



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

GB 50325-2020

**Standard for indoor environmental pollution control of civil
building engineering**

民用建筑工程室内环境污染控制标准

(English Translation)

Issued on: January 16, 2020

Implemented on: August 1, 2020

Issued by: Ministry of Housing and Urban-Rural Development of PRC

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1 General provisions

1.0.1

This standard is formulated, in order to prevent and control indoor environmental pollution, which is caused by main materials and decoration materials, in civil construction projects;

protect public health; safeguard public interests; achieve advanced technology and economical rationality.

1.0.2

This standard is applicable to the control of indoor environmental pollution, in newly constructed, expanded, reconstructed civil construction projects.

1.0.3

The indoor environmental pollutants, which are controlled by this standard, include radon, formaldehyde, ammonia, benzene, toluene, xylene, total volatile organic compounds.

1.0.4

The division of civil construction projects shall meet the following requirements:

1 The category I civil buildings shall include residences, residential functional apartments, hospital wards, elderly care housing facilities, kindergartens, school classrooms, student dormitories, etc.;

2 The category II civil buildings shall include office buildings, shops, hotels, cultural and entertainment venues, bookstores, libraries, exhibition halls, gymnasiums, public transportation waiting rooms, restaurants, etc.

1.0.5

The main building materials and decoration materials, which are selected for civil construction projects, shall comply with the relevant provisions of this standard.

1.0.6

The indoor environmental pollution control of civil buildings shall not only comply with the provisions of this standard, BUT also comply with the relevant current national standards.

2.1.1 Civil building engineering

The general term for newly built, expanded, reconstructed civil building structural engineering and decoration engineering.

2.1.2 Environmental test chamber

An equipment, which simulates the indoor environment, to test the release of chemical pollutants from decoration materials.

2.1.3 Radon exhalation rate from the surface

The radioactive activity of radon, which is released from soil or material surface per unit area and unit time.

2.1.4 Internal exposure index (I Ra)

The quotient, which is obtained -- by dividing the specific activity of the natural radionuclide radium-226 in the main building materials and decoration materials BY the specific activity limit value of 200.

2.1.5 External exposure Index (I gamma)

The sum of the quotients, which are obtained by -- dividing the radioactive specific activities of natural radionuclides radium-226, thorium-232, potassium-40 in the main building materials and decoration materials BY the specific activity limit values of 370, 260, 4200, respectively.

2.1.6 Radon concentration

The radioactive activity of radon per unit volume of air.

2.1.7 Wood-based panels

The panels or formed products, which are produced by using wood or non- wood plant fibers as the main raw material; processing it into various material units; applying (or not applying) adhesives and other additives; gluing together. It mainly includes the products, such as plywood, fiberboard, particleboard, surface decorative panels.

3.5.1 For indoor water-based flame retardants (including fire-retardant

coatings), waterproofing agents, preservatives, enhancers and other water- based treatment agents, in civil construction projects, it shall measure the content of free formaldehyde; the limit shall not exceed 100 mg/kg.

3.5.2 The measurement method of free formaldehyde content in water-based

treatment agent shall be carried out, according to the method specified in the current national standard "Determination of formaldehyde content of waterborne coatings -Spectrophotometric method with acetylacetone" GB/T

23993.

3.6 Others

3.6.1

For concrete admixtures, which are used in civil construction projects, the amount of ammonia released shall not be greater than 0.10%.

The measurement method of ammonia release shall comply with the current national standard "Limit of ammonia emitted from the concrete admixtures" GB 18588.

3.6.2

For the amount of ammonia, which is released from flame retardants, fire retardant coatings, water-based architectural waterproof coatings, as used in civil construction projects, it shall not be greater than 0.50%. The measurement method shall conform to the current industry standard "Limit and test method of harmful substances in fire-retardant coating" JG/T 415.

3.6.3

In the concrete admixtures, which can release formaldehyde AND is used in civil construction projects, the amount of residual formaldehyde shall not be greater than 500 mg/kg. The measurement method shall comply with the current national standard "Limit of residual formaldehyde from the concrete admixtures" GB 31040.

3.6.4

For the bonded wood structure materials, which are used indoors in civil buildings, the free formaldehyde emission shall not be greater than 0.124 mg/m

. The measurement method shall comply with the relevant provisions in Appendix B of this standard.

3.6.5 The free formaldehyde emission of indoor curtains and soft packs of civil

buildings shall not be greater than 0.124 mg/m

. The measurement method shall comply with the relevant provisions of Appendix B of this standard.

3.6.6 The content limit of free formaldehyde, in indoor wallpaper (cloth) of civil

buildings, shall comply with the relevant provisions in Table 3.6.6. The

4.1.1 For newly-built or expanded civil construction projects, before

design, it shall survey the radon concentration in the soil OR the radon exhalation rate from the surface in the urban area, where the construction project is located; submit the corresponding survey report. If the radon concentration in the regional soil or the radon exhalation rate from the surface has not been measured, it shall measure the radon concentration in the construction site soil or the radon inhalation rate from the soil; submit a corresponding test report.

4.1.2 The interior decoration and decoration design of civil buildings shall have pollution control measures. It shall conduct pre-assessment of decoration and decoration design pollution control; control the load ratio of decoration and decoration materials AND the release of material pollutants; adopt advanced technologies such as prefabricated