BS ISO 5631-3:2015

BSI Standards Publication

Paper and board — Determination of colour by diffuse reflectance

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

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National foreword

This British Standard is the UK implementation of ISO 5631-3:2015. It supersedes BS ISO 5631-3:2014 which is withdrawn.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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Paper and board — Determination of colour by diffuse reflectance —

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

Papier et carton — Détermination de la couleur par réflectance diffuse —
Partie 3: Conditions d'éclairage intérieur (D50/2°)

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Foreword

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

This third edition cancels and replaces the second edition (ISO 5631-3:2014). 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 *X,Y, Z* 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 D50 and the CIE 1931 (2°) standard observer. The method is especially applicable to the comparison of papers in graphic arts situations since these particular illuminant/observer conditions are required by ISO 13655 for the graphic arts industry. It is, however, emphasized that this is only a partial approach to the graphic arts conditions, since ISO 13655 also specifies measurement with a 45:0 or 0:45 geometry of a single sheet over a specified black backing and also requires that the illumination in the light booth be adjusted to CIE illuminant D50 conditions.

The other parts of this International Standard describe measurements and calculations carried out in an analogous manner using either the CIE illuminant C and the CIE 1931 (2°) standard observer (ISO 5631-1) or the CIE standard illuminant D65 and the CIE 1964 (10°) standard observer (ISO 5631-2). 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

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