4	Nominal size
3.5	Actual size
3.6	Right angle deviation
3.7	Pin holes
4	Classification and designation
4.1	Classification
4.2	Specifications
4.3	Product designation
5	Requirements
5.1	General requirements
5.1.1	Appearance quality
5.1.2	Permissible dimensional deviations
5.1.3	Bulk density
5.1.4	Burning behaviour
5.1.5	Radionuclide limits
5.1.6	Formaldehyde emission
5.1.7	Asbestos phase
5.2	Wet-process boards
5.2.1	Bending breaking load and thermal resistance
5.2.2	Noise reduction coefficient
5.2.3	Deflection after exposure to damp
5.2.4	Moisture content by mass
5.3	Dry-process boards
5.3.1	Bending breaking load and thermal resistance
6	Test methods

Foreword

GB/T 25998-2020 was issued on 2 June 2020 by the State Administration for Market Regulation and the Standardization Administration of the People's Republic of China, and has been in force since 1 April 2021. It is classified under ICS 91.060.30 and under Chinese Standard Classification code Q 25. It replaces GB/T 25998-2010, Mineral wool decorating and acoustic ceilings, which was the only previous edition.

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Compared with GB/T 25998-2010, apart from editorial changes, the main technical changes are the following: the field of application was added (see Clause 1, and Clause 1 of the 2010 edition); the definitions of mineral wool decorating and acoustic ceilings, of wet-process ceilings and of dry-process ceilings were revised (see 3.1, 3.2 and 3.3, and 3.1, 3.2 and 3.3 of the 2010 edition); the content of the product designation was revised (see 4.3, and 4.3 of the 2010 edition); the bulk density requirement was revised (see 5.1.3, and 5.3 of the 2010 edition); the classification requirement for burning behaviour was revised (see 5.1.4, and 5.6 of the 2010 edition); the formaldehyde emission requirement was revised (see 5.1.6, and 5.10 of the 2010 edition); the technical requirements for products made by the different production processes were revised (see 5.2 and 5.3, and 5.3, 5.5, 5.6, 5.7 and 5.10 of the 2010 edition); the noise reduction coefficient requirement was revised (see 5.2.2 and 5.3.2, and 5.7 of the 2010 edition); the bending breaking load requirement for dry-process boards with a rock wool substrate was revised (see 5.3.1, and 5.5.2 of the 2010 edition); the test method for right angle deviation was revised (see 6.2, and 6.2 of the 2010 edition); the test method for the noise reduction coefficient was revised (see 6.7, and 6.7 of the 2010 edition); the test method for formaldehyde emission was revised (see 6.10, and 6.10 of the 2010 edition); Annex B was deleted (see Annex B of the 2010 edition); and the method of taking the value of the bending breaking load of dry-process boards was revised (see C.5.6, and C.5.6 of the 2010 edition).

This standard was proposed by the China Building Materials Federation and is under the jurisdiction of the National Technical Committee on Thermal Insulation Materials of Standardization Administration of China (SAC/TC 191).

The drafting organisations of this standard are: Nanjing Fiberglass Research and Design Institute Co., Ltd.; Beixin Group Building Materials Co., Ltd.; Xingpai USG Building Materials Co., Ltd.; Armstrong Building Products (Suzhou) Co., Ltd.; Changzhou Beiyang Building Materials Co., Ltd.; Shanxi Dongfang Resources Development Co., Ltd.; Guangde Paluofeng Fibre Products Co., Ltd.; Hebei Guomei New Building Materials Co., Ltd.; and the National Quality Supervision and Inspection Centre for Glass Fibre Products.

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1 Scope

A suspended ceiling is the one surface in an office, a classroom or a hospital corridor that is large, flat and out of reach, which makes it the natural place to put the sound absorption a room needs. Mineral wool boards do that job because the felted slag, rock or glass fibres leave an open pore network in which air movement is damped by friction, so that speech energy is dissipated instead of being reflected back into a room where the same hard surfaces reflect it again. The engineering problem is that everything which makes the board absorbent works against every other property it must have. Open porosity means low density and weak bending strength, so a 600 mm tile spanning a grid sags under its own weight and sags further when it takes up moisture from humid air. The binders and coatings that give strength and a decorative face can emit formaldehyde into the same enclosed room, and organic content raises the fire load of a surface directly above the occupants. This document sets the classification, designation, requirements, test methods and inspection rules that hold those competing demands together for wet-process and dry-process mineral wool ceiling boards used indoors.

This standard specifies the classification and designation, the requirements, the test methods, the inspection rules, and the marking, labelling, packaging, transport and storage of mineral wool decorating and acoustic ceilings, hereinafter referred to as acoustic ceilings.

This standard applies to mineral wool decorating and acoustic ceilings produced by the wet process or the dry process and used for indoor suspended ceilings. Mineral wool decorating and acoustic ceilings for other uses may also refer to this standard.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document, including any amendments, applies.

The documents cited are: GB/T 191 on pictorial marking for handling of goods; GB/T 2918 on standard atmospheres for conditioning and testing; GB/T 3947 on acoustical terminology; GB/T 4132 on terms relating to thermal insulating materials; GB/T 5480 on test methods for mineral wool and its products; GB 6566 on limits of radionuclides in building materials; GB/T 8170 on rounding off of numerical values and the judgement of limiting values; GB 8624-2012 on the classification of burning behaviour; GB/T 10294 and GB/T 10295 on the determination of steady-state thermal resistance by the guarded hot plate and by the heat flow meter apparatus; GB/T 14402 on the determination of the gross heat of combustion; GB/T 17657-2013 on test methods for wood-based panels and surface decorated wood-based panels; GB 18580 on the limit of formaldehyde emission of indoor

decorating materials; GB/T 20247 on sound absorption measurement in a reverberation room; GB/T 20284 on the single burning item test; GB/T 20313 on the determination of moisture content by drying at elevated temperature; and HJ/T 206 on the technical requirements for asbestos-free building products carrying the environmental label.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 3947 and GB/T 4132 and the following apply.

3.1 Mineral wool decorating and acoustic ceilings

A decorative sound-absorbing board made mainly from slag wool, rock wool, glass wool or similar raw materials, processed by the wet or the dry production route.

Note: mineral wool decorating and acoustic ceilings are commonly used to improve the acoustic performance inside a building, while also providing a decorative function and improving the thermal insulation of the building.

3.2 Wet-process ceilings

A mineral wool decorating and acoustic ceiling board made mainly from granulated wool and similar materials, processed by pulping, forming, drying, cutting, surface treatment, edge milling and coating.

3.3 Dry-process ceilings

A mineral wool decorating and acoustic ceiling board made from a rock wool board or glass wool board as the substrate with a glass fibre tissue or similar material as the facing, processed by lamination, milling, edge sealing, coating and drying.

3.4 Nominal size

The size used to designate the specification of the product.

3.5 Actual size

The size used for production control in the factory.

3.6 Right angle deviation

The degree to which two adjacent edges depart from a right angle, expressed as the ratio of the maximum gap between the try square and the board to the length of the edge.

3.7 Pin holes