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Grading polished diamonds — Terminology and classification

Diamants taillés — Terminologie et classification



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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 main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 11211, which is a Technical Report of type 1, was prepared by Technical Committee ISO/TC 174, *Jewellery*.

This standardization of terminology and classification of polished diamonds is conducted within ISO/TC 174/WG 2. This working group was set up to clarify questions on specific aspects of polished diamonds. The results of this working group have been submitted to ISO/TC 174 for consideration. However, a full agreement on certain aspects has not yet been achieved. In particular, agreement is needed on the question of proportion, and further work is required for test methods and concerning the colour of fancy coloured diamonds. ISO/TC 174/WG 2 is continuing its discussion on these and other related matters.

This Technical Report is subject to further consideration, and members of WG 2 and others have already provided relevant proposals. Its adoption will give members of the industry the opportunity to discuss and comment on the conclusions the working group has reached so far. Moreover, ISO/TC 174 intends to review this Technical Report regularly in the light

of technological advances and the availability of more data, with the ultimate objective of converting it into an International Standard.

Annexes A and B form an integral part of this Technical Report.

Introduction

This Technical Report applies to polished diamonds and was compiled by the following:

Confédération internationale de la bijouterie, joaillerie, orfèvrerie, des diamants, perles et pierres (CIBJO)

Gemological Institute of America (GIA)

International Diamond Council (IDC)

Scandinavian Diamond Nomenclature (Scan.D.N.)

Grading polished diamonds — Terminology and classification

1 Scope

This Technical Report specifies the terminology and classification to be used for the grading and description of polished diamonds.

This Technical Report shall only be used for natural, unmounted, polished diamonds. It shall not be used for synthetic diamonds, treated diamonds (other than is allowed for in 3.3), or for assembled stones (see 3.5).

A terminology and classification for the colour of fancy coloured diamonds (see 5.1.2) is in the course of preparation.

Test methods concerning the technical application of this terminology and classification are in the course of preparation.

2 Description of a polished diamond

A description of a polished diamond as defined in clause 3 shall be established by grading its criteria in accordance with the rules specified in the following clauses and shall contain

- mass (weight) (4.1),
- shape (7.2),
- measurements (4.2),
- proportions (7.3),
- clarity (clause 6),
- plot of inclusions and blemishes (see 6.2),
- colour (5.1),

— long-wave UV fluorescence (5.4),

— finish (7.4),

— comments (if applicable).

The contents of a complete standard report are given in annex B.

3 Definitions

For the purposes of this Technical Report, the following definitions apply.

3.1 diamond: A natural mineral consisting essentially of carbon crystallized in the isometric (cubic) system. Its Mohs' scale hardness is 10; its specific gravity approximately 3,52; and its refractive index, n_D , is 2,417.

It is unnecessary to note the genesis of a diamond, as the use of the word "diamond" alone and without qualification states that it is natural.

3.2 synthetic diamond: A man-made reproduction of diamond which has essentially the same chemical composition, crystal structure, optical, and physical properties as its natural counterpart. It is forbidden to use the word "diamond" alone to describe synthetic diamonds that have either partly or wholly crystallized, or recrystallized, due to human intervention, no matter which basic material or methods are used. Products made in this way must be clearly referred to as "synthetic diamond".

3.3 treated diamond: A diamond which man has treated, other than by cutting and polishing, with the intent of changing the diamond's appearance by coating, filling or any other physical or chemical treatment.