SVENSK STANDARD SS-EN 50348

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Svenska Elektriska Kommissionen, SEK

Explosionsskyddad elektrisk materiel – Utrustning för automatisk sprutmålning med icke brandfarlig vätska

Automatic electrostatic spraying equipment for non-flammable liquid spraying material

Som svensk standard gäller europastandarden EN 50348:2001. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50348:2001.

ICS 87.100

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD **EN 50348**

NORME EUROPÉENNE

EUROPÄISCHE NORM October 2001

ICS 87.100

English version

Automatic electrostatic spraying equipment for non-flammable liquid spraying material

Matériel de pulvérisation électrostatique automatique pour matériau de pulvérisation liquide non inflammable

Ortsfeste elektrostatische Sprüheinrichtungen für nichtbrennbare flüssige Beschichtungsstoffe

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 50348:2001 E

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 204, Safety of electrostatic painting and finishing equipment.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50348 on 2000-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2002-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2003-10-01

Annexes designated "informative" are given for information only.
In this standard, annex A is informative.

Contents

Introduction

Process

In the process of electrostatic paint spraying, liquid is converted into a mist of of droplets which are directed onto a surface in order to obtain a uniform layer of the thickness and type required. The droplets are charged by means of a high voltage of the order of some tens of kilovolts so that they are attracted to and deposited on the earthed workpiece.

1 Scope

1.1 This European Standard specifies requirements for automatic electrostatic spraying equipment which is used for spraying non-flammable liquids which do not form explosive atmospheres in the spraying area. This applies also for paints that are classed as non-ignitable while spraying, e.g. water based paints (see annex A).

In this connection a distinction is made between spraying devices which due to their type of construction comply with requirements of personnel protection, and those for which other discharge energies and/or current limits are stipulated.

It also specifies the constructional requirements for the safe operational conditions of the electrical equipment installations including ventilation requirements. Additional requirements as to the construction of the spraying areas such as cabins and booths, etc. are dealt with in other standards, currently in preparation in CEN/TC 271.

NOTE If flammable liquid spraying materials are also used in the equipment, the requirements laid down in EN 50176 for automatic electrostatic spraying equipment for flammable liquid spraying material apply; that means that the spraying areas have to be equipped accordingly.

1.2 This European Standard considers the following types of electrostatic spraying systems:

Type B Systems with a discharge energy limit in excess of 5 mJ but less than 350 mJ and a current limit of less than 0,7 mA

In these systems there is no danger of electric shock.

Type C Systems with a discharge energy in excess of 350 mJ and/or a current in excess of 0,7 mA (see 5.1.2)

In these systems there are dangers of electric shock.

NOTE Type A systems complying with EN 50050:1986 are not relevant for this European Standard.

1.3 This European Standard considers only the hazards specific to the electrostatic characteristics of the electrostatic spraying process.

1.4 For other aspects, such as:

- selection, installation and use of electrical equipment in hazardous areas;
- health hazards, for example toxic and skin effects;
- cleaning of spraying areas;
- fire hazard from external sources;
- fire protection;

where there are no harmonized European Standards then national regulations apply.