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Vizualno ocenjevanje površine pohištva

Visual assessment of furniture surfaces

Visuelle Bewertung von Möbeloberflächen

Evaluation visuelle de la surface des meubles

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Visual assessment of furniture surfaces

Evaluation visuelle de la surface des meubles

Visuelle Bewertung von Möbeloberflächen

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European foreword

This document (EN 17214:2019) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

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1 Scope

This document defines visual assessment procedures for the appearance of furniture surfaces with regard to surface defects and colour and gloss variations.

It is not applicable to constructive features or geometric dimensions, e.g. parallelism of edges.

This standard is applicable to all furniture surfaces except textile and leather surfaces.

It applies to the incoming and outgoing goods inspections, as well as local assessments.

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.

EN ISO 3668:2001, *Paints and varnishes — Visual comparison of the colour of paints (ISO 3668:1998)*

ISO 1065:1991, *Non-ionic surface-active agents obtained from ethylene oxide and mixed non-ionic surface-active agents — Determination of cloud point*

3 Terms and definitions

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

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

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
normal position
position of the furniture item when used as intended

3.2
visual assessment
assessment of the furniture surface under specified conditions

3.3
overall impression
regularity in the arrangement of individual items of furniture that belong together and of their parts in relation to one another, or of individual parts of an item of furniture, from a distance according to the size of the furniture component

3.4
detailed impression
regularity of a surface of furniture items from a short distance (from 0,25 m to 1 m) according to the intended use of the furniture

3.5
flaw
any kind of visible damage on furniture surfaces that stands out from its surroundings and impairs the overall impression

Note 1 to entry: The flaw catches the attention of the viewer, thereby leading to its perception as disruptive.

EXAMPLE Scratches, occlusions.

3.6
furniture component
element subjected to visual inspection

3.7
assessed surface
part of the furniture component to be assessed

3.8
repeat
repeating, area-filling surface design element

EXAMPLE Wood decor, surface embossing.

3.9
observer
technician who carries out the assessment fulfilling the requirement specified in EN ISO 3668:2001

4 Assessment equipment

4.1 Cleaning solution

15 ml/l of the cleaner in water with the following cleaner composition:

a) 12,5 % (m/m) of a primary or polymeric sodium (C10 to C14) alkylaryl sulphonate [CAS 25155-30-0];

b) 12,5 % (m/m) of a polyethoxylated primary or secondary (C8 to C16) alcohol derivative with 5 to 15 ethoxyl groups with a cloud point of 25 °C to 75 °C in 1 % (m/m) aqueous solution (the determination of the cloud point is specified in ISO 1065:1991) [CAS 9005-67-];

c) 5,0 % (m/m) of ethanol (96 % aqueous solution);

d) 70 % (m/m) de-ionized or distilled water.

Instead of this described cleaning solution, a commercial cleaning solution recommended by the manufacturer can be used. In this case, it shall be mentioned in the test report.

4.2 Lighting

Artificial light source with a colour temperature of (6 500 ± 200) K (CIE standard illuminants D65 light).

4.3 Holder for furniture components

Device for placing the object to be inspected at an angle of 30° ± 3° and in a manner ensuring that the assessed surface is exposed to a light intensity of 1,000 lx to 2,000 lx (Figure 1), measured in the centre of the holder in horizontal position.

