SLOVENSKI STANDARD
SIST EN ISO 24016:2026

01-maj-2026

Nakit in plemenite kovine - Ocenjevanje poliranih diamantov - Terminologija, klasifikacija in preskusne metode (ISO 24016:2020, vključno s popravljeno različico 2024-03)

Jewellery and precious metals - Grading polished diamonds - Terminology, classification and test methods (ISO 24016:2020, including corrected version 2024-03)

Schmuck und Edelmetalle - Gradierung geschliffener Diamanten - Begriffe, Klassifizierung und Prüfverfahren (ISO 24016:2020, einschließlich korrigierte Fassung 2024-03)

Joaillerie et métaux précieux - Classification des diamants taillés - Terminologie, graduations et méthodes d'essai (ISO 24016:2020, y compris version corrigée 2024-03)

Ta slovenski standard je istoveten z: **EN ISO 24016:2026**

ICS:

01.040.39	Finomehanika. Nakit (Slovarji)	Precision mechanics. Jewellery (Vocabularies)
39.060	Nakit	Jewellery

SIST EN ISO 24016:2026 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 24016

March 2026

ICS 01.040.39; 39.060

English Version

Jewellery and precious metals - Grading polished diamonds - Terminology, classification and test methods (ISO 24016:2020, including corrected version 2024-03)

Joaillerie et métaux précieux - Classification des diamants taillés - Terminologie, graduations et méthodes d'essai (ISO 24016:2020, y compris version corrigée 2024-03)

Schmuck und Edelmetalle - Gradierung geschliffener Diamanten - Begriffe, Klassifizierung und Prüfverfahren (ISO 24016:2020, einschließlich korrigierte Fassung 2024-03)

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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 24016:2026 E

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European foreword

The text of ISO 24016:2020, including corrected version 2024-03 has been prepared by Technical Committee ISO/TC 174 "Jewellery and precious metals" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 24016:2026 by Technical Committee CEN/TC 410 "Jewellery and precious metals" the secretariat of which is held by DIN.

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International Standard

ISO 24016

Jewellery and precious metals — Grading polished diamonds — Terminology, classification and test methods

Joaillerie et métaux précieux — Classification des diamants taillés — Terminologie, graduations et méthodes d'essai

First edition
2020-09

Corrected version
2024-03

Reference number
ISO 24016:2020(en)

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Published in Switzerland

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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 documents 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).

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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.

This corrected version of ISO 24016:2020 incorporates the following corrections:

— In Table 2, lines I and K, the "+" signs have been deleted.

Introduction

The aim of a standard for grading unmounted polished diamonds is to set rules for determining with maximum precision and accuracy the mass, colour, clarity and cut of individual polished diamonds. On one hand, based on these four criteria - also known as "the 4C's" - the diamond trade evaluates the value of diamonds. On the other hand, some diamond grading reports may be issued based on different standards by different laboratories, potentially leading to different results for the same individual diamond. This situation damages the reputation of the whole diamond trade. Hence, the need for a unique ISO standard for grading polished diamonds.

Today, the need for an ISO standard for the grading of polished diamonds is supported by recent agreements between international and national diamond organizations with CIBJO (The World Jewellery Confederation) with the aim of adopting CIBJO's unique diamond grading and diamond nomenclature standard.

Together with ISO 18323, which sets the nomenclature for diamonds, synthetic diamonds and diamond simulants, an ISO standard for the grading of polished diamonds will strengthen the trust in the diamond industry worldwide.

Jewellery and precious metals — Grading polished diamonds — Terminology, classification and test methods

1 Scope

This document specifies the terminology, classification and the methods that are used for the grading and description of single unmounted polished diamonds over 0,25 carat (ct).

This document applies to natural, unmounted, polished diamonds. It is not to be used for fancy coloured diamonds, synthetic diamonds, treated diamonds (other than is allowed for in 7.4), nor for assembled stones.

