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**Coated abrasives — Determination  
and designation of grain size  
distribution —**

Part 3:  
**Microgrit sizes P240 to P5000**

*Abrasifs appliqués — Détermination et désignation de la distribution  
granulométrique —*

*Partie 3: Micrograins P240 à P5000*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

This third edition cancels and replaces ISO 6344-3:2013 and ISO 6344-1:1998, which have been technically revised.

The main changes compared to ISO 6344-3:2013 and ISO 6344-1:1998 are as follows:

- the title and the scope have been changed and updated due to the extension of grit designations up to P5000;
- relevant content of ISO 6344-1:1998 has been updated and transferred to this document and ISO 6344-2;
- references to ISO 6344-1:1998 have been deleted;
- normative references have been updated;
- [Clause 3](#) “Terms and definitions” has been updated;
- former [Clause 4](#) “Testing of microgrit sizes P240 to P1200” has been revised in its content and divided into two clauses: [Clause 4](#) “Grain size distribution of microgrit sizes P240 to P1200” and [Clause 5](#) “Test method of microgrit sizes P240 to P1200”;
- the checking mineral 280 has been deleted;
- former [Tables 3](#) and [4](#) for the theoretical equivalent grain diameters have been moved to a new [Annex A](#) “Theoretical equivalent grain diameters,  $d$ , for grits of fused aluminium oxide and for grits of silicon carbide”;
- former [Clause 5](#) has been revised in its content and divided into two clauses: [Clause 6](#) “Grain size distribution of microgrit sizes P1500 to P5000” and [Clause 7](#) “Test method of microgrit sizes P1500 to P5000”;

## ISO 6344-3:2021(E)

- the grit designations P3000, P4000 and P5000 have been added;
- [Clause 8](#) "Test report" has been added;
- [Clause 10](#) (former Clause 7) "Marking" has been revised;
- [Annexes B](#) and [C](#) (former [Annexes A](#) and [B](#)) have been revised;
- Bibliography has been updated.

A list of all parts in the ISO 6344 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Coated abrasives — Determination and designation of grain size distribution —

## Part 3: Microgrit sizes P240 to P5000

### 1 Scope

This document specifies a method for determining and testing the grain size distribution of electrofused aluminium oxide and silicon carbide microgrit sizes P240 to P5000 for coated abrasive products.

It is applicable to grits used in the manufacture of coated abrasive products and to grits extracted from coated abrasive products for test purposes.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9138, *Abrasive grains — Sampling and splitting*

ISO 13317-3, *Determination of particle size distribution by gravitational liquid sedimentation methods — Part 3: X-ray gravitational technique*

### 3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1

##### **microgrit**

abrasive grit having a median equivalent diameter of 58,5 µm to 2,7 µm whose *grain size distribution* (3.2) is determined by sedimentation

#### 3.2

##### **grain size distribution**

##### **particle size distribution**

##### **PSD**

percentage of grains of different sizes composing the macrogrit or *microgrit* (3.1)

### 4 Grain size distribution of microgrit sizes P240 to P1200

The testing of microgrit sizes P240 to P1200 by sedimentation shall be carried out using the US sedimentometer (see 5.2.1). The principle of measurement is to determine the volume as a function of time of particles settled in the collecting tube. The equivalent grain size diameters are calculated using Stokes' law.