

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

**BS EN 415-1:2014**



**BSI Standards Publication**

## **Safety of packaging machines**

Part 1: Terminology and classification  
of packaging machines and associated  
equipment

**bsi.**

...making excellence a habit.™

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

This British Standard is the UK implementation of EN 415-1:2014. It supersedes BS EN 415-1:2000+A1:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/3/3, Packaging machines.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.  
Published by BSI Standards Limited 2014

ISBN 978 0 580 75966 6  
ICS 01.040.55; 55.200

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2014.

**Amendments/corrigenda issued since publication**

Date	Text affected
------	---------------

---

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

## EUROPÄISCHE NORM

July 2014

ICS 01.040.55; 55.200

Supersedes EN 415-1:2000+A1:2009

English Version

## Safety of packaging machines - Part 1: Terminology and classification of packaging machines and associated equipment

Sécurité des machines d'emballage - Partie 1: Terminologie et classification des machines d'emballage et de l'équipement associé

Sicherheit von Verpackungsmaschinen - Teil 1: Terminologie und Klassifikation von Verpackungsmaschinen und zugehörigen Ausrüstungen

This European Standard was approved by CEN on 4 January 2014.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

Foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	6
3.1 Filling machines.....	6
3.2 Closing machines .....	8
3.3 Labelling, decorating and coding machines.....	11
3.4 Cleaning, sterilising, cooling and drying machines.....	13
3.5 Fill and seal machines.....	15
3.6 Inspection machines .....	16
3.7 Container and packaging component handling machines .....	18
3.8 Form, fill and seal machines.....	19
3.9 Carton erecting, carton closing and cartoning machines .....	21
3.10 Wrapping machines.....	23
3.11 Group or secondary packaging machines .....	25
3.12 Palletizers, depalletizers and ancillary equipment.....	27
3.13 Pallet wrapping machines.....	29
3.14 Strapping machines .....	30
3.15 Terms used in this standard and other parts of EN 415.....	31
Annex A (normative) Safety requirements for packaging machines.....	40
Annex B (informative) Packaging machine names in English, French, German and Italian .....	48
Annex C (informative) New Machines and Definitions .....	62
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC .....	63

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

## Foreword

This document (EN 415-1:2014) has been prepared by Technical Committee CEN/TC 146 "Packaging machines - Safety", the secretariat of which is held by UNI.

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 January 2015 and conflicting national standards shall be withdrawn at the latest by January 2015.

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

This document supersedes EN 415-1:2000+A1:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this document.

This part 1 of EN 415, *Safety of packaging machines* belongs to a series of documents, the other parts of which are the following:

- *Part 2: Pre-formed rigid container packaging machines*
- *Part 3: Form, fill and seal machines*
- *Part 4: Palletisers and depalletisers*
- *Part 5: Wrapping machines*
- *Part 6: Pallet wrapping machines*
- *Part 7: Group and secondary packaging machines*
- *Part 8: Strapping machines*
- *Part 9: Noise measurement methods for packaging machines, packaging lines and associated equipment, grade of accuracy 2 and 3*
- *Part 10: General requirements*

### Standards for packaging machines

The appropriate standard to find safety requirements for a particular packaging machine defined in Clause 3, is indicated in Annex A of this standard.

NOTE In most cases the safety requirements will be found in another part of EN 415, however for a few machines the safety requirements will be found in another type of standard .

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

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

## **Introduction**

Packaging machines are used extensively in Europe, in an increasingly wide range of industries. They contain many hazards and have the potential to cause serious injury.

There are an enormous variety of packaging machines, but hitherto there has been no internationally agreed nomenclature. This has led to confusion when reporting accidents and interpreting accident and trade statistics. The purpose of this standard is to name and define each group of packaging machines uniquely. In most cases, these names will already be in common use, however in some cases the commonly used name is ambiguous, a trade name, or used to describe more than one significantly different type of machine. In these cases, a less familiar name will be defined. The identification of specific types of packaging machines and their definition assists in the correct application of the EN 415 series of standards and other standards that may be relevant for packaging machines. Machine designers, manufacturers, suppliers, importers, users, enforcing authorities and other interested bodies are encouraged to use the nomenclature in this type "C" standard to improve communication and to avoid confusion, particularly when reporting accidents and preparing the documentation required by EU Directives.

This is a preview of "BS EN 415-1:2014". [Click here to purchase the full version from the ANSI store.](#)

## 1 Scope

This European Standard defines the field of packaging machines. The machines defined fall within the following general groups:

- filling machines;
- closing machines;
- labelling, decorating and coding machines;
- cleaning, sterilizing, cooling and drying machines;
- fill and seal machines;
- inspection machines;
- container and packaging component handling machines;
- form, fill and seal machines;
- carton erecting, carton closing and cartoning machines;
- wrapping machines;
- group or secondary packaging machines;
- palletizers, depalletizers and ancillary equipment;
- pallet wrapping machines;
- strapping machines.

This part of EN 415 indicates the relevant machine specific part of EN 415, or another relevant standard, where safety requirements for dealing with the hazards associated with these machines can be found.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 415-2, *Packaging machines safety — Part 2: Pre-formed rigid container packaging machines*

EN 415-3, *Safety of packaging machines — Part 3: Form, fill and seal machines*

EN 415-4, *Safety of packaging machines — Part 4: Palletisers and depalletisers*

EN 415-5, *Safety of packaging machines — Part 5: Wrapping machines*

EN 415-6, *Safety of packaging machines — Part 6: Pallet wrapping machines*

EN 415-7, *Safety of packaging machines — Part 7: Group and secondary packaging machines*