

BS EN ISO 6427:2014



BSI Standards Publication

Plastics — Determination of matter extractable by organic solvents (conventional methods)

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National foreword

This British Standard is the UK implementation of EN ISO 6427:2014. It is identical to ISO 6427:2013. It supersedes BS EN ISO 6427:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/21, Testing of plastics.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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ISBN 978 0 580 84591 8

ICS 83.080.01

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2014.

Amendments issued since publication

Date	Text affected
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ICS 83.080.01

English Version

Plastics - Determination of matter extractable by organic solvents (conventional methods) (ISO 6427:2013)

Plastiques - Détermination des matières extractibles par des solvants organiques (Méthodes conventionnelles) (ISO 6427:2013)

Kunststoffe - Bestimmung der extrahierbaren Bestandteile durch organische Lösemittel (Standardverfahren) (ISO 6427:2013)

This European Standard was approved by CEN on 29 May 2014.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

The text of ISO 6427:2013 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 6427:2014 by 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

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

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Endorsement notice

The text of ISO 6427:2013 has been approved by CEN as EN ISO 6427:2014 without any modification.

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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 6427 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

This third edition cancels and replaces the second edition (ISO 6427:1992), of which it constitutes a minor revision, the main purpose of which was to delete the second sentence in (subclause) 5.1. In addition, the minimum density for which the method is suitable for PE has been indicated directly in footnote "e" to [Table 1](#), rather than referring the reader to ISO 1872-1^[1] and what was [Table 1](#) in the 1992 edition has been split into two tables for ease of comprehension.

Introduction

There are several very similar national and international standards for determination of the percentage of extractable matter, with only slight differences in the procedures. To facilitate the work of the laboratory staff which has to carry out these determinations on various plastics products, the generally applicable methods are described in this International Standard.

Plastics — Determination of matter extractable by organic solvents (conventional methods)

1 Scope

This International Standard specifies methods for the determination of components in plastics that can be extracted by hot organic liquids near their boiling points. For one special case, a so-called cold-extraction method is given in [Annex B](#).

The extractable components can be monomers, oligomers, polymers, plasticizers, stabilizers, etc. The kind and percentage of extractable matter influence the properties of plastics.

The recommended extraction liquid depends on the type of plastic and on the purpose of the determination (see [Table 1](#)). The extracted amounts of special constituents are often not quantitative in the sense of analytical chemistry.

This International Standard does not apply to plastics that come into contact with food or drinking water. Special regulations for those plastics are established in many countries. In order to test plastics for compliance with these regulations, methods other than those given in this International Standard are used in most cases. The methods of this International Standard are not intended to be used for migration tests.

If this International Standard is used to test plastics other than those mentioned in [Table 1](#), the operating conditions is intended to be agreed upon by the interested parties.

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 308, *Plastics — Phenolic moulding materials — Determination of acetone-soluble matter (apparent resin content of material in the unmoulded state)*

ISO 383, *Laboratory glassware — Interchangeable conical ground joints*

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 1773, *Laboratory glassware — Narrow-necked boiling flasks*

ISO 1875, *Plastics — Plasticized cellulose acetate — Determination of matter extractable by diethyl ether*

3 Reagents and materials

3.1 Extraction liquid, of recognized analytical grade, to be selected according to the requirements of the plastic material being tested (see [Table 1](#)).

3.2 Anti-bumping granules.

3.3 Glass wool, pre-extracted.