

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB 4806.15-2024

**National food safety standard - Adhesives for food contact
materials and products**

食品安全国家标准 食品接触材料及制品用黏合剂

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National food safety standard - Adhesives for food contact materials and products

1 Scope

This standard applies to adhesives for food contact materials and products.

2 Terms and definitions

2.1 Adhesives for food contact materials and products

Among food contact materials and products, materials that are bonded through physical or chemical means AND are directly or indirectly in contact with food.

3 Product categories

Adhesives for food contact materials and products can be divided into two categories, according to whether they are in direct contact with food:

- Adhesives for direct contact with food: Adhesives used on the food contact surfaces of food contact materials and products, that are expected to be in direct contact with food.
- Adhesives for indirect contact with food: Adhesives used on non-food contact surfaces of food contact materials and products, that are not expected to be in direct contact with food, but whose components may be transferred to food.

4 Basic requirements

4.1 Adhesives used for food contact materials and products shall comply with the requirements of GB 4806.1.

4.2 For adhesive manufacturers for food contact materials and products, it shall control the safety risks of adhesive products, through formula design, raw material selection, production process control, product information transmission, etc.

4.3 Enterprises, that use adhesives for food contact materials and products, shall control safety risks derived from adhesives, through packaging design such as seams and edges, adding effective barrier layers, curing process control, product information transmission, etc. When it can achieve expected results, it shall minimize the use

amount and residue amount of adhesives.

5 Technical requirements

5.1 Raw material requirements

5.1.1 The use of basic raw materials for adhesives used in direct contact with food shall comply with the requirements of Appendix A and relevant announcements. The use of basic raw materials for adhesives for indirect contact with food shall comply with the requirements of Appendix A, Appendix B, relevant announcements.

5.1.2 The use of adhesive additives for food contact materials and products shall comply with the requirements of GB 9685 and related announcements. Additives used in direct food contact adhesives can also be used in indirect food contact adhesives.

5.2 Sensory requirements

The sensory requirements of the adhesive layer for direct contact with food shall comply with the provisions of Table 1.

Table 1 -- Sensory requirements

Item	Requirements
Sense	Normal color, no odor or unclean matter, etc.
Soaking liquid	The soaking liquid obtained from the migration test has no coloration, turbidity, precipitation, odor or other deterioration in sensory properties

5.3 Physical and chemical indicators

5.3.1 General physical and chemical indicators

The general physical and chemical indicators of the adhesive layer shall comply with the provisions of Table 2.

Table 2 -- General physical and chemical indicators

Item	Indicators	Testing methods
Total migration amount ^a /(mg/dm ²) ^b ≤	10	GB 31604.8
Potassium permanganate consumption ^a /(mg/kg) Water (60 °C, 2 h) ≤	10	GB 31604.2
Heavy metals (calculated as Pb) ^a /(mg/kg) 4% acetic acid (volume fraction) (60 °C, 2 h) ≤	1	GB 31604.9
Total migration amount of aromatic primary amines ^c /(mg/kg)	Not detectable (detection limit = 0.01 mg/kg)	GB 31604.52
^a Only applicable to adhesive layers for direct contact with food. For the adhesive layer that is in indirect contact with food, this item should be implemented in accordance with the provisions of the corresponding national food safety standards for the layer that is in direct contact with food.		

- ^b For adhesives used in food contact materials and products for infants and young children, the results shall be converted into mg/kg based on the area to volume ratio in actual use, meanwhile the limit shall be ≤ 60 mg/kg.
- ^c Only applicable to adhesives containing aromatic polyurethane and other adhesives that may produce aromatic primary amines. After the adhesive curing reaction is completed, the migration amount of aromatic primary amines shall be tested on food contact materials and final products. Appendices A and B of this standard, GB 9685 and related announcements stipulate migration limits for aromatic primary amines; their limits are implemented in accordance with relevant requirements.

5.3.2 Other physical and chemical indicators

5.3.2.1 Adhesives for food contact materials and products shall comply with the requirements for physical and chemical indicators, such as specific migration limits (SML), specific total migration limits [SML(T)], maximum residues (QM) of basic raw materials in Appendix A, Appendix B and relevant announcements.

5.3.2.2 Adhesives for food contact materials and products shall comply with the SML, SML(T), QM and other physical and chemical indicators of additives, which are specified in GB 9685 and relevant announcements.

6 Others

6.1 Migration test

The migration test shall be carried out in accordance with the provisions of GB 31604.1 and GB 5009.156, unless there are special provisions in this standard.

6.2 Label identification

6.2.1 Label identification shall comply with the provisions of GB 4806.1.

6.2.2 It shall indicate the product category on the label of adhesive products (adhesives for direct contact with food, adhesives for indirect contact with food).