BS EN ISO 4608:2023

BSI Standards Publication

Plastics — Homopolymer and copolymer resins of vinyl chloride for general use — Determination of plasticizer absorption at room temperature

National foreword

This British Standard is the UK implementation of EN ISO 4608:2023. It is identical to ISO 4608:2023. It supersedes BS EN ISO 4608:1998, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/82, Thermoplastic materials.

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

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EUROPEAN STANDARD

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English Version

Plastics - Homopolymer and copolymer resins of vinyl chloride for general use - Determination of plasticizer absorption at room temperature (ISO 4608:2023)

Plastiques - Résines d'homopolymères et de copolymères de chlorure de vinyle à usages généraux - Détermination de la prise de plastifiant à température ambiante (ISO 4608:2023)

Kunststoffe - Vinylchlorid (VC)-Homopolymere und Copolymere für allgemeine Anwendungen - Bestimmung der Weichmacheraufnahme bei Raumtemperatur (ISO 4608:2023)

This European Standard was approved by CEN on 20 November 2023.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 4608:2023) 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 SIS.

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of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

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 4608:1998.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 4608:2023 has been approved by CEN as EN ISO 4608:2023 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.

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 document 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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC9, *Thermoplastic materials,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 4608:1998), which has been technically revised.

The main changes are:

— the mandatory Clause 3 on terms and definitions has been added and subsequent clauses have been renumbered;

— the plasticizer Bis-(3,5,5-trimethylhexyl) phthalate [Diisononylphthalate (DINP)] has been added;

— the CAS number has been included for unambiguous reference to plasticizers;

— in 5.7.1, a NOTE has been added informing about stop of DOP use in Europe due to hazardous substance classification.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The results of this test method give a general indication of the plasticizer absorption of a resin at room temperature. They indicate the usefulness of resins for the manufacture of plasticised dry blends, particularly when taken in conjunction with the results of plasticizer absorption tests under hot conditions.

INTERNATIONAL STANDARD **ISO 4608:2023(E)**

Plastics — Homopolymer and copolymer resins of vinyl chloride for general use — Determination of plasticizer absorption at room temperature

1 Scope

This document specifies a method for determining the plasticizer absorption at room temperature. It is applicable to PVC general-purpose resins and filler resins designated "G" and "F" in ISO 24024-1[1].

This document can be used to determine the quantity of plasticizer absorbed by a resin at room temperature to give a dry mixture.

2 Normative reference

The following documents are referred to in the text in such a way that some or all of their content constituted 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 1385-1, *Phthalate esters for industrial use — Methods of test — Part 1: General*

ISO 8655-2, *Piston-operated volumetric apparatus — Part 2: Pipettes*

3 Terms and definition

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Principle

An excess of plasticizer is added to a specified amount of resin. The mixture is then centrifuged under defined conditions and the amount of plasticizer retained by the resin determined.

5 Apparatus and materials

Ordinary laboratory apparatus, plus the following:

5.1 Balance, having an accuracy of ±0,1 mg.

5.2 Burette, for example 50 cm^3, graduated at 0,1 cm^3 intervals or dispenser, for example 50 cm^3, accuracy according to ISO 8655-2.

5.3 Centrifuge, whose rotor turns in a horizontal plane and which has an acceleration under the test conditions of 24 500 $m{\cdot}s^{-2}$ to 29 500 $m{\cdot}s^{-2}$ measured at the bottoms of the tubes, with, if necessary,