Dimensions in millimetres

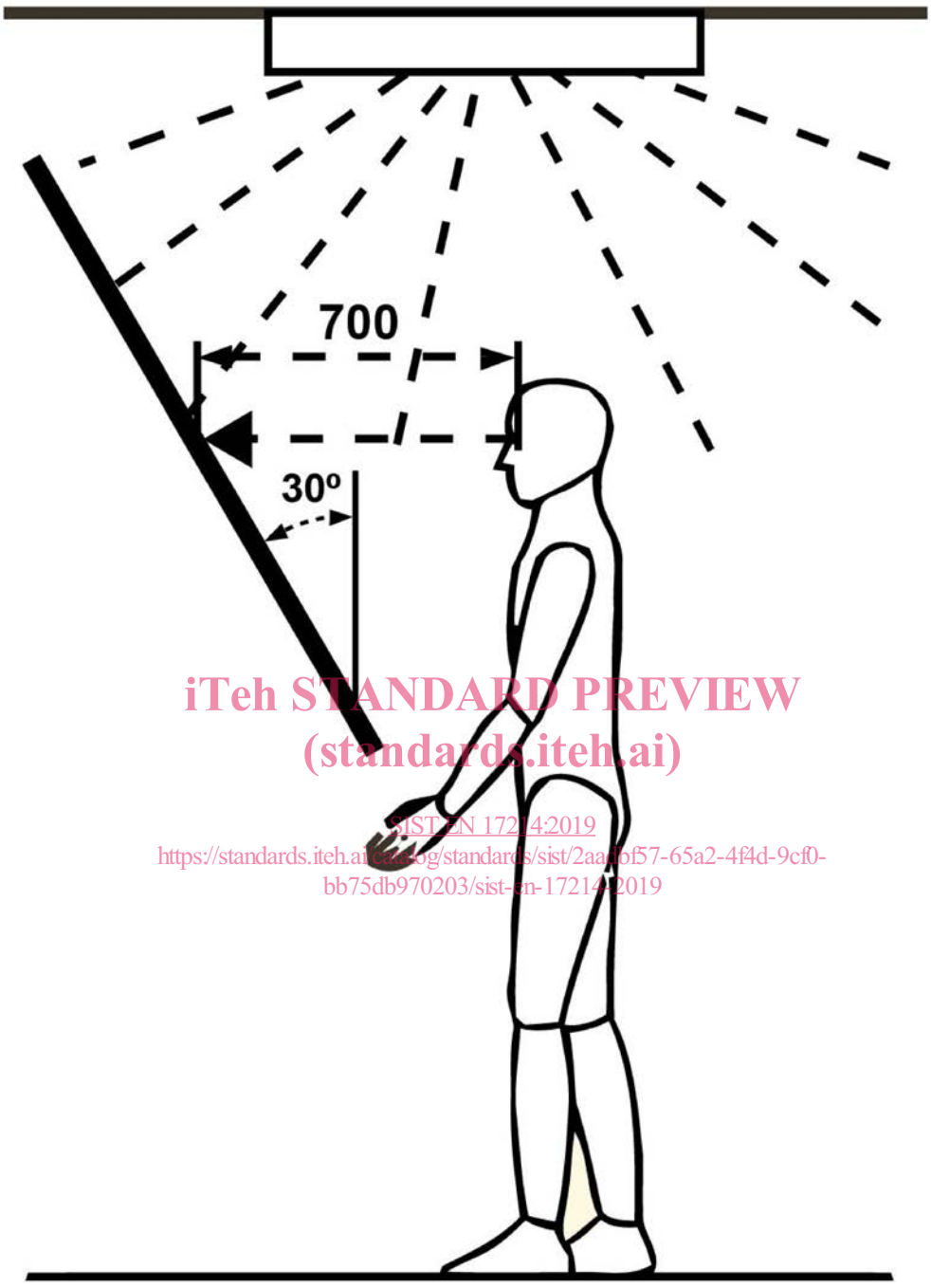

Figure 1 — Visual assessment principle for furniture components

4.4 Assessment template

Tool with defined areas [mm²], e.g. a transparent film with printed areas.

NOTE A suitable template is the “Size estimation chart”, product code 0109DIRTT, available from TAPPI, 15 Technology Parkway South, Suite 115, Peachtree Corners, Atlanta, GA 300922910, USA, tel. +1 770 446 1400, fax +1 770 446 6947.[1]

4.5 Light box

The light box provides a “daylight” by bulb or tube or LED (see Figure 2).

The light shall be even enough to ensure the absence of under illuminated zones.

The light behind the test pattern shall be without a black area within the light source.

The lightbox can be a negatoscope or other equipment with a diffuse and homogeneous light. The light box with the test pattern shall send an image with a clear contrast on the mirror. The distinction of image shall be without distorsion or dullness on a plane mirror.

