PINDEMATERJALIDE PEALEKANDMISSEADMED. OHUTUSNÕUDED

Application equipment for coating materials - Safety requirements

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1953:2025 sisaldab Euroopa standardi EN 1953:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 1953:2025 consists of the English text of the European standard EN 1953:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.02.2025.	Date of Availability of the European standard is 12.02.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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This European Standard was approved by CEN on 22 December 2024.

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, 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, Türkiye and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 1953:2025) has been prepared by Technical Committee CEN/TC 271 “Surface treatment equipment - safety”, 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 August 2025, and conflicting national standards shall be withdrawn at the latest by August 2026.

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 1953:2013.

See Annex B, Table B.1 for the technical modifications which have been made in comparison with EN 1953:2013.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annexes ZA and ZB, which are an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, Türkiye and the United Kingdom.

Introduction

This document is a type-C standard as stated in EN ISO 12100:2010.

This document is of relevance in particular for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions);

— service providers, e. g. for maintenance (small, medium and large enterprises).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

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

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

1 Scope

This document deals with all significant hazards, hazardous situations and hazardous events which are relevant to hand-held and automatic application equipment for coating material, when used as intended and under the conditions foreseen by the manufacturer, including reasonably foreseeable misuse.

See Annex A for significant hazards.

Together with this document, EN 50050-1:2013, EN 50050-2:2013, EN 50050-3:2013, EN 50059:2025, EN 50176:2025, EN 50177:2009[1], EN 50223:2015 or EN 50348:2010 give requirements for electrostatic application equipment.

The specific significant risks related to the use of application equipment with foodstuffs and pharmaceutical products are not dealt with in this document.

This document is not applicable to:

— application equipment designed for pneumatic working pressure above 15 bar;

— application equipment with rotating bell/disc designed for hydraulic working pressures above 25 bar;

— non-atomizing application equipment (e.g. extruding equipment, dispenser);

— fluidised bed powder coating machinery;

— application equipment covered by EN 50580:2012[5];

— supply hoses;

— airbrushes for graphic and artistic works;

— machinery for the supply and circulation of coating materials (see EN 12621:2025).

This document is not applicable to application equipment manufactured before the date of its publication.

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 14462:2015, *Surface treatment equipment - Noise test code for surface treatment equipment including its ancillary handling equipment - Accuracy grades 2 and 3*

EN 50050-1:2013, *Electrostatic hand-held spraying equipment - Safety requirements - Part 1: Hand-held spraying equipment for ignitable liquid coating materials*

EN 50050-2:2013, *Electrostatic hand-held spraying equipment - Safety requirements - Part 2: Hand-held spraying equipment for ignitable coating powder*

EN 50050-3:2013, *Electrostatic hand-held spraying equipment - Safety requirements - Part 3: Hand-held spraying equipment for ignitable flock*

EN 50059:2025, *Electrostatic hand-held spraying equipment — Safety requirements — Hand-held spraying equipment for non-ignitable coating materials*

EN 50176:2025, *Stationary electrostatic application equipment for ignitable liquid coating material — Safety requirements*

EN 50177:2009[1], *Stationary electrostatic application equipment for ignitable coating powders — Safety requirements*

EN 50223:2015, *Stationary electrostatic application equipment for ignitable flock material - Safety requirements*

EN 50348:2010, *Stationary electrostatic application equipment for non-ignitable liquid coating material - Safety requirements*

EN 60204-1:2018, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2016, modified)*

EN IEC 60079-0:2018,[2] *Explosive atmospheres — Part 0: Equipment — General requirements (IEC 60079-0:2017)*

EN ISO 4414:2010, *Pneumatic fluid power - General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN ISO 11688-1:2009, *Acoustics - Recommended practice for the design of low-noise machinery and equipment - Part 1: Planning (ISO/TR 11688-1:1995)*

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

EN ISO 13732-1:2008, *Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 1: Hot surfaces (ISO 13732-1:2006)*

EN ISO 13849-1:2023, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2023)*

EN ISO 80079-36:2016,[3] *Explosive atmospheres — Part 36: Non-electrical equipment for explosive atmospheres — Basic method and requirements (ISO 80079-36:2016)*

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 terminology databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp/

3.1
application equipment
equipment for application of coating materials, which can consist of the following elements:

— air cap;

— material nozzle;

— trigger;

[1] As impacted by EN 50177:2009/A1:2012.
[2] As impacted by EN IEC 60079-0:2018/AC:2020-02 and EN IEC 60079-0:2018/A11:2024.
[3] As impacted by EN ISO 80079-36:2016/AC:2019.