

Superabrasives — Limit deviations and run-out tolerances for grinding wheels with diamond or cubic boron nitride

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee MTE/13, Grinding wheels, abrasive tools, paper, cloths and powders, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

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Superabrasives — Limit deviations and run-out tolerances for grinding wheels with diamond or cubic boron nitride

*Superabrasifs — Écartes limites et tolérances de battement pour
les meules à base de diamant et de nitrure de bore*



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Foreword

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ISO 22917 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

Superabrasives — Limit deviations and run-out tolerances for grinding wheels with diamond or cubic boron nitride

1 Scope

This International Standard applies to all rotating grinding tools with diamond or cubic boron nitride with metal, vitrified or resinoid bonded cores, and circular bores for mounting the grinding tool on a clamping flange as well as to grinding points with cylindrical spindle for mounting in collets. It contains the significant limit deviations and run-out tolerances of these grinding tools.

2 Normative references

The following referenced documents are indispensable for the application 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 286-1:1988, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits*

ISO 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*

3 Terms and definitions

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

For further terms and definitions, see also ISO 286-1. It should be noted, however, that some of the terms are defined in a more restricted sense than in common usage.

3.1 size

number expressing, in a particular unit, the numerical value of a linear dimension

3.1.1 basic size nominal size

size from which the limits of size are derived by the application of the upper and lower deviations

3.1.2 actual size

size of a feature, obtained by measurements

3.1.3 limits of size

two extreme permissible sizes of a feature, between which the actual size should lie, the limits of size being included

3.1.3.1

maximum limit of size

greatest permissible size of a feature

3.1.3.2

minimum limit of size

smallest permissible size of a feature

3.2

deviation

algebraic difference between a size (actual size, limit of size, etc.) and the corresponding basic size

3.2.1

limit deviations

upper deviation and lower deviation

3.2.1.1

upper deviation

algebraic difference between the maximum limit of size and the corresponding basic size

3.2.1.2

lower deviation

algebraic difference between the minimum limit of size and the corresponding basic size

3.3

size tolerance

difference between the maximum limit of size and the minimum limit of size, i.e. the difference between the upper deviation and the lower deviation

NOTE The tolerance is an absolute value without sign.