NOTE Suitable devices are e.g. NBX1 negatoscope by ELLA LEGROS or Glossinspector by MHanser.[1]

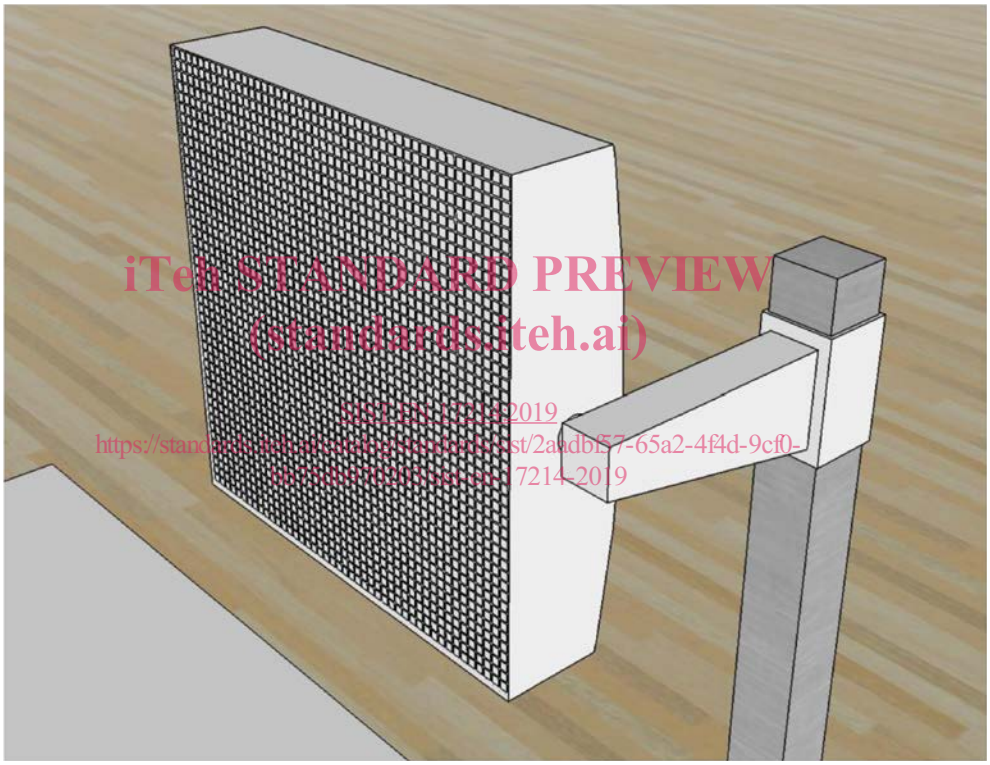

Figure 2 — Light box

4.6 Test pattern

The test pattern (see Figure 3) has empty squares (10,0 ± 0,2) mm side, separated by metal bars of (2,0 ± 0,1) mm.

The overall dimension shall be at least of 15 columns and 20 lines of squares.

The test pattern shall stay plane on the light box or printed on the lightbox screen.

[1] These are examples of suitable products available commercially. This information is given for the convenience of users of this document and does not constitute an endorsement by CEN of this product.

