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Jewellery and precious metals — Inspection of batches of small diamonds — Terminology, classification and test methods

Joierie, bijouterie et métaux précieux — Contrôle des lots de petits diamants — Terminologie, classification et méthodes d'examen

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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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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.

This document was prepared by Technical Committee ISO/TC 174, *Jewellery and precious metals*.

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.

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Introduction

ISO 24016 describes the terminology, the classification and test methods that apply for the grading of polished diamonds over 0,25 ct (carat). This category is commonly named "large diamonds" as opposed to the category of "small diamonds".

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From an economic perspective, on the jewellery and watchmaking industries, the low price of each single small diamond – compared to that of a large diamond - is widely compensated by the enormous quantity of small diamonds used.

As for a large diamond, the quality of a small diamond is mainly defined by its carat mass, its colour, its clarity and its cut. But, specifically the inspection of small diamonds faces one main challenge. They are sold by batches, sometimes as large as 10 000 units. When these batches are homogeneous, an inspection per sampling is possible.

This document is proposed to companies involved in the small diamond trade and willing, in the frame of their commercial relationship, to agree on both a defined quality and its inspection methodology.

It is agreed by both parties that the batches that are supplied for inspection by sampling are on a level of the supply chain that provides the necessary homogeneity. Small diamonds are already controlled in different countries and today there is a need for harmonizing the technical principles of inspection of small diamonds. This harmonization will benefit the jewellery and watchmaking industries in large, because their reputations are inextricably linked to a stringent compliance with their product quality specifications.

This document aims to clarify and ease the relationship between diamantaires and companies decorating their products with small diamonds, which consequently strengthens the end consumer confidence in the jewellery, watchmaking and all other luxury industries.

This document completes ISO 18323 and ISO 24016.

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Jewellery and precious metals — Inspection of batches of small diamonds — Terminology, classification and test methods

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1 Scope

This document specifies the terminology, classification and test methods that are used for the inspection of batches of unmounted polished colourless diamonds with single mass smaller than or equal to 0,25 ct (carat).

While the inspection of a batch is made one diamond at a time, the use of this document is not to be claimed for one single diamond only nor for fancy coloured diamonds, nor for synthetic diamonds, nor for treated diamonds, neither for assembled stones.

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 2859-1:1999, Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection~~

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~~ISO 18323, Jewellery — Consumer confidence in the diamond industry~~

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~~ISO 24016:2020, Jewellery and precious metals — Grading polished diamonds — Terminology, classification and test methods~~

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[ISO 18323, Jewellery — Consumer confidence in the diamond industry](#)

[ISO 24016, Jewellery and precious metals — Grading polished diamonds — Terminology, classification and test methods](#)

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3 Terms and definitions

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For the purposes of this document, the terms and definitions given in [ISO 18323](#), [ISO 24016](#) and the following apply.

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ISO and IEC maintain [terminological terminology](#) databases for use in standardization at the following addresses:

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

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

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3.1 diamond

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mineral consisting essentially of carbon crystallised in the isometric (cubic) crystal system, with a hardness on the Mohs' scale of 10, a specific gravity of approximately 3,52 and a refractive index of approximately 2,42, created by nature

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Note 1 to entry: The denomination "diamond" without further specification always implies "natural diamond". These two terms are equivalent and carry the same meaning.

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[SOURCE: ISO 24016:2020, 3.1.1]

3.2 small diamonds

diamonds (3.1)(3.1) of individual mass smaller than or equal to 0,25 ct

3.3 batch

series of small diamonds (3.2)(3.2) conforming to the batch specification (3.4)(3.4)

3.4 batch specification

written or verbal description of a batch (3.3)(3.3) of small diamonds (3.2)(3.2) comprising authenticity, cut (3.6)(3.6), batch size (3.5)(3.5), and/or dimension, and/or colour grade, and/or clarity grade, and/or cut grade (3.12)(3.12) and/or proportion grade (3.11)(3.11) and/or symmetry grade (3.9)(3.9), and/or polish grade (3.8)(3.8)

3.5 batch size

quantity of small diamonds (3.2)smalldiamonds (3.2) in a batch (3.3)(3.3)

3.6 cut

shape, proportions, polish and symmetry of a diamond (3.1)(3.1)

Note_1_to_entry: The term finish encompasses polish and symmetry.

[SOURCE: ISO 24016:2020, 3.5]

3.7 cutting style

facets arrangement of a polished diamond (3.1)(3.1)

EXAMPLEEXAMPLE brilliant, step cut

3.8 polish grade

grade taking into consideration the surface condition of a diamond (3.1)(3.1)

3.9 symmetry grade

grade taking into consideration the exactness of the shape of a diamond (3.1)(3.1), the arrangement of its facets and in some circumstances its girdle regularity

3.10 finish grade

grade combining the symmetry grade (3.9)(3.9) and the polish grade (3.8)(3.8)

3.11 proportion grade

grade combining table size, crown height and/or crown angle, pavilion depth and/or pavilion angle, star length, pavilion half facet length, girdle thickness, total depth and in some circumstances culet size

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