

Maquinaria para procesado de alimentos. Conceptos básicos. Parte 2: Requisitos de higiene y de limpieza. (Ratificada por la Asociación Española de Normalización en febrero de 2021.)

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Maquinaria para procesamiento de alimentos. Conceptos básicos. Parte 2: Requisitos de higiene y de limpieza. (Ratificada por la Asociación Española de Normalización en febrero de 2021.)

*Food processing machinery - Basic concepts - Part 2: Hygiene and cleanability requirements (Endorsed by Asociación Española de Normalización in February of 2021.)*

*Machines pour les produits alimentaires - Notions fondamentales - Partie 2 : Prescriptions relatives à l'hygiène et à la nettoyabilité (Entérinée par l'Asociación Española de Normalización en février 2021.)*

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English Version

**Food processing machinery - Basic concepts - Part 2:  
Hygiene and cleanability requirements**

Machines pour les produits alimentaires - Notions  
fondamentales - Partie 2 : Prescriptions relatives à  
l'hygiène et à la nettoyabilité

Nahrungsmittelmaschinen - Allgemeine  
Gestaltungsleitsätze - Teil 2: Anforderungen an  
Hygiene und Reinigbarkeit

This European Standard was approved by CEN on 30 November 2020.

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## European foreword

This document (EN 1672-2:2020) has been prepared by Technical Committee CEN/TC 153 “Machinery intended for use with foodstuffs and feed”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1672-2:2005+A1:2009.

The significant changes with respect to the previous edition EN 1672-2:2005+A1:2009 are listed below:

- the list of terms and definitions was upgraded;
- new methodology “Iterative hygiene risk reduction process”;
- all requirements regarding hygiene were upgraded, and new requirements regarding cleanability were added;
- Annex ZA was deleted to be in line with the HAS consultant recommendation.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

This document gives general hygiene and cleanability requirements for machinery in the scope of this document. It is intended to be referred by type-C machinery-specific standards. This document can be used as a general guide for machinery without type-C-specific standards.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

In almost all cases at least one of the different methods of design, safeguarding or other safety measures can be chosen which will meet both safety and hygiene essential requirements and adequately control both risks. The option to satisfy both hygiene and safety risks may not be the most obvious option which would have been adopted had the risk only been to safety or to hygiene, but will have to be the one chosen to meet both.

## 1 Scope

**1.1** This document specifies common hygiene and cleanability requirements for machinery and machine components used in preparing and processing food for human (see informative Annex A) and, where relevant, animal feed processing to eliminate or minimize the risk of contagion, infection, illness or injury arising from this food to an acceptable level. It identifies the hazards which are significant to the use of such food processing machinery and describes design methods and information for use for the elimination or reduction of these risks.

Additional and/or deviant hygiene and cleanability requirements may be given in applicable C-standards for specific machines or categories of machinery.

**NOTE** Separate hygiene and cleanability requirements are contained in other EU-Directives or -Regulations (see Bibliography).

Examples of hygiene risks and acceptable solutions are given in the informative Annex B.

This document may also be used for machinery, components or other equipment used for other purposes than food preparing or processing, if cleanability is required.

**1.2** This document does not deal with the hygiene-related risks to operators arising from the use of the machine.

**1.3** This document is not applicable to machines manufactured before the date of publication of this document by CEN.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 21469:2006, *Safety of machinery — Lubricants with incidental product contact — Hygiene requirements (ISO 21469:2006)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1 food

any product, ingredient or material intended to be orally consumed by human or animal

**Note 1 to entry:** The definition means food according to Article 2 of Regulation (EC) No. 178/2002 and feed.

### 3.2

#### **hygiene**

taking of all measures during the preparation and processing of food to ensure that it is fit for human or animal consumption

### 3.3

#### **access distance**

##### **P**

distance from the nearest free access point of the machine, according to the intended installation, to reach the furthest point of all areas to be cleaned

Note 1 to entry: Access points are given in Figure 21.

### 3.4

#### **adverse influence**

effect which gives a significant reduction of the fitness for consumption of a food

Note 1 to entry: A food can be adversely influenced, in particular by microbial pathogens or other unwanted microorganisms, toxins, vermin and other contaminants.

### 3.5

#### **areas of machinery and machine components**

food area, splash area and non-food area as following defined (see 3.5.1 to 3.5.3) and as illustrated in Figure 1

Note 1 to entry: These areas are not to be confused with any others amongst those defined in other standards (e.g. electro-technical standards).

#### 3.5.1

##### **food area**

machine and machine components surfaces which are exposed to food or from which food or other materials can drain, drip, diffuse or be drawn into the food

#### 3.5.2

##### **splash area**

area composed of surfaces on which part of the food can splash or flow along under intended conditions of use and does not return into the food

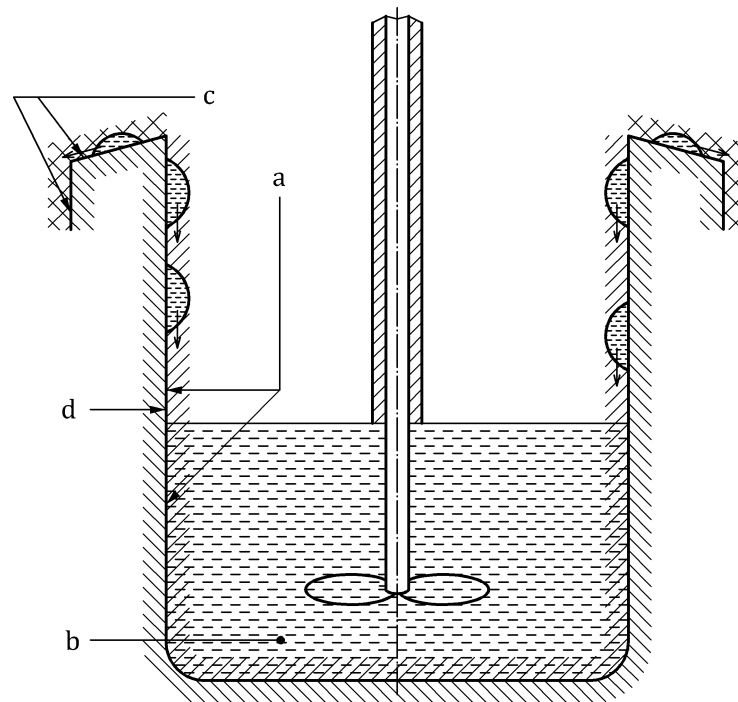
Note 1 to entry: Part of the food in the splash area is no more food in the sense of 3.1.

#### 3.5.3





##### **non-food area**

any area other than food area or splash area





**Key**

-  *a* food area (3.5.1)
-  *b* food (3.1)
-  *c* splash area (3.5.2)
-  *d* non-food area (3.5.3)

**Figure 1 — Areas of equipment**

**3.6**

**cleaning**

removal of soils

**3.6.1**

**cleanable**

designed and constructed so that soils can be removed

**3.6.2**

**easily cleanable**

designed and constructed to be cleanable by a simple cleaning method, where necessary after removing easily dismountable parts

Note 1 to entry: Simple cleaning methods could be, e.g. vacuum cleaning, cleaning in place (CIP) or cleaning after dismantling parts without the need of tools (e.g. spanner) for dismantling.

**3.6.3**

**wet cleaning**

cleaning with the use of liquids

**3.6.4**

**dry cleaning**

cleaning without the use of liquids