



*NSF International Standard /
American National Standard*

NSF/ANSI 51 - 2012

Food Equipment Materials



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for Food Equipment —

Food equipment materials

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Foreword²

The purpose of this Standard is to establish minimum food protection and sanitation requirements for the materials used in the construction of commercial food equipment.

By way of reference, this Standard will define the basic materials requirements for all equipment covered by NSF/ANSI Food Equipment Standards.

This Standard establishes requirements intended to ensure that a material is not formulated such that it may impart deleterious substances to food in its intended end use application. This Standard does not define specific extraction test methods or acceptance criteria to be used to assess the extent of chemical migration from food contact surfaces to food. Instead, the appropriate United States Federal Regulations have been cited as references upon which conformance with this Standard is based. Other NSF/ANSI Standards may establish extraction tests and acceptance criteria, as needed, for specific types of equipment based on the materials used in their construction and the nature of the food contact (i.e., beverage dispensing equipment, ice making equipment).

This Standard establishes cleanability, corrosion resistance, impact resistance, abrasion resistance, heat resistance, and coating adhesion ability requirements and testing methods for food equipment materials of construction, as applicable.

This edition of the Standard contains the following revision:

Issue 10

The purpose of this revision was to update the Normative References and boilerplate language, clarify the requirements for brass and bronze, glass and glass-like materials, and storage shelving intended for wet environments, relocate the lead requirement and test method from NSF/ANSI 4 and the glass materials requirement to NSF/ANSI 51, and expand Fluoropolymer coatings.

The Interpretations Annex contains responses to interpretation requests. The responses will be published in each version of the Standard until such time that the interpretation response is no longer applicable.

This Standard was developed by the NSF Joint Committee on Food Equipment using the consensus process of the American National Standards Institute.

Suggestions for improvement of this Standard are welcome. Comments should be sent to the Chairperson of the Joint Committee on Food Equipment at standards@nsf.org or c/o NSF International, P.O. Box 130140, Ann Arbor, Michigan 48113-0140, USA.

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NSF/ANSI Standard for Food Equipment –

Food equipment materials

1 General

1.1 Purpose

This Standard establishes minimum public health and sanitation requirements for materials used in the construction of commercial food equipment. The requirements of this Standard are intended to ensure that the composition and surface finish of food equipment materials are such that a material will not adulterate food nor render food equipment difficult to clean and sanitize.

1.2 Scope

This Standard is applicable to the materials and finishes used in the manufacture of food equipment (e.g., broiler, beverage dispenser, cutting board, stock pot). The Standard is also applicable to components such as tubing, sealants, gaskets, valves, and other items intended for various food equipment applications.

These components shall meet the relevant design and construction requirements of the NSF Standard applicable to the type of food equipment on which the component is used.

The requirements of 4 of this Standard may also be applied separately to determine whether a material is suitable for use in a food zone based on its formulation alone. The other relevant requirements of this Standard, including those for cleanability and corrosion resistance, would apply to the finished product for which the material is used.

Materials other than those specifically mentioned in this Standard may be used provided that such materials meet the minimum requirements described herein.

1.3 Measurement

Decimal and SI conversions provided parenthetically shall be considered equivalent. Metric conversions and significant figure rounding have been made according to IEEE/ASTM SI 10.

2 Normative references

The following documents contain provisions that, through reference, constitute provisions of this NSF/ANSI Standard. At the time of publication, the editions listed below were valid. All standards are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below. The most recent published edition of the document shall be used for undated references.

21 C.F.R. §§170-199, *Food and Drug*³

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