

**Masinate ohutus. Õhu kaudu levivate
ohtlike ainete emissiooni hindamine.
Osa 9: Saasteaine
kontsentratsiooniparameeter,
ruumimeetod**

Safety of machinery - Evaluation of the emission of
airborne hazardous substances - Part 9: Pollutant
concentration parameter, room method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1093-9:1999 sisaldab Euroopa standardi EN 1093-9:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1093-9:1999 consists of the English text of the European standard EN 1093-9:1998.</p> <p>This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Käesolev Euroopa standard määrab kindlaks ruumimeetodi testimisruumis asuvatest ja kindlaksmääratud tingimustel töötavatest seadmetest õhku leviva määratud ohtliku aine saaste kontsentratsiooniparameetri määramiseks.</p>	<p>Scope:</p>
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Võtmesõnad: emissioon, kontsentratsioon, määramine, ohtlikud ained, ruumid, seadmete ohutus, testimise tingimused, õhu saastumine

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Descriptors: Emission, hazardous substances, pollutant, testing.

English version

Safety of machinery

**Evaluation of the emission of airborne
hazardous substances**

Part 9: Pollutant concentration parameter – Room method

Sécurité des machines – Evaluation de l'émission de substances dangereuses véhiculées par l'air – Partie 9: Paramètre de concentration en polluant, méthode en salle d'essai

Sicherheit von Maschinen – Bewertung der Emission von luftgetragenen Gefahrstoffen – Teil 9: Konzentrationsparameter des luftverunreinigenden Stoffes, Prüfraumverfahren

This European Standard was approved by CEN on 1998-09-04.

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CEN

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 114 "Safety of machinery", 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 March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

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).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

This European Standard is a type B standard as stated in ENV 1070 : 1993.

This European Standard is a part of EN 1093. Part 1 of this European standard presents a selection of different methods for the evaluation of the emission of airborne hazardous substances from machines.

1 Scope

This European Standard specifies a room method for the measurement of the pollutant concentration parameter of a specified airborne hazardous substance from machines, located in a test room and operating the machines under defined conditions.

This method can only be used for machines with a local exhaust ventilation with an air flow rate $\geq 500 \text{ m}^3/\text{h}$ and machines without recirculated air.

Measurement of the pollutant concentration parameter of a machine can serve for the:

- a) evaluation of the performance of a machine;
- b) evaluation of the improvement of the machine;
- c) comparison of machines within groups of machines with the same intended use (groups are defined by the function and materials processed),
- d) ranking of machines from the same group according to their pollutant concentration parameters;
- e) determination of the state of the art of machines with respect to their pollutant concentration parameter.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 292-1 : 1991	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology
EN 292-2 : 1991	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications
EN292-2/A1: 1995	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications; Amendment A1
ENV 1070 : 1993	Safety of machinery - Terminology
EN 1093-1	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods
ISO 2602:1980	Statistical interpretation of test results - Estimation of the mean - Confidence interval

3 Definitions

For the purposes of this European Standard the definitions of ENV 1070 :1993 and the following definition applies:

pollutant concentration parameter, room, P_{cr} : The measured concentration of a specified pollutant in defined position(s) near the machine. For the purpose of this European Standard the measurement points are at defined positions around the machine and the pollutant concentration parameter is the mean value of the measured concentrations.

4 Principle

The principle of the measurement method is to operate the machine with strong local exhaust ventilation ($\geq 500 \text{ m}^3/\text{h}$) under controlled conditions in a test room and to measure pollutant concentrations at defined positions (see 5.2).

The average concentration gives an indication of the emission of the machine and the standard deviation gives an indication of the dispersion of the pollutant emitted.