

ICS 67.260

English version

## Code of Practice on cleanability of commercial food equipment used in the retail and catering sectors

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## Contents

Page

Foreword .....	4
1 Scope .....	5
2 Normative references .....	7
3 Terms and Definitions .....	8
4 Materials .....	25
4.1 Material requirements for food equipment .....	25
4.2 Materials for marine equipment .....	30
4.3 Materials for commercial cooking, rethermalization (regeneration), and powered hot food holding and transport equipment .....	31
4.4 Materials for commercial refrigerators and freezers .....	32
5 Design and construction .....	33
5.1 General sanitation .....	33
5.2 Design and construction for food equipment provided with a security package .....	58
5.3 Design and construction for marine food equipment .....	59
5.4 Design and construction for commercial cooking, rethermalization (regeneration), and powered hot food holding and transport equipment .....	60
5.5 Design and construction for dispensing freezers .....	64
5.6 Design and construction for commercial refrigerators and freezers .....	66
5.7 Design and construction for commercial powered food preparation equipment .....	74
5.8 Design and construction for automatic ice making equipment .....	79
5.9 Design and construction for manual food and beverage dispensing equipment .....	81
5.10 Design and construction for commercial bulk milk products dispensing equipment .....	85
5.11 Design and construction for vending machines for food and beverages .....	89
5.12 Design and construction for mobile food carts .....	95
6 Performance .....	100
6.1 General .....	100
6.2 Performance for wood top bakers tables .....	104
6.3 Performance for commercial cooking, rethermalization (regeneration) and powered hot food holding and transport equipment .....	106
6.4 Dispensing freezers .....	109
6.5 Commercial powered food preparation equipment .....	113
6.6 Automatic ice making equipment .....	113
6.7 Manual food and beverage dispensing equipment .....	114
6.8 Vending machines for food and beverages .....	114
6.9 Performance for mobile food carts .....	114
7 Labelling and literature .....	115
7.1 Food equipment provided with a security package .....	115
7.2 Cleaning instructions .....	116
Annex A (normative) European Legislations .....	117
Annex B (normative) Standards specification for common metallic coating processes .....	118
Annex C (normative) Performance for commercial cooking, rethermalization (regeneration) and powered hot food holding and transport equipment - Cleaning in place (CIP) and sanitization test method .....	120
C.1 Summary .....	120
C.2 Equipment .....	120
C.3 Microorganism .....	121

C.4	Supplies .....	121
C.5	Reagents .....	121
C.6	Safety precautions and hazards .....	122
C.7	Growth medium .....	122
C.8	Culture of <i>E. coli</i> .....	123
<b>Annex D (normative) Dispensing freezers - Cleaning in place (CIP) and sanitization test</b>		
	method .....	125
D.1	Summary .....	125
D.2	Equipment .....	125
D.3	Microorganism .....	126
D.4	Supplies .....	126
D.5	Reagents .....	126
D.6	Safety precautions and hazards .....	127
D.7	Growth medium .....	127
D.8	Culture of <i>E. coli</i> .....	128
<b>Annex E (normative) Automatic ice making equipment - Cleaning in place (CIP) and sanitization test method</b>		
	sanitization test method .....	130
E.1	Summary .....	130
E.2	Equipment .....	130
E.3	Microorganism .....	131
E.4	Supplies .....	131
E.5	Reagents .....	131
E.6	Safety precautions and hazards .....	132
E.7	Growth medium .....	132
E.8	Culture of <i>P. fluorescens</i> .....	134
<b>Annex F (informative) Additional information</b>		
	Additional information .....	136
<b>Bibliography</b>		
	Bibliography .....	138

## Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on **2006-05-04**, the constitution of which was supported by CEN following the public call for participation made on **2003-12-01**.

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN Management Centre. These organizations were drawn from the following economic sectors: **Food Service Equipment Industry; Quick Service Restaurants.**

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The final review/endorsement round for this CWA was started on **2005-07-27** and was successfully closed on **2005-09-26**. The final text of this CWA was submitted to CEN for publication on **2006-07-07**.

The purpose of this document is to provide a Code of Practice on the material, design, construction and performance of Commercial Food Service Equipment to achieve cleanability.

Operators in the retail and catering sector sought a method to comply with the legislation 852/2004 EC, Food Hygiene, which requires a quality system such as 'Hazard Analysis Critical Control Point(s)' (HACCP). Inherently this requires their equipment be cleanable. This document was established to provide members of this sector a Code of Practice to ensure that the manufacturers of equipment have a guideline to design and build cleanable equipment.

To assist the manufacturer, references to NSF/ANSI standards related to particular clauses in this document are given in Annex F.

While specific materials, design, and construction may be stipulated, equipment that incorporates alternate materials, design, or construction may be acceptable when such equipment meets or exceeds the intent of this Code of Practice.

It should be noted that European regulations, National regulations, Local regulations and European Standards take precedence over this Code of Practice.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN: AENOR, AFNOR, ASRO, BSI, CSNI, CYS, DIN, DS, ELOT, EVS, IBN, IPQ, IST, LVS, LST, MSA, MSZT, NEN, NSAI, ON, PKN, SEE, SIS, SIST, SFS, SN, SNV, SUTN and UNI.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

## 1 Scope

This CEN Workshop Agreement is a comprehensive Code of Practice on the material, design, construction and performance of Commercial Food service Equipment to achieve cleanability.