2 Normative references

The following document is 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 18323, *Jewellery — Consumer confidence in the diamond industry*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18323 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

— IEC Electropedia: available at http://www.electropedia.org/

3.1
polished diamond
diamond with a defined *cut* (3.5)

3.1.1
diamond
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

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

3.1.2
treated diamond
diamond (3.1.1) having undergone any human intervention other than cutting, polishing, cleaning and setting, to permanently or non-permanently change its appearance

EXAMPLE Coating, fracture filling, heating, irradiation, laser drilling, HPHT treatment or any other physical or chemical process.

3.1.3
synthetic diamond
laboratory-grown diamond
laboratory-created diamond
artificial product that has essentially the same chemical composition, crystal structure and physical (including optical) properties as a *diamond* (3.1.1)

Note 1 to entry: The English terms laboratory-created diamond or laboratory-grown diamond may be used synonymously with synthetic diamond. Where there is no acceptable local direct translation of the English terms laboratory grown diamond or laboratory created diamond then only the translation of the term synthetic diamond should be used.

Note 2 to entry: Abbreviations such as "lab grown", "lab created" "lab diamond" or "syn diamond" shall not be used.

Note 3 to entry: The word “laboratory” refers to the facility which produces the synthetic diamonds. This should not to be confused with a gemmological laboratory that is dedicated to the analysis, authentication, identification, classification (grading) of diamonds.

3.1.4
composite stone
assembled stone
stone constructed of two or more parts

3.2 Internal characteristics

3.2.1
bearding
tiny *feathers* (3.2.8) extending in from the girdle

3.2.2
bruise
surface percussion mark, accompanied by tiny, root-like *feathers* (3.2.8)

3.2.3
cavity
large or deep opening

3.2.4
chip
damage, usually occurring along the girdle or culet, which alters the outline of the stone

Note 1 to entry: Also to be considered as an external characteristic (see 3.3.4) depending upon depth.

3.2.5
cleavage
large *feather* (3.2.8) occurring in a plane, parallel to a crystal face

3.2.6
cloud
hazy or milky area made up of a number of very small *inclusions* (3.10)

3.2.7
crystal
mineral crystal included in a *diamond* (3.1.1)

3.2.8
feather/fracture
separation or break due to either *cleavage* (3.2.5) or fracture, often white and feathery in appearance

3.2.9
grain centre
small area of concentrated *crystal* (3.2.7) structure distortion

3.2.10
internal graining
internal indications of irregular *crystal* (3.2.7) growth

3.2.10.1
coloured graining
graining which appears as coloured streaks

3.2.10.2
reflective graining
graining which appears as a reflective plane

3.2.10.3
whitish graining
graining which may appear as whitish streaks or may give the stone a hazy (cloudy) appearance which decreases transparency

3.2.11
indented natural
natural (3.3.6) that penetrates the stone

Note 1 to entry: Also to be considered as an external characteristic (see 3.3.15) depending upon depth.

3.2.12
knot
included *diamond* (3.1.1) crystal which reaches the surface

3.2.13
laser drilling
burning a channel with a laser between the surface of a *diamond* (3.1.1) and an *inclusion* (3.10) (generally black), the channel being used as a conduit to allow a chemical treatment of the *inclusion* (3.10) with the purpose of making the *inclusion* (3.10) less visible

3.2.14
needle
long, thin included *crystal* (3.2.7) which looks like a tiny rod

3.2.15
nick
minor damage, occurring along the girdle, the culet or facet edge, which does not significantly affect the outline of the stone

Note 1 to entry: Also to be considered as an external characteristic (see 3.3.7) depending upon depth.

3.2.16
pinpoint
very small *inclusion* (3.10); under 10x normally seen as a tiny dot, either singly or in groups or strings

3.2.17
reduced transparency
cloudy, milky, or hazy appearance of the whole or part of a *diamond* (3.1.1) due to internal features that may or may not be visible at 10x magnification

3.2.18
twinning wisp
inclusions (3.10) usually located in a plane, which occur as a result of the change in orientation of the diamond crystal structure

3.2.19
etch channel
high-temperature magma erodes the weak area of the *diamond* (3.1.1), leaving behind tubular traces extending from the surface to the inside, with a quadrangle opening