

**QB**

**LIGHT INDUSTRY STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**QB/T 2332-1997**

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**Stainless steel vacuum insulation vessel  
(English Translation)**

**Issued on: December 4, 1997**

**Implemented on: August 1, 1998**

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**Issued by: China Light Industry Association**

## Table of Contents

|                                                   |    |
|---------------------------------------------------|----|
| Foreword...                                       | 3  |
| 1 Scope...                                        | 5  |
| 2 Normative references...                         | 5  |
| 3 Classification, part name and specifications... | 6  |
| 4 Technical requirements...                       | 7  |
| 5 Appearance...                                   | 9  |
| 6 Materials...                                    | 10 |
| 7 Test methods...                                 | 10 |
| 8 Inspection rules...                             | 13 |
| 9 Mark, packaging, transportation and storage...  | 14 |

### Foreword

This standard non-equivalently adopts Japanese Industrial Standard JIS S 2053-1994  
Stainless steel insulation vessel.

In addition to the portable stainless steel insulation vessel, this standard adds desktop  
insulation vessel, big-mouth insulation vessel, and insulation cup.

The small-mouth insulation vessel of which the capacity is lower than 0.4L, the big-mouth  
insulation vessel, and insulation cup are mainly used to store drinks and food. They will  
not maintain for a long time under normal using circumstances, so the temperature  
measurement time for insulation vessel of which the capacity is lower than 0.4L is 12h; the  
temperature measurement time for big-mouth insulation vessel and insulation cup is 6h.

The portable insulation vessel must do tightness test.

This standard specifies that the strap-type insulation vessel shall do swing impact test, the  
others shall do fall impact test.

Taking the usage characteristics of the products into account, this standard has strict rules  
on the hygiene requirements of materials of plastics parts and stainless steel liner. The  
thickness of the material is not specified.

The strap color fastness test in this standard adopts the requirements of GB 3922-1983

the textile's color fastness to perspiration test method.

Taking the characteristics of small volume, heavy weight of the stainless steel insulation vessels into account, the stacking height must not exceed 3.0m.

Tightness performance test method; impact resistance test method; fitness test of the cork installation; mounting strength test of the strap and handle; smell of the water in capacity, cork and the container; and coating adhesion test specified in this standard ADOPT the relevant provisions of JIS S 2053-1994 stainless steel insulation vessel.

This standard was proposed by the China Light Industry Association's Quality Standard Department.

This standard shall be centralized by the National Daily Glass Enamel Standardization Center.

Drafting organizations of this standard. China Light Industry Association's Glass Enamel Institute, Shanghai Insulation Vessel Company, Hubei Jingjiang Ltd., Hebei Kaiyuan Industrial Co., Ltd., and Guangzhou Insulation Vessel Industrial Company.

The main drafter of this standard. Zhang Guoxiu, Pan Fengfang, Sun Zhongrong, Cui Renquan, and Chen Yumei.

This standard was first-time issued on December 4, 1997.

Light Industrial Standard

of the People's Republic of China

QB/T 2332-97

Stainless steel vacuum insulation vessel

## **1 Scope**

This standard specifies the product classification, technical requirements, test method, acceptance rules and mark, packing, transportation and storage of the stainless steel vacuum insulation vessel.

This standard applies to the stainless steel vacuum insulation vessel used to store hot and cold drinks and food for daily use (hereinafter referred to as "insulation vessel")

## 2 Normative references

The articles contained in the following documents have become part of this standard when they are quoted herein. For the dated documents so quoted, all the modifications or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 2828-1987 Sampling procedures and tables for lot-by-lot inspection by attributes (Apply to inspection of successive lots or batches)

GB 3280-92 Cold rolled stainless steel sheets and plates

GB/T 3922-1995 Textiles--Testing method for colour fastness to perspiration

GB 4239-91 Cold rolled stainless steel and heat-resisting steel strips

GB 4807-84 Hygienic standard for rubber sealing washer for food container

GB/T 5009.60-1996 Method for analysis of hygienic standard of products of polyethylene polystyrene and polypropylene for food packaging

GB/T 5009.64-1996 Method for analysis of hygienic standard of rubber sheet (ring) for food use

obvious zigzag, deflated sub, wrinkles, rust and other defects. Welds are smooth without welding tumor.

### **5.3 Plastic parts shall be processed well. Plasticizing is uniform, with smooth surface,**

uniform color, no serious rub hair, no inadequate molding and other obvious defects.

### **6.1 Stainless steel liner's material shall comply with the provisions of GB 9684 2.1, or it**

uses the material having the same or better quality.

### **6.2 The materials of other stainless steel parts shall be consistent with the materials**

regulated by GB 3280 or GB 4239 or use materials having the same or better quality.

**6.3 The materials of seal rings and rubber plastic parts that contact food shall be** consistent with the provisions of Table 6, or use materials having the same or better quality.

### **7.1 The insulation performance test of finished products**

Conduct the insulation test to the finished products according to 3.1 in GB 5430. It shall use the finished cork.

### **7.2 Capacity measurement**

The MASS of the insulation vessel which is filled with normal temperature water (5-35°C) to spill-over-full AND the sealing cork IS SUBTRACTED by the MASS of the insulation vessel which is without water and with the sealing cork. Then convert the mass into capacity (1 g of water is converted into 1 mL).

#### **7.3.1 Drop test**

In the condition of use, fully-fill the non-strap insulation vessel, which has been qualified for insulation effectiveness, with the normal temperature water (5-35°C). Then hang it up (as shown in Figure 5). Drop it from 400 mm height to 300mm-thick hard block board which is fixed horizontally. Inspect it according to the relevant provisions of Table 6.

Chapter 4. After all items are qualified, it is deemed as qualified.

**9.1.1 There shall be visible sign on each product or its packaging. Mark the name,** capacity, manufacturing factory name, brand and quality grade of the product. And attach the instructions and the certificate.

#### **9.1.2 The instructions shall indicate the product name, capacity, caliber, manufacturing**

factory name, and quality grade. And it shall indicate contents such as use method, precautions in use, executed standard, quality assurance and exchange requirements.

**9.1.3 Transport packaging shall indicate the factory name, article number, grade,** quantity, package size, volume, weight, and date of packing.