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General Safety Requirements for Food-Contact Materials and Articles (GB 4806.1-2016)

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Report Highlights:

On October 19, 2016, China's National Health and Family Planning Commission (NHFPC) released the National Food Safety Standard of General Safety Requirements of Food-Contact Materials and Articles (GB 4806.1-2016), which will be implemented on October 19, 2017. This standard stipulates the general requirements, limitation requirements, compliance principles, testing method, traceability and product information for food contact materials and articles. The standard applies to all types of food contact materials and articles. A draft of the standard was notified to the WTO as SPS CHN 876 in May 2015. Please note that the comment process has ended and that this standard is considered final.

The following report contains an unofficial translation of the final standard.

BEGIN TRANSLATION

National Food Safety Standard

General Safety Requirements of Food-Contact Materials and Articles

1. Scope

This standard specifies the basic requirements, requirements of limits, conformity principles, testing methods, traceability and product information of food-contact materials and articles.

This standard applies to all types of food-contact materials and articles.

2. Terms and Definitions

2.1 Food-Contact Materials and Articles

Under normal use conditions, various materials and articles that are or may be in contact with foods or food additives (hereinafter referred to as “foods”), or the materials and articles whose ingredients may migrate into foods; such materials and articles include the food packaging materials/containers/kitchenware used in food production, processing, packaging, transportation, storage and use, and the paints and coatings/inks/adhesives that may be in direct or indirect contact with foods; they do not include the detergents, disinfectants and public water-carrying facilities.

2.2 Composite Materials and Articles

The food-contact materials and articles composed of two or more layers of different or the same type of materials by bonding, hot melting or other methods.

2.3 Combined Materials and Articles

The food-contact materials and articles produced by combining two or more types of different or the same materials by assembling, welding, or inlaying.

2.4 Overall Migration

The total quantity of all non-volatile substances migrated from food-contact materials and articles into the food simulants in contact with them, expressed in milligrams of non-volatile substances per kilogram of food simulant (mg/kg), or in milligrams of non-volatile migrants moved out per square decimeter of contact area (mg/dm²). While the food-contact materials and articles that are in contact with foods for infants and young children, expressed in mg/kg.

2.5 Overall Migration Limit (OML)

The maximum permitted amount of all non-volatile substances migrated from food-contact materials into the food simulants in contact with them, expressed in milligrams of non-volatile substances per kilogram of food simulant (mg/kg), or in milligrams of non-volatile migrants moved out per square decimeter of contact area (mg/dm²). While the food-contact materials and articles that are in contact with foods for infants and young children, expressed in mg/kg.

2.6 Maximum Quantity of Use

The maximum permitted quantity of a certain type or class of substance added in the production of food-contact materials and articles, expressed in mass fraction (%).

2.7 Specific Migration

The quantity of a certain type or class of substance migrated out from food-contact materials and articles into the foods or food simulants in contact with them, expressed in expressed in milligrams of a certain specific migrant per kilogram of foods or food simulants (mg/kg), or in milligrams of a certain specific migrant moved out per square decimeter of contact area (mg/dm²).

2.8 Specific Migration Limit (SML)

The maximum permitted quantity of a certain type or class of substance migrated out from food-contact materials and articles into foods or food simulants in contact with them, expressed in milligrams of a certain specific migrant per kilogram of foods or food simulants (mg/kg), or expressed in milligrams of a certain specific migrant moved out per square decimeter of contact area (mg/dm²).

2.9 Total Specific Migration

Total quantity of two or more substances migrate out from food-contact materials and articles into foods or food simulants in contact with them, expressed in milligrams of a certain type or class of migration substance (or group) designated per kilogram of foods or food simulants (mg/kg), or expressed in milligrams of a certain type or class of migration substance (or group) designated per square decimeter of contact area (mg/dm²).

2.10 Total Specific Migration Limit [SML(T)]

The maximum total permitted quantity of two or more substances migrate out from food-contact materials and articles into foods or food simulants in contact with them, expressed in milligrams of a certain type or class of migration substance (or group) designated per kilogram of foods or food simulants (mg/kg), or expressed in milligrams of a certain type or class of migration substance (or group) designated per square decimeter of contact area (mg/dm²).

2.11 Residual Limit

The quantity of a certain type or class of residual substance in food-contact materials or articles, expressed in milligrams of a certain type or class of the residual substance contained per kilogram of materials and articles (mg/kg), or expressed in milligrams of a certain type or class of the residual substance contained per square decimeter of contact area (mg/dm²).

2.12 Maximum Permitted Quantity (QM)

The maximum permitted quantity of a certain type or class of residual substance in food-contact materials and articles, expressed in milligrams of a certain type or class of the residual substance contained per kilogram of materials or articles (mg/kg), or expressed in milligrams of a certain type or class of the residual substance contained per square decimeter of contact area (mg/dm²).

2.13 Not Intentionally Added Substances

The substances contained in food-contact materials and articles, which were not added; such substances include the impurities in the raw and auxiliary materials, the decomposition products/the pollutants and the reaction intermediate products generated in the production, operation and use processes.

