BS ISO 5631-1:2015

BSI Standards Publication

Paper and board — Determination of colour by diffuse reflectance

Part 1: Indoor daylight conditions (C/2°)

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National foreword

This British Standard is the UK implementation of ISO 5631-1:2015. It supersedes BS ISO 5631-1:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PAI/11, Methods of test for paper, board and pulps.

A list of organizations represented on this committee can be obtained on request to its secretary.

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INTERNATIONAL STANDARD

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Second edition
2015-11-01

Paper and board — Determination of colour by diffuse reflectance —

Part 1: Indoor daylight conditions (C/2°)

Papier et carton — Détermination de la couleur par réflectance diffuse —
Partie 1: Conditions d'éclairage intérieur de jour (C/2°)

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 6, *Paper, board and pulps*.

This second edition cancels and replaces the first edition (ISO 5631-1:2009). The major change is to allow for calculations using ASTM E308 for instruments that have bandpass correction and still maintain the procedure for instruments without bandpass correction.

ISO 5631 consists of the following parts, under the general title *Paper and board — Determination of colour by diffuse reflectance*:

— *Part 1: Indoor daylight conditions (C/2°)*

— *Part 2: Outdoor daylight conditions (D65/10°)*

— *Part 3: Indoor illumination conditions (D50/2°)*

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Introduction

The colour of an object can be uniquely characterized by means of a triplet of colour coordinates such as the CIE tristimulus values or the CIELAB 1976 L^*, a^*, b^* coordinates for a specified CIE illuminant and CIE standard observer.

Apart from the optical properties of the sample, the values of such coordinates depend upon the conditions of measurement, particularly the spectral and geometric characteristics of the instrument used. This part of ISO 5631 should therefore be read in conjunction with ISO 2469.

This part of ISO 5631 describes the measurement and description of colour in terms of the CIE illuminant C and the CIE 1931 (2°) standard observer. The other parts of this International Standard describe measurements and calculations carried out in an analogous manner using either the CIE standard illuminant D65 and the CIE 1964 (10°) standard observer or the CIE illuminant D50 and the CIE 1931 (2°) standard observer.

The choice of illuminant conditions is important when determining the colour coordinates of white papers containing a fluorescent whitening agent. In ISO 5631-2, the UV content of the illumination is much higher, approximating UV levels encountered in outdoor viewing conditions.

ISO 5631-3 describes the measurement and description of colour in terms of the CIE illuminant D50 and the CIE 1931 (2°) standard observer. This method is especially applicable to graphic arts situations since these illuminant/observer conditions are used within the graphic arts industry.

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