Electric motor-operated tools - Dust measurement Procedure - Part 1: General requirement

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NATIONAL FOREWORD

See Eesti standard EVS-EN 50632-1:2015 sisaldab Euroopa standardi EN 50632-1:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 50632-1:2015 consists of the English text of the European standard EN 50632-1:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.08.2015.	Date of Availability of the European standard is 21.08.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.140.20, 25.140.30

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50632-1

August 2015

ICS 25.140.20

English Version

Electric motor-operated tools - Dust measurement Procedure - Part 1: General requirements

Outils électriques à moteur - Procédure de mesure de la poussière - Partie 1: Exigences générales

Motorbetriebene Elektrowerkzeuge - Staubmessverfahren - Teil 1: Allgemeine Anforderungen

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

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Ref. No. EN 50632-1:2015 E

Contents

European foreword **3**

Introduction **4**

1 Scope **5**

1.1 General 5

1.2 Types of dust 5

2 Normative references **5**

3 Terms and definitions **5**

4 Test procedure **6**

4.1 General 6

4.2 Test room and equipment 6

4.3 Operating conditions 7

5 Instrumentation **8**

5.1 Instrumentation for measuring operating conditions 8

5.2 Instrumentation for measuring climatic conditions 8

6 Information to be reported **8**

European foreword

This document (EN 50632-1:2015) has been prepared by CLC/TC 116 “Safety of motor-operated electric tools”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-08-03
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-08-03

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This European Standard is divided into three parts:

Part 1: General requirements for the dust measurement which are common to electric motor-operated tools (for the purpose of this standard referred to simply as tools);

Part 2 or 3: Requirements for the dust measurement for particular types of tools, which either supplement or modify the requirements given in Part 1 to account for the particular characteristics of these specific tools.

This Part 1 is to be used in conjunction with the appropriate Part 2 or 3 which contains clauses that supplement or modify the corresponding clauses in Part 1 to provide the relevant requirements for each type of product.

The following print types are used:
- requirements; in roman type
- *test specifications: in italic type;*
- notes: in smaller roman type.

The terms defined in Clause 3 are printed in **bold typeface**.

Introduction

Inhalable dust emitted by electric motor-operated tools may present a hazard to the operator and other exposed persons.

Therefore, this standard specifies a procedure how to measure the **dust** concentration produced by an electric power tool under standardized conditions representing typical applications. However, the **dust** concentration during actual use of the power tool may differ from the **dust** concentration measured in accordance with this standard depending on the ways in which the tool is used.

The results of **dust** measurements can be used:

- for a declaration of the **dust** emission;
- for comparing the **dust** emission from tools of the same type;
- in a preliminary assessment of **dust** exposure at a workplace.

For all purposes, it is important to specify measurement procedures with known accuracy so that the results of measurements taken by different laboratories can be compared.

The measurements of **dust** concentration are made in accordance with the standard EN 1093-9 for the test room.

1 Scope

1.1 General

This European Standard specifies general requirements for the **dust** measurement of electric motor-operated tools supplied from mains or from batteries. This European Standard applies to those tools with and without **dust extraction unit** where **dust** such as mineral **dust** containing silica or wood **dust** is expected.

1.2 Types of dust

Dust is a disperse distribution of solid substances in gases, particularly air, resulting from mechanical processes. According to EN 481, two size categories are to be differentiated: the **inhalable dust** and the **respirable dust** fraction. **Inhalable dust** refers to the entire inhalable fraction of the **dust** through mouth and/or nose. **Respirable dust** relates to the fraction of the **inhalable dust** that can reach the pulmonary alveoli due to its small particle size.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 481, *Workplace atmospheres - Size fraction definitions for measurement of airborne particles*

EN 1093-9, *Safety of machinery – Evaluation of the emission of airborne hazardous substances – Part 9: Pollutant concentration parameter, room method*

EN 13205 (all parts), *Workplace exposure – Assessment of sampler performance for measurement of airborne particle concentrations*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
dust
distribution of solid materials in gases, generated by mechanical processes

3.2
inhalable dust
dust fraction which can be taken up over the respiratory system in accordance with EN 481

3.3
respirable dust
dust fraction which can reach the alveoli and bronchia in accordance with EN 481

3.4
dust sampler
device for collecting the **respirable** and **inhalable dust** portion by aspirating a measured amount of **dust**-laden air and deposition of the **dust** on an integrated filter