INTERNATIONAL STANDARD

ISO 4211-3

Second edition
2013-05-15

Furniture — Tests for surface finishes —

Part 3: Assessment of resistance to dry heat

Ameublement — Essais des finitions de surface —

Partie 3: Évaluation de la résistance à la chaleur sèche

Reference number
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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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. www.iso.org/directives

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 136, *Furniture*.

This second edition cancels and replaces the first edition (ISO 4211-3:1993), which has been technically revised. Significant technical changes in this version are as follows:

— change in the illumination of the diffuse light source; it is now (1200 ± 400) lx;

— changes in the descriptive numerical rating code: new descriptions apply.

ISO 4211 consists of the following parts, under the general title *Furniture — Tests for surface finishes*:

— *Part 2: Assessment of resistance to wet heat*

— *Part 3: Assessment of resistance to dry heat*

— *Part 4: Assessment of resistance to impact*

Furniture — Tests for surface finishes —

Part 3: Assessment of resistance to dry heat

1 Scope

This part of ISO 4211 specifies a method for the assessment of the resistance to dry heat of all rigid furniture surfaces regardless of materials.

It does not apply to leather and textile surfaces.

The test is intended to be carried out on a part of the finished furniture, but can be carried out on test panels of the same material, finished in an identical manner to the finished product and of a size sufficient to meet the requirements of the test.

The test is carried out on unused surfaces.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 209, *Aluminium and aluminium alloys — Chemical composition*

ISO 1770, *Solid-stem general purpose thermometers*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 4288, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Rules and procedures for the assessment of surface texture*

3 Terms and definitions

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

3.1
test panel
panel including the test surface

Note 1 to entry: It may be cut from a finished item of furniture or it may be a separate panel produced in the same manner as the finished item of furniture.

3.2
test surface
part of the test panel

3.3
test area
part of the test surface under the heat source (5.2)

3.4
roughness
R_a
arithmetic mean of the absolute values of the profile deviations from the mean line

4 Principle

A standard aluminium alloy block at a specified test temperature is placed on the test surface. After a specified period of time, the block is removed. The test surface is wiped dry and the test panel left undisturbed for at least 16 h. It is then examined under specified lighting conditions for signs of damage (discolouration, change in gloss and colour, blistering, swelling, or other defects). Test results are assessed in terms of a descriptive numerical rating code.

5 Apparatus and materials

5.1 Thermometer, as specified in ISO 1770, capable of insertion to the bottom of the centre bore of the heat source (5.2) or other means of measuring the temperature of the heat source to an accuracy of ± 1 °C.

5.2 Heat source, a block as shown in Figure 1 manufactured from aluminium alloy according to ISO 209, Al Mg Si (alloy shall contain more than 94 % aluminium). The roughness of the bottom surface shall be (2 ± 1) µm, expressed as R_a, according to ISO 4287 and ISO 4288.

NOTE Alloy 6060 and 64430 are suitable.

For this International Standrad, the following tolerances are applicable:

Dimensions: ± 0,2 mm of the nominal dimension;

Angles: ± 2° of the nominal angle.

Dimensions in millimetres

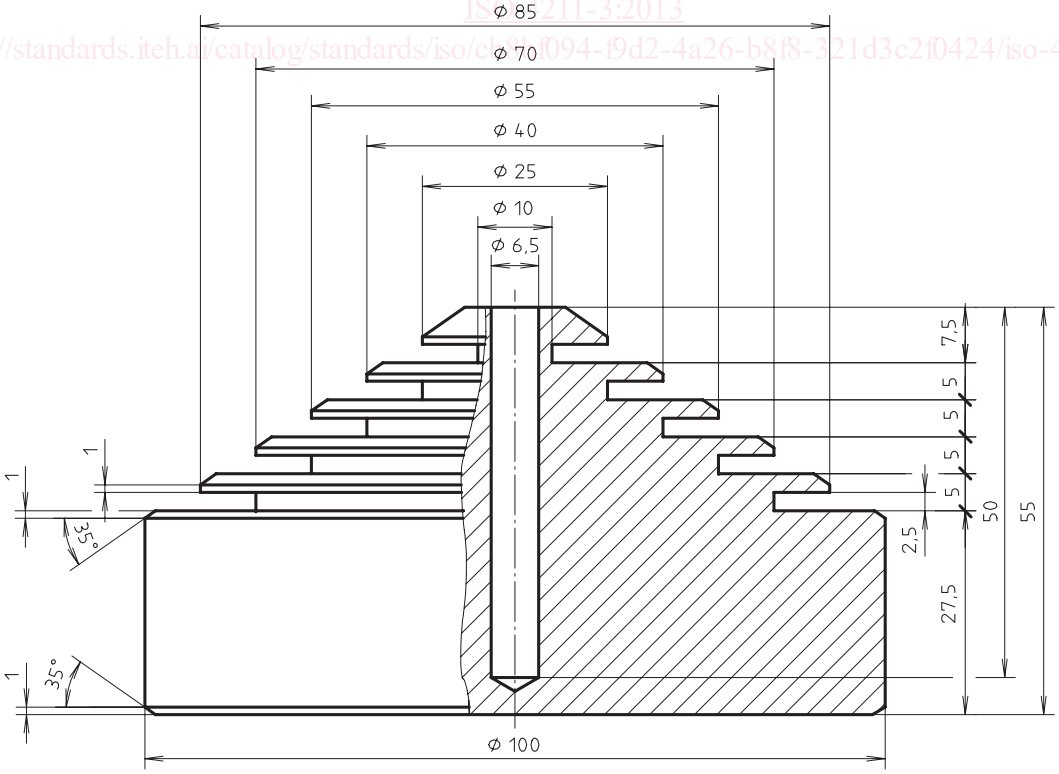

Figure 1 — Aluminium block used as heat source