



Safety of machinery

Part 3403: Safety of packaging machines—Form, fill and seal machines

This Australian Standard is the identical adoption of EN 415-3:1999+AMD 1:2009, Safety of packaging machines — Part 3: Form, fill and seal machines, with the permission of the European Committee for Standardization - CEN, Avenue Marnix 17, B-1000 Brussels, Belgium



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- Engineers Australia
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- Institute of Instrumentation, Control and Automation, Australia
- NSCA Foundation
- NSW Department of Industry, Skills and Regional Infrastructure Development
- Safety Institute of Australia
- SafeWork NSW
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Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee SF-041, Safety of Machinery.

The objective of this Standard is to specify safety requirements for form, fill and seal packaging machines and the filling machines that are particularly associated with them.

This Standard is identical with, and has been reproduced from, EN 415-3:1999+A1:2009, *Safety of packaging machines, Part 3: Form, fill and seal machines*.

As this document has been reproduced from an International Standard, the following applies:

- (a) In the source text 'this European Standard' should read 'this Australian Standard'.
- (b) A full point substitutes for a comma when referring to a decimal marker.

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The terms 'normative' and 'informative' are used in Standards to define the application of the appendices or annexes to which they apply. A 'normative' appendix or annex is an integral part of a Standard, whereas an 'informative' appendix or annex is only for information and guidance.

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Foreword

This document (EN 415-3:1999+A1:2009) 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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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 415-3:1999.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

This European Standard 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).

A1 For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

Other parts of this standard include:

EN 415 Safety of packaging machines;

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

Part 2: Pre-formed rigid container packaging machines;

Part 4: Palletisers and depalletisers;

A1 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. **A1**

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, 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.

Introduction

Form, fill and seal 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.

The extent to which hazards are covered is indicated in the scope and clause 4 of this standard. In addition, machines should comply as appropriate with EN 292-1 and EN 292-2 for hazards which are not covered by this standard.

A1 This document is a type C standard as stated in EN ISO 12100. The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard. **A1**

1 Scope

This European Standard establishes safety requirements for form, fill and seal packaging machines and the filling machines which are particularly associated with them. This group of machines is defined in detail in clause 3 of this standard, with diagrams illustrating examples of the principle of operation of each machine type. However briefly, this standard covers the following broad groups of machines:

- horizontal form, fill and seal machines;
- vertical form, fill and seal machines;
- pre-made bag erect fill and seal machines;
- mandrel flexible package or carton form, fill and seal machines;
- carton erect, fill and close machines;
- thermoform, fill and seal machines.

Filling machines commonly fitted to form, fill and seal machines including:

- auger fillers;
- volumetric cup fillers;
- volumetric piston fillers;
- counters;
- gravimetric fillers (weighers).

This standard covers the safety requirements for machine design, construction, installation, commissioning, operation, adjustment, maintenance and cleaning.

This part of EN 415 applies primarily to machines manufactured after the date of issue of this standard.