

**Masinate ohutus. Õhu kaudu levivate ohtlike ainete emissiooni hindamine. Osa 11: Saasteärastamise näitaja KONSOLIDEERITUD TEKST**

Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 11:  
Decontamination index CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1093-11:2002+A1:2008 sisaldab Euroopa standardi EN 1093-11:2001+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 18.08.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.07.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1093-11:2002+A1:2008 consists of the English text of the European standard EN 1093-11:2001+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 18.08.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 09.07.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** air, air cleaners, air cleaning equipment, cleaning capability, dangerous stuffs, definitions, efficiency, emission values, emissions, evaluations, impurities, machines, ratings, safety, selection, testing

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English Version

**Safety of machinery - Evaluation of the emission of airborne  
hazardous substances - Part 11: Decontamination index**

Sécurité des machines - Évaluation de l'émission de  
substances dangereuses par l'air - Partie 11 : Indice  
d'assainissement

Sicherheit von Maschinen - Bewertung der Emission von  
luftgetragenen Gefahrstoffen - Teil 11: Reinigungsindex

This European Standard was approved by CEN on 19 April 2001 and includes Amendment 1 approved by CEN on 6 June 2008.

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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 Management Centre has the same status as the official versions.



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## Foreword

This document (EN 1093-11:2001+A1:2008) 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 January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

This document includes Amendment 1, approved by CEN on 2008-06-06.

This document supersedes EN 1093-11:2001.

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

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 EC Directive(s).

**A1** For relationship with EC Directive(s), 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.

## Introduction

This is a type B standard as specified in EN 1070. This standard is a part of EN 1093. Part 1 “Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods” of this standard presents a selection of different methods for the evaluation of the emission of airborne hazardous substances from machines.

## 1 Scope

This standard describes a method for the measurement of the decontamination index of pollution control systems e. g. capture devices including local exhaust ventilation, water spray systems and, when appropriate, separation equipment installed on a machine. This method uses the real pollutant (see 4.2 of EN 1093-1 : 1998 “*Safety of machinery — Evaluation of the emission of airborne hazardous substances — Part 1: Selection of test methods*”) and can be operated in room or field environments.

It should be observed that during the test, especially during the shutdown or the removal of the pollution control system, the concentration of hazardous substances, if present, can reach levels which are liable to incur a risk to the health of the operators or other occupants present in the room.

**Warning:** This standard does not deal with the protective measures required to control these risks.

Measurement of the decontamination index of pollution control system can serve for the:

- evaluation of the performance of a pollution control system of a machine;
- evaluation of the improvement of a pollution control system;
- comparison of pollution control systems for machines of similar design;
- ranking of pollution control systems according to their decontamination efficiency;
- determination of the air flow rate in the case of an exhaust system to achieve a given level;
- determination of the state of the art of pollution control systems for machines with respect to the decontamination efficiency.

## 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 (including amendments).

EN 1070, *Safety of machinery - Terminology*

ISO 3966:1977, *Measurement of fluid flow in closed conduits - Velocity area method using Pitot static tubes*

ISO 4006:1991, *Measurement of fluid flow in closed conduits - Vocabulary and symbols*

ISO 4053-1:1977, *Measurement of gas flow in conduits - Tracer methods - Part 1 : General*

ISO 5167-1:1991, *Measurement of fluid flow by means of pressure differential devices - Part 1: Orifice plates, nozzles and Venturi tubes inserted in circular cross-section conduits running full*

ISO/TR 5168:1998, *Measurement of fluid flow - Evaluation of uncertainties*

ISO 7145:1982, *Determination of flowrate of fluids in closed conduits of circular cross-section - Method of velocity measurement at one point of the cross-section*