

China – Updates about GB Standards for Food Contact Materials (FCMs).

TÜV Rheinland LGA Products - Information

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On July 28th, 2022, the Chinese National Health Commission (NHC) issued a series of national food safety standards in Announcement No. 3 of 2022. It includes a revised standard for food contact materials and articles made of paper and paperboard (GB 4806.8-2022) and a new standard for food contact materials and articles made of bamboo and wood (GB 4806.12-2022). The implementation date is June 30th, 2023 for GB 4806.8-2022 and December 30th, 2022 for GB 4806.12-2022. Further information about these two GB standards will be explained below.

REVISED GB 4806.8-2022 FOR PAPER AND PAPERBOARD

GB 4806.8-2022 is the first revision for food contact materials and articles made of paper and paperboard since its first publication in 6 years ago. The standard revises several important points:

- Raw material requirements
 - Raw materials used in food contact materials and articles made of paper and paperboard should not be harmful to human health. The fiber raw material should be mainly plant fibers. For synthetic fibers, they should comply with the relevant national food safety standards.
 - The use of additives should comply with the provisions of GB 9685 and relevant NHC announcements.
- Sensory requirements
 - A remark is added in the standard to indicate that decoloration of unbleached and uncoloured paper and paperboard are not considered as abnormal coloration
- Physical and chemical indicators
 - Potassium permanganate consumption is removed based on the experimental analysis results
 - Requirement for 1,3-dichloro-2-propanol (1,3-DCP, not detectable with detection limit of 2µg/L) and 3-chloro-1,2-propanediol (3-MCPD, ≤12 mg/kg) is added
- Other technical requirements
 - For coatings, inks and/or adhesives used in food contact materials and articles made of paper and paperboard, they should meet the requirements of the corresponding national food safety standards.
- A new annex with test method for the determination of 1,3-DCP and 3-MCPD in water extract is added

NEW GB 4806.12-2022 FOR BAMBOO AND WOOD

GB 4806.12-2022 is the first national food safety standard for food contact materials and articles made of bamboo and wood (including cork). It helps to improve the current situation of lacking food safety standards and provide clear guidance for this material type. The standard specifies the raw material requirements, sensory requirements, physical and chemical indicators, microbial limits and other technical requirements. Some of the main points are shown below:

- Food contact materials and articles made of bamboo and wood should comply with the general safety requirements of GB 4806.1.
- Raw material requirements
 - Raw materials used in food contact materials and articles made of bamboo and wood should not be harmful to human health.
 - The use of inks, wax and other additives should comply with the provisions of GB 9685 and relevant NHC announcements.
- Sensory requirements
 - Normal color, no burrs, free of insects, odors, mold or other contaminants
 - The solution obtained from the migration test shall not have any deterioration of sensory properties such as precipitation, abnormal odor, abnormal coloration. By considering the nature of bamboo and wood, it uses “abnormal” in order to distinguish it from the normal odor and color from bamboo and wood.
- Physical and chemical indicators

| Migration indicators | | |
|--|---|--|
| Test | Limit | Risk interpretation |
| Overall migration | 10 mg/dm ² (or 60 mg/kg for children use FCMs) | To check the total amount of non-volatile substances migrating from FCMs |
| Specific migration of formaldehyde | ≤ 15 mg/kg | Formaldehyde can be used for many purposes in the processing of bamboo and wood (e.g. in adhesive and coating). Its migration should be limited to a degree that is not harmful to health. |
| Specific migration of pentachlorophenol (PCP) and its salts (expressed as PCP) | ≤ 0.15 mg/kg | PCP could be used as preservatives. If the removal of these preservatives is not thorough, they can migrate from FCMs to food during use. |
| Specific migration of sulfur dioxide (SO ₂) | ≤ 10 mg/kg | Sulfur fumigation, hydrogen peroxide or sodium sulfate could be used for bleaching during the production process and resulting a large amount of SO ₂ in FCMs. |
| Residues indicators | | |
| Thiabendazole | ≤ 1.2 mg/kg | They can be used as fungicides during the production process. The residual content of fungicides may migrate from FCMs to food during use. |
| o-Phenylphenol | ≤ 4.8 mg/kg | |
| Imazalil | ≤ 0.4 mg/kg | |
| Biphenyl | ≤ 0.6 mg/kg | |

- Other technical requirements
 - For coatings, inks and/or adhesives used in food contact materials and articles made of bamboo and wood, they should meet the requirements of the corresponding national food safety standards

Further information on current legal changes can also be found on our homepage at www.tuv.com or <https://www.tuv.com/regulations-and-standards/en/>.

Further technical information can be obtained from:

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Info box: For additional information about FCM Services please see [here](#)

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