

Technical Requirement for Environmental Products

The Certifiable Technical Requirement for Environmental Labelling Products

Sanitary Ceramics HBC 16 - 2003

HBC 16-2003

1 Scope

This technical requirement specifies definition, basic requirements, technical contents and test method for environmental labelling products of sanitary ceramics.

This technical requirement shall apply to china sanitary ceramics such as wash-hand basin, pedestal pan, urinal, bidet, launder, squatting pan, bathtub, etc.

2 Standards cited

Provisions in the following standards are cited in this technical requirement, and therefore form the provisions of the standard. When this technical requirement is published, all of the version of these standards are valid. All of these standards would be revised, and parties use this standard should take into consideration the possibility of using the latest edition of the following standards.

GB 6566-2001 Limit of radionuclides in building materials

GB/T 6952-1999 Sanitary wares

JC/T 856-2000 Fitting system for 6 litter water pedestal pan

3 Definition

3.1 "Internal exposure index" refers to quotient by dividing special activity of natural radionuclide Ra—226 in sanitary ceramics by limitation specified in this standard.

$$\text{The equation is : } I_{Ra} = \frac{C_{Ra}}{200}$$

Where : I_{Ra} —Internal exposure index;

C_{Ra} —Special activity of natural radionuclide Ra - 226 in sanitary ceramics, expressed in unit of becquerel / kilogram(Bq · kg⁻¹);

200—In the case of only take into consideration of internal radiation, it refers to limitation of special activity of natural radionuclide Ra - 226 in sanitary ceramics in this standard; it is expressed in unit of becquerel / kilogram(Bq · kg⁻¹);

3.2 "External exposure index" means sum of quotients by separately dividing special activity of natural radionuclide Ra—226, Th—226 and K—40 by their corresponding limitations in this standard when they solely exist.

$$\text{The equation is : } I_{\gamma} = \frac{C_{Ra}}{370} + \frac{C_{Th}}{260} + \frac{C_K}{4200}$$

Where : I_{γ} —External exposure index;

C_{Ra} , C_{Th} , C_K —Special activity of natural radionuclide Ra - 40, Th - 232, and K - 40 in sanitary ceramics, expressed in unit of becquerel / kilogram(Bq · kg⁻¹);

370、260、4200—In the case that only external exposure is taken into consideration, in this standard, they are the limitations of special activity for natural radionuclide Ra - 40, Th - 232, and K - 40 in sanitary ceramics when they are solely exist, expressed in unit of becquerel / kilogram(Bq · kg⁻¹);

3.3 Special activity

It means quotient by dividing radioactivity of a certain nuclide in object by the mass of this object.

$$\text{Equation: } A = C / M$$

Where : C —Special activity, expressed in unit of becquerel / kilogram(Bq · kg

-1);

A —Nuclide activity, expressed in unit of becquerel (Bq);

M —Mass of object, in unit of kilogram (kg).

4 Basic requirements

4.1 Quality of products shall conform with requirement of GB/T 6952.

4.2 Pollutant emission of the company should be obliged to conform with requirement of pollutant emission standards nationally or locally.

5 Technical contents

5.1 Internal exposure index of activity should not be higher than 0.7; external exposure index should not be higher than 1.0.

5.2 Average water absorption of product should not be higher than 0.5%.

5.3 Product should be flawless after anti-cracking test.

5.4 Flush volume of pedestal pan should not more than 6 litre, and next flush volume should not more than 2.5 litre.

6 Test

6.1 Special activity index of product should be tested according to the method specified by GB 6566-2001.

6.2 Provisions described in 5.2 of the technical contents should be verified according to the method in GB 6952-1999.

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Annotations :

This technical requirement has been prepared by Department of science and technology, standards of State Environment Protection Administration.

The State Environment Protection Administration keeps the right of interpretation for this technical requirement.