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

JC/T 779-2010

**Glass Fibre Reinforced Plastics Baths
(English Translation)**

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1 Scope

This Standard specifies the product structure, classification and sign, requirements, test methods, inspection rules, markings, packaging, transportation, and storage of glass fibre reinforced plastic baths (hereinafter referred to as bathtubs).

This Standard is applicable to glass fibre reinforced plastic bathtubs with various moulding processes.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this document.

GB/T 1462 Test Methods for Water Absorption of Fibre Reinforced Plastics

GB/T 2828.1 Sampling Procedures for Inspection by Attributes - Part 1: Sampling

Schemes Indexed by Acceptance Quality Limit (AQL) for Lot-by-Lot Inspection

GB/T 3854 Test Method for hardness of Reinforced Plastics by Means of a Barcol

Impresser

GB/T 3961 Terms for Fibre Reinforced Plastics

GB/T 8237 Liquid Unsaturated Polyester Resin for Fibre Reinforced Plastics

GB/T 11942 Colorimetric Methods for Colour Building Materials

GB/T 17470 Glass Fibre Mats - Chopped Strand and Continuous Filament Mats

GB/T 18369 Glass Fibre Roving

GB/T 18370 Glass Fibre Woven Roving

JC/T 858 Specification for Cast Acrylic Sheet for Baths and Shower Trays for Domestic Purpose

5 - overflow hole;

6 - back.

Figure 1 -- Structural Schematic Diagram of the Bathtub

4.2 Product classification

Bathtubs are divided into gel coat type bathtubs (indicated by B) and acrylic bathtubs (indicated by Y).

4.3 Product sign

Bathtubs are signed by classification, maximum length, and standard number.

Example:

The max. length is 1300mm, the acrylic bathtubs produced according to JC/T 779-2010 are signed as follows:

Y - 1300 - JC/T 779-2010

5.1 Acrylic sheet

Acrylic sheets for bathtubs shall comply with the provisions of JC/T 858.

5.2 Resin

The gel coat resin shall comply with the provisions of the heat-resistant type specified in GB/T 8237; the resin shall comply with the provisions of GB/T 8237.

5.3 Reinforced materials

Glass fibre chopped strand mats and continuous filament mats shall comply with the provisions of GB/T 17470; glass fibre roving for spray moulding shall comply with the provisions of GB/T 18369; glass fibre woven roving shall comply with the provisions of GB/T 18370.

Max. length,

Classification

Table 3 -- Length Deviation of the Bathtub Unit: mm

6.3 Resistance to daily chemicals

After the test according to 7.4, the bathtub shall be free from permanent pollution and damage.

6.4 Pollution resistance

The colour difference ΔE on the surface of the test panel before and after the test shall be no greater than 3.5.

6.5 Barcol hardness

The Barcol hardness of the acrylic bathtub shall be no less than 40; the Barcol hardness of the gel coat type bathtub shall be no less than 35.

6.6 Water absorption rate

The water absorption rate of the gel coat type bathtub shall be no greater than 0.5%.

6.7 Load resistance

After the test according to 7.8, there shall be no cracks or peeling on the surface of the bathtub; and no defects affecting the use on the back.

6.8 Impact resistance

After the test according to 7.9, the bathtub shall have no cracks or other obvious damage.

6.9 Hot water resistance

After the test according to 7.10, there shall be no more than 5 small cracks on the surface of the bathtub, no more than 10 bubbles; thereof, no more than 5 large bubbles;

and there shall be no obvious discoloration or fading.

NOTE: Small cracks: the crack length is less than 5mm; large bubbles: the maximum diameter of the bubbles is 15mm.

6.10 Full-water deformation

After the test according to 7.11, the deformation at the bottom of the drain outlet is less
Length Permissible deviation tape with a minimum graduation of 1mm.

7.4 Resistance to daily chemicals

According to the provisions of JC/T 858. For each reagent, cut two specimens from the flat part of the bathtub or take a whole bathtub.

7.5 Pollution resistance

Use black shoe polish as a pollutant; and the test shall be carried out in accordance with the provisions of GB/T 11942.

7.6 Barcol hardness

According to the provisions of GB/T 3854.

7.7 Water absorption rate

Carry out in accordance with the provisions of GB/T 1462.

7.8 Load resistance test

See Appendix A for the test method.

7.9 Impact resistance

Place the bathtub on the support shown in Figure A.1; and use a steel ball with a diameter of 30mm and a mass of (112 ± 1) g above the approximate centre of the bottom of the bathtub. Fall freely from the height of 2m; and conduct a chalk test at the place where the steel ball impacts.

NOTE: The chalk test is to dip gauze with coloured chalk powder that is different from the colour of the bathtub; and evenly apply it to the inspected position of the bathtub;

then wipe it off with a clean gauze; finally check whether there are cracks and peelings.

7.10 Hot water resistance

See Appendix B for test method.