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

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

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#### **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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## **Contents**

Ει	uropean foreword	
Int	troduction	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

EN 50632-1:2015 (E)

## **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
  latest date by which the national standards (dow) 2017-08-03
- latest date by which the national standards conflicting with this document have to be withdrawn

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**.

EN 50632-1:2015 (E)

#### 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.

EN 50632-1:2015 (E)

#### 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

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