



National Standard of the People's
Republic of China

GB 4806.7—2016

National Food Safety Standard
Plastic Materials and Its Products
for Food Contact

(Unofficial translation)

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Republic of China

Preface

This standard will replace the relevant criteria in the part of the products in the *GB 9681-1988 Hygienic standard of products of polyvinyl chloride for food packaging*, *GB 9687-1988 Hygienic standard for polyethylene products used as food containers and table wares*, *GB 9688-1988 Hygienic standard for polypropylene products used as food containers and table wares*, *GB 9689-1988 Hygienic standard for polystyrene products used as food containers and table wares*, *GB 9690-2009 Hygienic standard for melamine-formaldehyde products used as food containers and packaging materials*, *GB 13113-1991 Hygienic standard for polyethylene terephthalate products used as food containers and packaging materials*, *GB 14942-1994 Hygienic standard for polycarbonate products used as food containers and packaging materials*, *GB 16332 -1996 Hygienic standard of products of nylon for food packaging*, *GB 17326-1988 Hygienic standard for rubber-modified acrylonitrile-butadiene-styrene products used as food containers and packaging materials*, *GB 17327-1988 Hygienic standard for acrylonitrile-styrene products used as food containers and packaging materials*, and *GB 13115-1991 Hygienic standard for unsaturated polyester resin and glass fibre reinforced plastics used as food containers and packaging materials*.

Compared with the above standards, the major modifications in this standard are as follows:

- The standard name is modified as “National Food Safety Standard: Plastic Materials and its Products for Food Contact”;
- The scope of the standard is modified;
- The terms and definitions are added;
- The basic requirements are added;
- The requirements of raw materials are added;
- The physicochemical indexes are modified
- The general requirements of the migration test are added;
- The requirements of the label tag are added.

National Food Safety Standard

Plastic Materials and its Products for Food Contact

1. Scope

This standard is applicable to the plastic materials and its products for the food contact, including unvulcanized thermoplastic elastomer materials and products.

2. Terminology and definition

2.1 Plastic materials

It is a high polymer material with one or more types of resin or pre-polymer as the primary structural constituent and with the additives added or not added, which has been manufactured under certain temperature and pressure with a certain shape between the resin and plastic product, including the plastic particles (or slicing), master batch and sheet, and so on.

2.2 Plastic product

It is a finished product with the plastic resin or material as a raw material and with the additives added or not added, and it has certain shapes upon molding processing.

2.3 Master batch

It is a condensation product manufactured after the plastic additives (for example, coloring agent, padding, fibre and stabilizing agent) which may impact on the physical property of the plastic materials and its products are attached into one or more types of resin in the case of the overweight, and which may be manufactured into other plastic materials and final products only after mixing use with the resins or aggregates.

3. Basic requirements

The plastic materials and its products for the food contact materials shall meet the provisions of GB 4806.1.

4. Technical requirements

4.1 Requirements of raw materials

The use conditions of the resin in the plastic materials and its products for the food contact shall meet the provisions of the GB 4806.6 and relevant notices.

4.2 Requirements of senses

The requirements for senses shall meet the provisions of Table 1.

Table 1 Requirement for Sense

Item	Requirement
Sense	Normal color and luster, Odorless, No dirt, etc
Soak solution	No deterioration with turbidity, sedimentation and foreign odor in the soak solution obtained in the migration test

4.3 Physical and chemical indexes

4.3.1 The physical and chemical indexes shall meet the provisions of Table 2.

Table 2 Physical and Chemical Indexes

Item	Index	Test Method
Overall migration quantity $/(mg/dm^2)^{[b]}$ \leq	10	GB 31604.8
Potassium permanganate consumption/(mg/kg) water (60°C, 2h) \leq	10	GB 31604.2
Heavy metal (Calculate with Pb)/ (mg/kg) 4% acetic acid (volume fraction) (60°C, 2h) \leq	1	GB 31604.9
Decolonization test ^[c]	Negative	GB 31604.7
a. The mother stock shall be tested after mixing with the resins or granular materials and after being manufactured into final plastic products which may contact with the foods in accordance with the actual recipe. b. For the plastic materials and its products which may contact with the infant foods, the results unit shall be converted into mg/kg in accordance with the area-volume ratio in the actual use, and the limits shall be less than or equal to 60mg/kg. c. Only applicable to such products in which the coloring agents have been added.		

4.3.2 The specific migration limits, total specific migration limits, maximum residue limits, other physical and chemical indexes for the monomers and other starting materials shall meet the provisions of the Appendix A and relevant announcements of the GB 4806.6-2016.

4.4 Additives

Such additives shall meet the provisions of the GB 9685 and the relevant announcements.

5. Miscellaneous**5.1 Migration test**

The migration test shall be executed in accordance with the provisions of the GB 31604.1 and GB 5009.156.

5.2 Label tag

The label tag shall meet the provisions of the GB 4806.1, in addition, the polymers and common blends shall label the name for all the resins in accordance with the resin name labeled in the label, specification or accompanying document of the Appendix A of the GB 4806.6-2016.