
**Dentistry — Diamond rotary
instruments —**

**Part 3:
Grit sizes, designation and colour code**

Art dentaire — Instruments rotatifs diamantés —

Partie 3: Tailles des grains, désignation et code de couleur



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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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 7711-3 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

This second edition cancels and replaces the first edition (ISO 7711-3:1992), which has been technically revised to include the following changes:

- a) reduction from 7 classes for the colour code to 6 classes (deletion of “very fine”);
- b) introduction of an abbreviation for the colour code.

ISO 7711 consists of the following parts, under the general title *Dentistry — Diamond rotary instruments*:

- *Part 1: Dimensions, requirements, marking and packaging*
- *Part 2: Discs*
- *Part 3: Grit sizes, designation and colour code*

Introduction

The first edition of this part of ISO 7711 was published in 1992. It was the first attempt to group the diamond grit used for dental rotary instruments and to specify a designation and a colour code for the grit size areas. The rapid development of the use of diamond grit for dental instruments and the possibility of refined separation and thus a clearer classification of diamond grit necessitated a revision of this part of ISO 7711.

This revision offers the opportunity to provide abbreviations for the terms used, to align them with similar standards for dental rotary instruments.

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Dentistry — Diamond rotary instruments —

Part 3: Grit sizes, designation and colour code

1 Scope

This part of ISO 7711 specifies the designation, colour code and grit sizes for diamond rotary instruments which are used commonly in a dental surgery. It applies to all types of dental diamond rotary instruments independent of type and shape.

NOTE Attention is drawn to ISO 6360 which specifies a number coding system for the identification of dental rotary instruments of all types.

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 6106, *Abrasive products — Checking the grit size of superabrasives*

3 Terms and definitions

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

3.1

macrogrit

grit with grain size distribution which is determined by sieving

3.2

microgrit

grit with grain size distribution which is determined by sedimentation

4 Designation, colour code, grit sizes

4.1 Designation

The designation of the diamond instruments in regard to the fineness of the diamond grit used shall conform with the designation given in Table 1.

4.2 Colour code

The colour code complements the designation. Usage of the colour code is optional, at the discretion of the manufacturer. If colour coding is used, the colours shall be those specified in Table 1.

The location on the diamond instrument where the colour is applied is at the discretion of the manufacturer.

4.3 Grain size distribution

4.3.1 Macrogrits

The method for determining or verifying the grain size distribution of macrogrits for diamonds used in the manufacture of industrial products (e.g. grinding wheels, saws) as specified in ISO 6106, for grain sizes between 1 180 µm and 41 µm, shall be used.

The series of diamond grit sizes is designated as the D series (D 1181 to D 46), where “D” denotes diamond.

NOTE Further information is given in references [13] and [15] (see Bibliography).

4.3.2 Microgrits

Currently no internationally accepted method for determining or verifying the grain size distribution of microgrits for diamonds is available. Therefore methods from regional standards or national standards are used.

The series of diamond grit sizes is designated as the M series, where “M” denotes microgrit.

NOTE Further information is given in references [12] and [14] (see Bibliography).

4.4 Grit sizes

The grit sizes as specified in Table 1 shall be used for all types of diamond instruments.

The grit sizes and their classification in regard to their fineness are selected according to relevant national or international regulations.

Because of the difficulty in separating grain sizes, overlapping areas are unavoidable and commonly accepted.

Columns 3 and 4 indicate colour codes and their equivalent grit size ranges, respectively.

Table 1 — Designation, colour code, grit sizes

Designation	Abbreviation	Colour code	Grit size range µm	Median grain size µm	Grit designation
ultra-fine	UF	white	4 to 14	8	M 4 to M 14
extra-fine	EF	yellow	10 to 36	25	M 10 to M 36
fine	F	red	27 to 76	46	M 27 to D 76
medium	M	blue	64 to 126	107	D 64 to D 126
coarse	C	green	107 to 181	151	D 107 to D 181
very coarse	VC	black	151 to 213	181	D 151 to D 213