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

QB/T 2421-1998

**Aluminum and aluminum alloy non-stick cookware
(English Translation)**

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Foreword

This standard non-equivalently adopts British standard BS 7069-1988 "Specification for cookware".

Annexes A, B, C and D are all informative.

This standard was proposed by Industry Management Department of State Light Industry Bureau.

This standard shall be under the jurisdiction of National Daily Hardware Standardization Center.

The main drafting organizations of this standard. Shanghai 1st Aluminum Product Factory, Shenyang Light Industry Research and Design Institute, Shanghai Xingli Hardware Products Co., Ltd., Zhejiang Taizhou ASD Electric Appliances Co., Ltd., Shaoxing Huachang General Factory of Aluminum Products, Non-stick Cookware Branch of Fenglei Brmory Aviation Industry Corporation of Guizhou China, Guangdong Nanhai Hefeng

Electrochemical Co., Ltd., Southern General Hardware Factory of Guangdong, Dupont China Holding Co., Ltd. AND Daikin Fluoro Coatings (Shanghai) Co., Ltd.

1 Scope

This standard specifies the definition, product classification, technical requirements, test methods, inspection rules, mark, packaging, transportation and storage requirements of aluminum and aluminum alloy non-stick pan products.

This standard is applicable to household aluminum and aluminum alloy non-stick pan products which is made by using aluminum and aluminum alloy as base-body, painting its inner surface with non-stick coating and polishing its outer surface or painting its outer surface with heat resistance paint or other surface treatment such as aluminium enameling.

2 Normative references

The following normative documents contain the provisions, which through reference in this text, constitute the provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties who enter into agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

GB 191-90 Packaging - Pictorial markings for handling of goods

GB/T 2828-87 Sampling procedures and tables for lot-by-lot inspection by attributes (Apply to inspection of successive lots or batches)

GB/T 2829-87 Sampling procedures and tables for periodic inspection by attributes (Apply to inspection of stability for productive process)

GB/T 6060.4-88 Roughness comparison specimens - Polished surfaces

GB/T 6388-86 Transport package shipping mark

GBAT 6543-86 Corrugated box

GB/T 6544-86 Corrugated fiberboard

GB/T 6739-1996 Determination of film hardness by pencil test

GB 11678-89 Hygienic standard for polytetrafluorethylene used as inner coating of food containers

GB/T 11679-89 Method for analysis of hygienic standard of polytetrafluorethylene coating
Assessment of coating surface by microscope.

3.10 Crack

The non-stick coating crack which is observed with microscope.

4.1.1 The products can be classified, according to usage, into boiling pan, frying pan, wok,

milk pan and accessories.

4.1.2 The inner product surface is painted with non-stick coating. Non-stick coating is

classified into one-layer, double-layer and three-layer system and so on.

4.1.3 The outer surface is treated with painting non-stick coating, aluminium enameling,

high temperature resistance paint or polishing and other kinds of treatment methods.

4.2.2 When the specification is expressed in inner diameter, the unit shall be centimetre

(cm), and even number series has the priority to be used.

4.2.3 When the specification is expressed in volume, the unit shall be litre (L). The value is

taken to keep a decimal places.

4.3 Product diagram

The typical product structure and components name is shown as Figure 1.

Peeling strength is tested according to clause 6.4. The striped coating shall not be greater than 6mm away from the edge of knife scratch.

5.3.6 Scratch resistance

Scratch resistance is tested according to clause 6.5. The total length of coating which is not removed shall not be less than 10%.

5.3.7 Non-stick performance

Non-stick performance is tested according to clause 6.6. The tested food can be taken out with non-metal scoop from the coating surface without any damage and the coating surface can be cleaned with soft cloth.

5.3.8 Stability after heated and shock cooling

It shall be tested according to clause 6.7 and there shall not be bubble or cracks on coating surface.

5.3.9 Alkali resistance

It shall be tested according to clause 6.8 and there shall not be peeling or cracks on coating surface.

5.3.10 Acid resistance

It shall be tested according to clause 6.9 and there shall not be peeling, cracks, or shrinkage on coating surface.

5.3.11 Saline water corrosion resistance

It shall be tested according to clause 6.10 and there shall not be additive defects on coating surface such as bubble, corrosion spot and so on.

5.3.12 Microscopic appearance

It shall be tested according to clause 6.24. There shall not be bottom exposure and cracks on the coating when observed with 10x microscope.

5.3.13 Hygienic requirements

The hygienic requirements of non-stick coating shall fulfill requirements of GB 11678.

5.4.1 Appearance

The paint film surface shall be smooth and have uniform color and there is no blister or peeling. A small amount of micro particles and pores are permitted.

The coating shall be completely hot melted. Its surface shall be basically smooth and have uniform color while there is no obvious bubbles, cracks, bottom exposure and peelings.