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vedelate kattematerjalide pealekandmiseks.
Ohutusnõuded KONSOLIDEERITUD TEKST**

Coating plants - Spray booths for application of organic liquid
coating materials - Safety requirements CONSOLIDATED
TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Coating plants - Spray booths for application of organic liquid coating materials - Safety requirements

Installations d'application - Cabines d'application par
pulvérisation de produits de revêtement organiques liquides
- Prescriptions de sécurité

Beschichtungsanlagen - Spritzkabinen für flüssige
organische Beschichtungsstoffe -
Sicherheitsanforderungen

This European Standard was approved by CEN on 10 September 2004 and includes Corrigendum 1 issued by CEN on 14 June 2006 and Amendment 1 approved by CEN on 16 July 2009.

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Foreword

This document (EN 12215:2004+A1:2009) 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of an identical text or by endorsement, at the latest by February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.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 European Standard was approved by CEN on 10 September 2004 and includes Corrigendum 1 issued by CEN on 14 June 2006 and Amendment 1 approved by CEN on 16 July 2009.

This document supersedes EN 12215:2004.

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

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags **AC** **AC**¹.

This document is one of a set of standards devoted to the health and safety requirements of coating plants for the application and drying of organic liquid coating material and varnishes.

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-directives.

NOTE Although a spray booth, as an integral whole, formally does not fall under the scope of the ATEX Directive 94/9/EC, the standard is based upon a fundamental risk analysis according to this directive.

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

¹ Applicable to the French version.

Introduction

This standard is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and 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 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.

The specific requirements which manufacturers are included in the information for use are given in clause 7.

1 Scope

This document is applicable to spray booths as well as multizone spray booths for the application of organic liquid coating materials (paints, varnishes....), and deals with all significant hazards relevant to spray booths or multizone spray booths, when they are used as intended and under the conditions foreseen by the manufacturer (see clause 4).

A spray booth is an assembly of the following linked components: forced ventilation by one or more fans; dry air filtering and/or wet air washing systems, measuring and control devices, ventilation air heating system, automatic fire extinguishing equipment, warning devices, electrical apparatus, joined together within or at a partially or totally enclosed structure (limited by walls, called space) for the controlled processing of spray application of organic liquid coating material.

NOTE 1 Spray booths are classified in annex F.

This standard describes methods of verification of safety measures, information labels to be affixed to the spray booth and minimum usage requirements contained within the operators handbook.

This standard does not cover:

- spraying areas (spaces for application of organic liquid coating materials which are limited only by one side wall used for extraction of exhaust ventilation).
- combined spray booths according to definition given in 3.2;

NOTE 2 See prEN 13355.

- the limiting walls of spray booths if they are constituent parts of a building are not to be considered part of the machinery assembly;
- the workroom or building used for the spraying of large size items (example: air-liner);
- spraying equipment used in spray booths which is covered by EN 1953, EN 50050, and EN 50176.
- Spray booths which are part of complex installations.

NOTE 3 complex installations may include additional hazards.

This standard is not applicable to spray boots which are manufactured before the date of publication of this standard by CEN.

2 Normative references

The following referenced documents are indispensable for the application 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 525, *Non-domestic direct gas-fired forced convection air heaters for space heating not exceeding a net heat input of 300 kW.*

EN 563, *Safety of machinery — Temperatures of touchable surfaces — Ergonomics data to establish temperature limit values for hot surfaces.*

EN 746-1, *Industrial thermoprocessing equipment — Part 1: Common safety requirements for industrial thermoprocessing equipment.*

EN 746-2, *Industrial thermoprocessing equipment — Part 2: Safety requirements for combustion and fuel handling systems.*

EN 954-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design.*

EN 971-1:1996, *Paints and varnishes — Terms and definitions for coating materials — Part 1: General terms.*

EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics.*

EN 983, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics.*

EN 1070:1998, *Safety of machinery — Terminology.*

EN 1088, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection.*

EN 1127-1:1997, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology.*

EN 1838, *Lighting applications — Emergency lighting.*

EN 1953, *Atomising and spraying equipment for coating materials — Safety requirements.*

EN 13463-1:2001, *Non-electrical equipment for potentially explosive atmospheres — Part 1: Basic method and requirements.*

EN 13463-5, *Non-electrical equipment intended for use in potentially explosive atmospheres — Part 5: Protection by constructional safety "c".*

EN 13478, *Safety of machinery — Fire prevention and protection.*

prEN 14986, *Design of fans working in potentially explosive atmospheres.*

EN 14462:2005 *Noise test code for surface treatment equipment including its ancillary handling equipment* ^(A1)

EN 50015, *Electrical apparatus for potentially explosive atmospheres — Oil immersion "o",*

EN 50016, *Electrical apparatus for potentially explosive atmospheres — Pressurised apparatus "p".*

EN 50017, *Electrical apparatus for potentially explosive atmospheres — Powder filling "q".*

EN 50050, *Electrical apparatus for potentially explosive atmospheres — Electrostatic hand-held spraying equipment.*

EN 50176, *Automatic electrostatic spraying installations for flammable liquid spraying material.*

EN 60079-0, *Electrical apparatus for explosive gas atmospheres – Part 0: General requirements (IEC 60079-0:2004).*

EN 60079-1, *Electrical apparatus for potentially explosive atmospheres – Part 1: Flameproof enclosure "d" (IEC 60079-1:2003).*

EN 60079-7, *Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety "e" (IEC 60079-7:2001).*

EN 50020, *Electrical apparatus for potentially explosive atmospheres — Intrinsic safety "i".*

EN 60079-15, *Electrical apparatus for explosive gas atmospheres - Part 15: Type of protection "n" (IEC 60079-15:2001, modified).*

EN 60079-18, *Electrical apparatus for explosive gas atmospheres – Part 18: Construction, test and marking of type of protection encapsulation "m" electrical apparatus (IEC 60079-18:2004).*

EN 60079-25, *Electrical apparatus for explosive gas atmospheres – Part 25: Intrinsically safe systems (IEC 60079-25:2003).*

EN 60204-1:1997, *Safety of machinery — Electrical equipment of machines – Part 1: General requirements (IEC 60204-1:1997).*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989).*

EN ISO 3746, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3764:1995).*

EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996).*

EN ISO 11202, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at the work station and at other specified positions — Survey method in situ (ISO 11202:1995).*

EN ISO 12100-1:2003, *Safety of machinery - Basic concepts, general principles for design – Part 1: Basic terminology, methodology (ISO 12100-1:2003).*

EN ISO 12100-2:2003, *Safety of machinery - Basic concepts, general principles for design – Part 2: Technical principles (ISO 12100-2:2003).*

EN ISO 14122-2, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2001).*

EN ISO 14122-3, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001).*

EN ISO 14122-4, *Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders (ISO 14122-4:2004).*