

BS ISO 9361-2:2011



BSI Standards Publication

Indexable inserts for cutting tools — Ceramic inserts with rounded corners

Part 2: Dimensions of inserts with cylindrical fixing hole

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National foreword

This British Standard is the UK implementation of ISO 9361-2:2011. It supersedes BS4193-20:1993 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/18, Tools tips and inserts for cutting applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Amendments issued since publication

Date	Text affected
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**Indexable inserts for cutting tools —
Ceramic inserts with rounded corners —**

**Part 2:
Dimensions of inserts with cylindrical
fixing hole**

*Plaquettes amovibles pour outils coupants — Plaquettes en céramique
avec arrondi de pointe — Partie 2: Dimensions des plaquettes avec trou
de fixation cylindrique*





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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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Foreword

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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.

ISO 9361-2 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

This second edition cancels and replaces the first edition (ISO 9261-2:1991), which has been technically revised.

ISO 9361 consists of the following parts, under the general title *Indexable inserts for cutting tools — Ceramic inserts with rounded corners*:

- *Part 1: Dimensions of inserts without fixing hole*
- *Part 2: Dimensions of inserts with cylindrical fixing hole*

Indexable inserts for cutting tools — Ceramic inserts with rounded corners —

Part 2: Dimensions of inserts with cylindrical fixing hole

1 Scope

This part of ISO 9361 specifies the dimensions of indexable ceramic inserts with rounded corners, with cylindrical fixing hole, with 0° normal clearance. These inserts are primarily intended to be mounted by top and hole clamping or hole clamping alone on external and internal turning tools.

Ceramic cutting materials consist of a variety of oxides, nitrides and carbides. In contrast with hardmetals (including cermets), ceramics do not have a metallic binding matrix. Such ceramic materials are, for example, oxide ceramics (consisting primarily of aluminium oxide Al_2O_3), carboxide ceramics (consisting generally of a mixture of aluminium oxide and other materials, such as titanium carbide TiC) and nitride ceramics (consisting generally of a mixture of silicon nitride and other materials, such as yttrium oxide Y_2O_3 and aluminium oxide).

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 1832:2004, *Indexable inserts for cutting tools — Designation*

ISO 9361-1, *Indexable inserts for cutting tools — Ceramic inserts with rounded corners — Part 1: Dimensions of inserts without fixing hole*

3 Types of inserts

The types of indexable ceramic inserts specified in this part of ISO 9361 are the following:

- TN: triangular inserts, with 0° normal clearance;
- SN: square inserts, with 0° normal clearance;
- CN: rhombic inserts, with 0° normal clearance and 80° included angle;
- DN: rhombic inserts, with 0° normal clearance and 55° included angle;
- VN: rhombic inserts, with 0° normal clearance and 35° included angle;
- RN: round inserts, with 0° normal clearance.

Inserts dealt with in this part of ISO 9361 are standardized without chip breakers.

In general, the inserts are used with chamfered and rounded cutting edges (see Clause 6).

Table B.1 gives the range of sizes for the inserts (see Annex B).