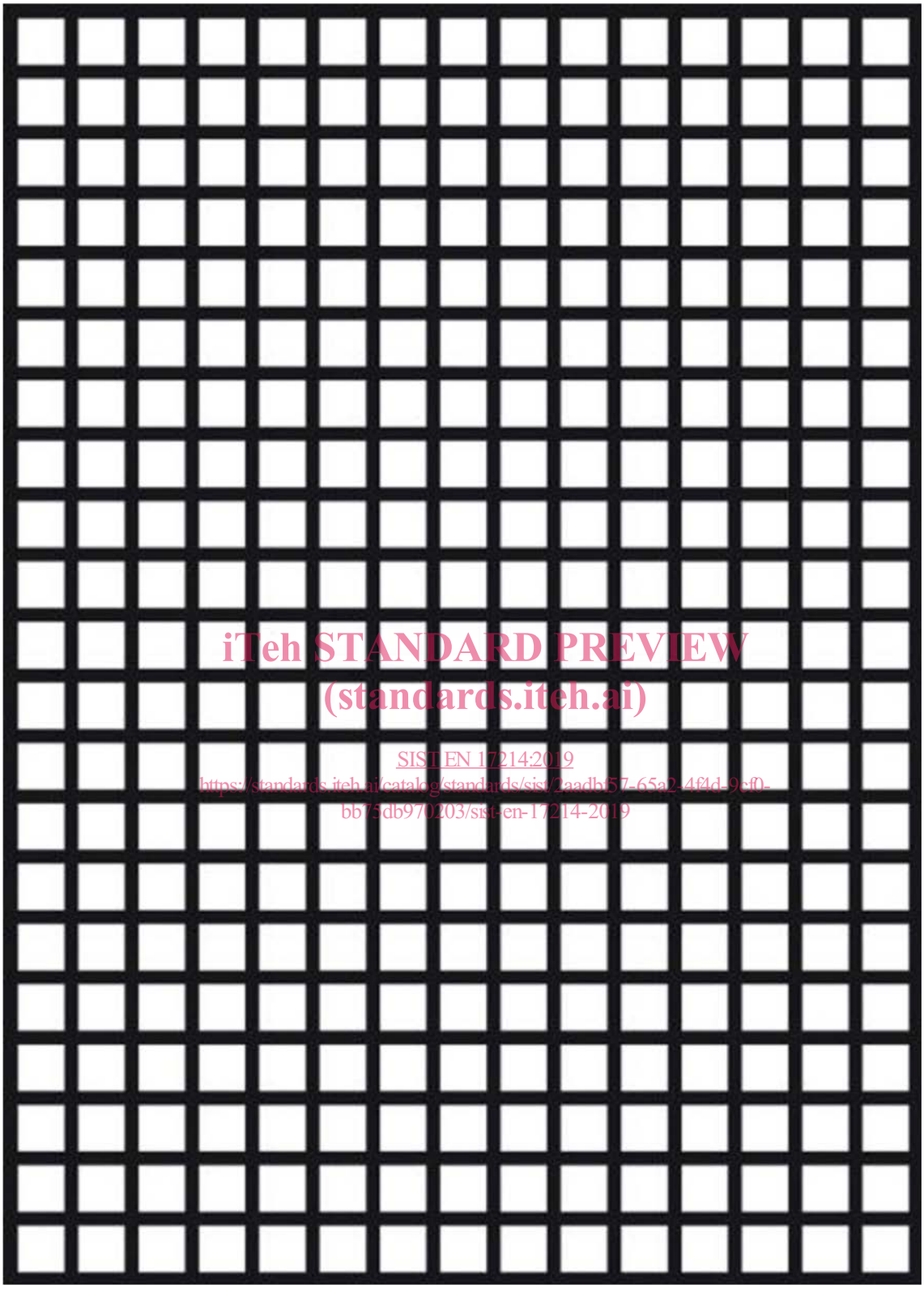

Figure 3 — Test pattern

4.7 Rating code scale

The classification is based on the principle of the figures presented in Annex B, see Figure B.1 to B.8.

5 Testing and assessment

5.1 General

Assessment procedures A and B are determined to be performed in the incoming and outgoing inspection at the factory.

Assessment procedure C is determined to be performed on site in an installed condition.

The assessment shall be performed on furniture surfaces that have been cleaned with the cleaning solution according to 4.1.

The surfaces shall dry off after the cleaning, without rubbing the surface.

5.2 Procedure A for visual assessment of furniture components at the incoming and outgoing inspection in the factory

The furniture component shall be cleaned with the cleaning solution according to 4.1 (1 day old at most) before the visual assessment. The concerned surface shall be lightly wiped with a clean, soft, absorbent cloth (no microfibre) before the inspection.

The surface to be assessed shall be inserted in the holder (4.3) and assessed by an experienced inspector in keeping with the inspection conditions of Table 1 and under the lighting device (4.2), as illustrated in Figure 1.

Table 1 — Assessment conditions

Assessment parameters	Value
Position	Incline (30 ± 2)° (orientation as in installed condition)
Light source colour temperature (daylight, diffuse or D65 lamps)	(6 500 ± 200) K
Light intensity	1 000 lx – 2 000 lx
Viewing angle	30°– 90° to the surface
Viewing distance	(0,7 ± 0,1) m
Viewing period	max. 20 s

The visual assessment is preferably performed in comparison with agreed reference samples (e.g. original sample) and/or tolerance samples, or comparable sections of repeats, e.g. with wooden decors.

The following criteria shall be observed in the process:

— deviations in the colour shade, glossiness and structure;

— stains, occlusions (e.g. oil, soot, insects, fibres);

— flaws in the coating such as, for example, dents, scratches, bubbles, welts, paint runs, contrasting areas;

— as well as other indentations or upheavals.

An assessment template (see 4.4) can be relied upon to assess the size of stains, impacts, indentations and upheavals.