SLOVENSKI STANDARD
oSIST ISO 2469:2011

01-marec-2011

Papir, karton, lepenka in vlaknine - Merjenje faktorja razpršene odsevnosti

Paper, board and pulps -- Measurement of diffuse radiance factor

Papier, carton et pâtes -- Mesurage du facteur de luminance énergétique diffuse

Ta slovenski standard je istoveten z: **ISO 2469:2007**

ICS:

85.040	Vlaknine	Pulps
85.060	Papir, karton in lepenka	Paper and board

oSIST ISO 2469:2011 **en**

INTERNATIONAL STANDARD

ISO 2469

Fourth edition
2007-06-15

Paper, board and pulps — Measurement of diffuse radiance factor

Papier, carton et pâtes — Mesurage du facteur de luminance énergétique diffuse

Reference number
ISO 2469:2007(E)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 2469 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

This fourth edition of ISO 2469 cancels and replaces the third edition (ISO 2469:1994) and ISO 2469:1994/Cor.1:1998, which have been technically revised. Primarily, certain instrumental features and computational routines are more rigorously defined in order to meet the requirements of technological advances and in order to ensure a high precision and reproducibility in the measurement results.

In addition, the property mentioned in the title has been changed from “diffuse reflectance factor” to “diffuse radiance factor” as an acknowledgement of the fact that many grades of paper now contain added fluorescent whitening agents. For any given material, the total radiance factor is the sum of the reflected radiance factor and the luminescent radiance factor, and it is this total property which is the subject of this International Standard. For pulps and papers not containing any fluorescent component, the radiance factor and the reflectance factor are synonymous, see Annex E.

Introduction

The radiance factor depends on the conditions of measurement, particularly the spectral and geometric characteristics of the instrument used. The diffuse radiance factor as defined by this International Standard is determined using instruments having the characteristics given in Annex A and calibrated according to the procedure specified in Annex B.

The radiance factor is the sum of the reflected radiance factor and the luminescent radiance factors, and the radiance factor of a luminescent (fluorescent) object is dependent on the spectral power distribution of the illumination. The content of UV radiation in the illumination must therefore be set to a specified level if adequately accurate measurements are to be carried out on fluorescent objects. The preparation of fluorescent reference standards to enable this adjustment to be made is described in Annex C. The use of these fluorescent reference standards is described in detail in the International Standards describing the measurement of the properties of the materials containing fluorescent whitening agents.

The spectral radiance factor or the weighted radiance factor applicable to one or several specified wavelength bands is often used to characterize the properties of pulp, paper and board. Examples of radiance factors associated with specified wavelength bands are the ISO brightness (diffuse blue radiance factor) and the luminance factor.

The radiance factor or reflectance factor is also used as the basis for calculating optical properties, such as opacity, colour, whiteness and the Kubelka-Munk scattering and absorption coefficients. These various properties are specified in specific International Standards, for all of which this International Standard is the primary normative reference.