



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 13468-1:2019

Plastics - Determination of the total  
luminous transmittance of transparent  
materials - Part 1: Single-beam  
instrument (ISO 13468-1:2019)

**I.S. EN ISO 13468-1:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN ISO 13468-1:2019 is the adopted Irish version of the European Document EN ISO 13468-1:2019, Plastics - Determination of the total luminous transmittance of transparent materials - Part 1: Single-beam instrument (ISO 13468-1:2019)

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EUROPEAN STANDARD

EN ISO 13468-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2019

ICS 83.080.01

Supersedes EN ISO 13468-1:1996

English Version

Plastics - Determination of the total luminous  
transmittance of transparent materials - Part 1: Single-  
beam instrument (ISO 13468-1:2019)

Plastiques - Détermination du facteur de transmission  
du flux lumineux total des matériaux transparents -  
Partie 1: Instrument à faisceau unique (ISO 13468-  
1:2019)

Kunststoffe - Bestimmung des totalen  
Lichttransmissionsgrades von transparenten  
Materialien - Teil 1: Einstrahlinstrument (ISO 13468-  
1:2019)

This European Standard was approved by CEN on 18 June 2019.

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COMITÉ EUROPÉEN DE NORMALISATION  
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**EN ISO 13468-1:2019 (E)**

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## **European foreword**

This document (EN ISO 13468-1:2019) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

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

This document supersedes EN ISO 13468-1:1996.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Endorsement notice**

The text of ISO 13468-1:2019 has been approved by CEN as EN ISO 13468-1:2019 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
13468-1**

Second edition  
2019-06

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## **Plastics — Determination of the total luminous transmittance of transparent materials —**

### **Part 1: Single-beam instrument**

*Plastiques — Détermination du facteur de transmission du flux  
lumineux total des matériaux transparents —*

*Partie 1: Instrument à faisceau unique*



Reference number  
ISO 13468-1:2019(E)

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## ISO 13468-1:2019(E)

### 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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

This second edition cancels and replaces the first edition (ISO 13468-1:1996), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- the format of figures has been revised;
- the normative references have been revised;
- editorial changes have been applied.

A list of all parts in the ISO 13468 series can be found on the ISO website.

# Plastics — Determination of the total luminous transmittance of transparent materials —

## Part 1: Single-beam instrument

### 1 Scope

This document covers the determination of the total luminous transmittance, in the visible region of the spectrum, of planar transparent and substantially colourless plastics, using a single-beam photometer with a specified CIE Standard light source and photodetector. This document cannot be used for plastics which contain fluorescent materials.

This document is applicable to transparent moulding materials, films and sheets not exceeding 10 mm in thickness.

NOTE 1 Total luminous transmittance can also be determined by a double-beam spectrophotometer as in ISO 13468-2. This document, however, provides a simple but precise, practical and quick determination. This method is suitable for use not only for analytical purposes but also for quality control.

NOTE 2 Substantially colourless plastics include those which are faintly tinted.

NOTE 3 Specimens more than 10 mm thick can be measured provided the instrument can accommodate them, but the results might not be comparable with those obtained using specimens less than 10 mm thick.

### 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.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 5725-1, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

ISO 5725-3, *Accuracy (trueness and precision) of measurement methods and results — Part 3: Intermediate measures of the precision of a standard measurement method*

ISO 11664-1, *Colorimetry — Part 1: CIE standard colorimetric observers*

ISO 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

CIE Publication No. 15, *Colorimetry*

CIE Publication No. 17, *CIE International lighting vocabulary*<sup>1)</sup>

1) Also published as IEC 60050-845.

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