2.14 Effective Resistant/Proofing Layer

The screen layer formed by one layer or multiple layers of materials in the food-contact materials or articles, which prevents the substances behind the screen layer to migrate into foods and guarantee the unapproved substance migrated into foods is less than 0.01 mg/kg in quantity; in addition, under the recommended using conditions, the food contact material and articles comply with provisions of the Article 3.1 and 3.2 of this standard when they are in contact with foods.

3 Basic Requirements

3.1 Under the recommended using conditions, the level of substance migrated from food-contact materials and articles into foods should not impose harm to human health.

3.2 Under the recommended using conditions, when the food-contact materials and articles are in contact with foods, they should not result in changes of food composition, structure or properties such as color/smell/taste; they should not cause technical effect (unless otherwise provided specifically) to the foods.

3.3 Quantity of the substances used in food-contact materials and articles should be minimized on the premise that the desired results can be achieved.

3.4 The substances used in food-contact materials and articles should comply with appropriate quality specifications.

3.5 Producers of food-contact materials and articles should control the not intentionally added substances in products to ensure the migrating quantity complies with the provisions in the Article 3.1 and 3.2 of this standard.

3.6 For the substances that do not contact foods and have an effective resistant/proofing layer between such substance and the foods, or the substances that are not list in the appropriate national food safety standards, producers of the food-contact materials and articles should carry out safety assessment and control measures to ensure the migrating quantity of such substances do not exceed 0.01mg/kg. The carcinogenic, teratogenic and mutagenic substances as well as nanomaterials are not subject to the above principles, but should comply with relevant laws, regulations and rules.

3.7 Production of the food-contact materials and articles should comply with provisions in the GB31603.

4 Limit Requirements

4.1 General Requirements

The overall migration of food-contact materials and articles, the quantity of substances used, the specific migration, the total specific migration, and the residue limits should comply with the provisions of national food safety standards regarding to overall migration limit, the maximum quantity of use, the specific migration limit (SML), the total specific migration limit [SML(T)] and the maximum permitted quantity (QM).

4.2 Special Requirements

4.2.1 For the same (group of) substances listed in both the GB9685 and the specific product standards, such (group of) substances in food-contact materials and articles should comply with relevant provisions for limits, and the limits should not be sum up.

4.2.2 Composite materials and articles and the combined materials and products, and the various types of materials in the coating products should comply with provisions in relevant national food safety standards. When different materials have limits for the same item, the food-contact materials and articles as a whole should comply with the weighed sum-up value of the relevant limits. When it is unable to calculate the weighed sum-up value, the minimum limit of the item should be adopted.

5 Conformity Principles

5.1 The use of raw materials in food-contact materials and articles should comply with the provisions in the national food safety standards for relevant products and relevant public notices.

5.2 The use of additives in food-contact materials and articles should comply with the provisions in the GB 9685 and relevant public notices.

5.3 Food-contact materials and articles should comply with the provisions in the national food safety standards for relevant products.

6 Testing Methods

6.1 The migration test of food-contact materials and articles should comply with the provisions of the GB31604.1 and the GB 5009.156. Where special provisions are specified in the national food safety standards for the product, the provisions in the product standards should be implemented.

6.2 Determination of relevant items of food-contact materials and articles should follow the testing methods provided in national standards and, in case there is no corresponding national standard, other testing methods that have been technically verified.

7 Traceability

7.1 Producers of food-contact materials and articles should establish the product traceability system to ensure the

traceability of food-contact materials and articles at all phases.

7.2 The traceability system should ensure the availability of information on origin/destination of the food-contact materials and articles, and the compliance information of related substances or materials.

8 Product Information

8.1 The product identification information should be clear and true, and should not mislead consumers.

8.2 The product should provide adequate product information, including identification content (labels, user's manuals) and compliance certificate to ensure the availability of sufficient information for safety assessment for food-contact materials and articles.

8.3 The identification contents should include the product names and materials, the statement of conformity to relevant regulations and standards, the name/address/contact details of producers or entrusting parties, and the date of production and shelf life (if applicable).

8.4 The statement of conformity should include the regulations and standards to follow, the list of substances that are subject to restrictive requirements and their limits, and the overall migration compliance (for molded parts only), etc.

8.5 In addition to the above requirements, the food-contact materials and articles should be marked with "For Contact with Foods", "For Food Packaging" or similar expressions, or should print, affix the spoon and chopsticks marks, see Appendix A for details, with the exceptions of the products that have clear food-contacting purposes (such as chopsticks and frying wok). The products having special requirements should indicate the methods and precautions for use, the purpose, application environment, temperature and the like. For the products that the relevant standards clearly defined the conditions for use or exceeding the conditions for use will produce higher food safety risk and the conditions for use should be described in special or striking manner so that the user can safely and properly handle, display, store and use the products.

8.6 The above mentioned identification contents should be preferably marked on the products or the product labels, the label should be placed in the conspicuous position at the smallest sales package of the product. If the information fails to fully display on the product or product label for technical reasons, it can be displayed in the product manual or accompanying documents.

Annex A Vector Diagram of Spoon and Chopsticks Symbols



Fig. A.1 Vector Diagram of Spoon and Chopsticks Symbols

END OF TRANSLATION