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

This document covers the following:

- a) General catering equipment.
- b) Marine food equipment.
- c) Commercial cooking, rethermalization (regeneration), and powered hot food holding equipment and transport equipment: this equipment includes, but is not limited to, ranges, ovens, fat/oil fryers, fat/oil filters, griddles, tilting griddle skillets, broilers, steam and pressure cookers, kettles, rotisseries, toasters, coffee makers and other hot beverage makers, component water heating equipment, proofing boxes and cabinets, hot food holding equipment, rethermalization (regeneration) equipment, and hot food transport cabinets.
- d) Dispensing freezers that process and freeze previously pasteurized product (e.g., soft ice cream, ice milk, yogurt, malts, custards) and dispense it directly into the consumer's container; dispensing freezers that dispense premanufactured frozen product (e.g., ice cream) directly into the consumer's container; and batch dispensing freezers. The materials, design, and construction requirements of this section may also apply to an item that is manufactured as a component of a dispensing freezer.
- e) Commercial refrigerators and freezers used to store and/or display cold food. The types of refrigerators and freezers covered by this document include, but are not limited to: storage refrigerators (e.g., reach-in, under counter, walk-in, roll-in); storage freezers (e.g., reach-in, under counter, walk-in, roll-in); rapid pull-down refrigerators and freezers; refrigerated food transport cabinets; refrigerated buffet units; refrigerated food preparation units; display refrigerators; beverage coolers; and ice cream cabinets.
- f) Commercial powered food preparation equipment includes, but is not limited to, coffee grinders, grinders, mixers, pasta makers, peelers, saws, slicers, tenderizers, and similar equipment.
- g) Food preparation equipment that has been modified for security purposes. Food equipment is often utilized in environments such as correctional facilities, mental health facilities, and some schools, where both sanitation and security are concerns. This document contains exceptions and labelling requirements that shall only be applicable to the splash and non-food zones of food equipment provided with a security package.
- h) Automatic ice making equipment and devices used in the manufacturing, processing, storing, dispensing, packaging, and transportation of ice intended for human consumption.
- i) Manual food and beverage dispensing equipment that manually dispense food or beverages, in bulk or in portions. The materials, design, and construction requirements of this Standard may also be applied to an item that is manufactured as a component of food and beverage dispensing equipment.

- j) Commercial bulk milk and dispensing equipment designed to dispense servings of milk or milk products by manual or machine actuation. It does not include dispensing freezers (soft-serve machines), vending machines, or manual food and beverage dispensing equipment.
- k) Vending machines for food and beverages, including those that vend packaged food and beverages and those that vend food and beverages in bulk.
- l) Mobile food carts and their related components. This includes mobile food carts intended for the preparation and service of food, as well those intended for service of prepackaged food only. It does not include catering trucks or other motor vehicle mounted food service equipment. Requirements for umbrellas, awnings, and similar overhead accessories installed on mobile food carts are not covered.

This document is in harmony with EN 1672-2 and EN ISO 14159.

This document does not deal with non food related hazards, e.g. mechanical hazards, electrical hazards etc. covered by specific CEN/CENELEC standards (see Bibliography).

## 2 Normative references

This document incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this document only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- EN 1717, *Protection against pollution of potable water installations and general requirements of devices to prevent pollution by backflow*
- EN 1678, *Food processing machinery - vegetable cutting machines – Safety and hygiene requirements*
- EN 12267, *Food processing machinery - Circular saw machines - Safety and hygiene requirements*
- EN 12268, *Food processing machinery - Band saw machines - Safety and hygiene requirements*
- EN 12331, *Food processing machinery - Mincing machines – Safety and hygiene requirements*
- EN 12851, *Food processing machinery - Catering attachments for machines having an auxiliary drive hub- Safety and hygiene requirements*
- EN 12852, *Food processing machinery - Food processors and blenders - Safety and hygiene requirements*
- EN 13208, *Food processing machinery - Vegetable peelers- Safety and hygiene requirements*
- EN 13389, *Food processing machinery – Mixers with horizontal shafts – Safety and hygiene requirements*
- EN 1672-2, *Food processing machinery – Basic concepts – Part 2: Hygiene requirements*
- EN 1005-2, *Safety of machinery – Human physical performance – Part 2: Manual handling of machinery and component parts of machinery*
- EN 10088-1, *Stainless steels – Part 1: List of stainless steels*
- EN 60335-1, *Household and similar electrical appliances – Safety – Part 1: General requirements (IEC 60335-1:2001, modified)*
- EN 60335-2-49, *Household and similar electrical appliances – Safety – Part 2-49: Particular requirements for commercial electric hot cupboards (IEC 60335-2-49:2002)*
- EN 61770, *Electric appliances connected to the water mains – Avoidance of back siphonage and failure of hose-sets (IEC 61770:1998 + A1:2004)*
- EN ISO 14159, *Safety of machinery – Hygiene requirements for the design of machinery (ISO 14159:2002)*
- EN ISO 6272-1, *Paints and varnishes – Rapid-deformation (impact resistance) tests – Part 1: Falling-weight test, large-area indenter (ISO 6272-1:2:2002)*