BSI Standards Publication

Spray booths for organic coating material - Safety requirements

National foreword

This British Standard is the UK implementation of EN 16985:2018. It supersedes BS EN 12215:2004+A1:2009, BS EN 12981:2005+A1:2009 and BS EN 13355:2004+A1:2009, which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/3/8, Thermoprocessing equipment - Safety.

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.

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

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English Version

Spray booths for organic coating material - Safety requirements

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

Lackierkabinen für organische Beschichtungsstoffe - Sicherheitsanforderungen

This European Standard was approved by CEN on 15 March 2018.

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European foreword

This document (EN 16985:2018) 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of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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 12215:2004+A1:2009, EN 12981:2005+A1:2009 and EN 13355:2004+A1:2009.

In comparison with the previous edition the following technical modifications have been made:

a) The 3 European Standards EN 12215:2004+A1:2009, EN 12981:2005+A1:2009 and EN 13355:2004+A1:2009 have been merged into this European standard;

b) The scope has not been changed, but the limits of a spray booth have been defined by specifying the interfaces to ancillary machinery, to clarify the scope;

c) 4.2.2 Falling objects, has been introduced;

d) 4.2.3 Height from the ground, has been introduced;

e) 4.7 Contact with and inhalation of hazardous material, has been revised;

f) 4.7.3.3.4 Segmented spray booths, has been introduced;

g) 4.8 Fire, has been revised;

h) 4.9 Explosion, has been revised;

i) 4.10 Safety devices and control systems, has been revised;

j) 4.11 Trapping, has been introduced;

k) 4.12 Ergonomics, has been introduced;

l) 4.13 Environment in which the machinery is used, has been introduced;

m) The list of hazards has been moved to new Annex A (informative);

n) Examples of classification of hazardous zones have been moved to new Annex B (informative);

o) Calculations for explosive atmosphere have been moved to new Annex C (normative);

p) Calculation for powder filters has been introduced (Annex C.4);

q) Requirements for air flow velocity measurement have been clarified and moved to new Annex D (normative);

r) Information on ignitability of water-based paint has been introduced in new Annex E (informative);

s) Annex F (normative) on Energy-efficiency and reduction of environmental impact has been introduced;

t) Annex G (informative) with examples for safety related controls has been introduced;

u) Annex H (informative) on a procedure for the determination of the spray booth clearance time using smoke has been introduced;

v) Annex I (informative) with an example for the estimation of the spray booth purge time has been introduced;

w) Annex J (informative) with examples for ventilation of spray booths with working pits has been introduced.

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 the EU Directive 2006/42/EC.

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

NOTE Although a spray booth, as an integral whole, formally does not fall under the scope of the ATEX Directive 2014/34/EU, the standard is based upon a fundamental risk analysis according to this directive.

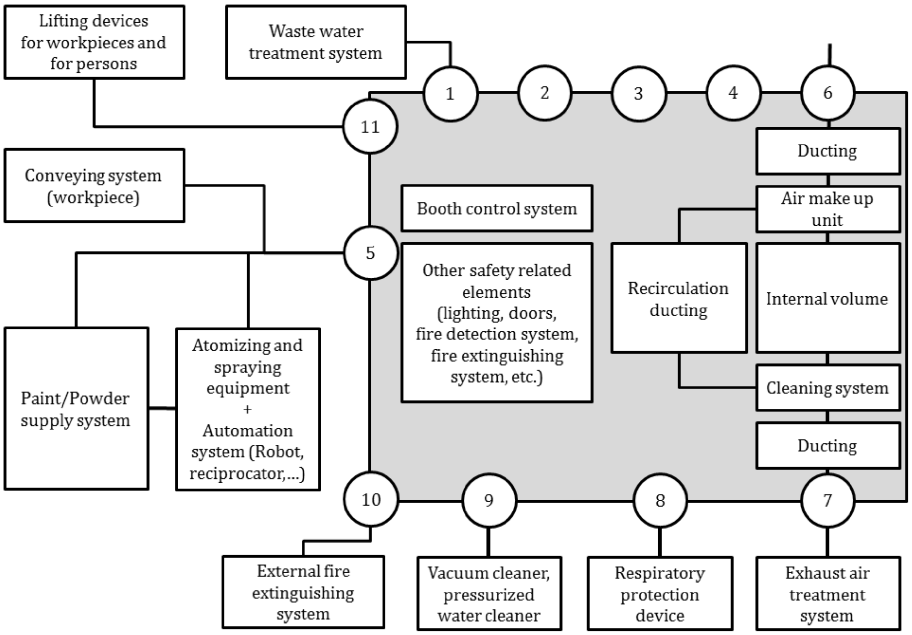
According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany,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

1 Scope

This European Standard deals with all significant hazards, hazardous situations and hazardous events relevant to spray booths for the application of organic liquid and powder coating materials, when they are used as intended and under the conditions foreseen by the manufacturer, including reasonably foreseeable misuse.

See Annex A for significant hazards.

Interfaces between spray booths and other machinery used in coating application are given in Figure 1.



Key

	spray booth
1	water output connector
2	connector to electric power supply
3	water input connector
4	connector to pressurized air supply
5	interface of control system
6	fresh air supply
7	connector to exhaust air treatment system
8	connector to RPD air supply
9	booth cleaning system connector
10	connection to external fire extinguishing system
11	connection to lifting device

Figure 1 — Interfaces of a spray booth to ancillary machinery