# SLOVENSKI STANDARD
# SIST EN ISO 4608:2000

**01-maj-2000**

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**Polimerni materiali - Homo- in kopolimeri vinilklorida za splošno uporabo - Določanje absorpcije mehčal pri sobni temperaturi (ISO 4608:1998)**

Plastics - Homopolymer and copolymer resins of vinyl chloride for general use - Determination of plasticizer absorption at room temperature (ISO 4608:1998)

Kunststoffe - Vinylchlorid(VC)- Homopolymere und Copolymere für allgemeine Anwendungen - Bestimmung der Weichmacheraufnahme bei Raumtemperatur (ISO 4608:1998)



Plastiques - Résines d'homopolymeres et de copolymeres de chlorure de vinyle a usages généraux - Détermination de la prise de plastifiant a température ambiante (ISO 4608:1998)



**Ta slovenski standard je istoveten z:** **EN ISO 4608:1998**

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**ICS:**

| | | |
|---|---|---|
| 83.080.20 | Plastomeri | Thermoplastic materials |

**SIST EN ISO 4608:2000** **en**

# EUROPEAN STANDARD
# NORME EUROPÉENNE
# EUROPÄISCHE NORM

# EN ISO 4608

May 1998

ICS 83.080.20

Descriptors: see ISO document

English version

## Plastics - Homopolymer and copolymer resins of vinyl chloride for general use - Determination of plasticizer absorption at room temperature (ISO 4608:1998)

Plastiques - Résines d'homopolymères et de copolymères de chlorure de vinyle à usages généraux - Détermination de la prise de plastifiant à température ambiante (ISO 4608:1998)

Kunststoffe - Vinylchlorid(VC)-Homopolymere und Copolymere für allgemeine Anwendungen - Bestimmung der Weichmacheraufnahme bei Raumtemperatur (ISO 4608:1998)

This European Standard was approved by CEN on 9 April 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.



This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.



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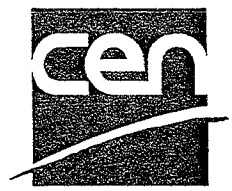

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Central Secretariat: rue de Stassart, 36 B-1050 Brussels**

## Foreword

The text of the International Standard ISO 4608:1998 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 IBN.

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 November 1998, and conflicting national standards shall be withdrawn at the latest by November 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE FROM CEN/CS: The foreword is susceptible to be anmended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

## Endorsement notice



The text of the International Standard ISO 4608:1998 was approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

**ISO 4608**

Third edition
1998-05-01

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

*Plastiques — Résines d'homopolymères et de copolymères de chlorure de vinyle à usages généraux — Détermination de la prise de plastifiant à température ambiante*



Reference number
ISO 4608:1998(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.

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.



International Standard ISO 4608 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.



This third edition cancels and replaces the second edition (ISO 4608:1984), which has been technically revised.





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

## 1 Scope

This International Standard specifies a method for determining plasticizer absorption at room temperature. It is applicable to PVC general-purpose resins and filler resins (designated "G" and "F" in ISO 1060-1:1998, *Plastics — Homopolymer and copolymer resins of vinyl chloride — Part 1: Designation system and basis for specifications*).

The object of the test is to determine the quantity of plasticizer absorbed by a resin at room temperature to give a dry mixture.



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



## 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1385-1:1977, *Phthalate esters for industrial use — Methods of test — Part 1: General.*

## 3 Principle

An excess of bis-(2-ethylhexyl) phthalate (DOP) 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.

## 4 Apparatus and materials

Ordinary laboratory apparatus, plus the following:

**4.1 Balance,** capable of weighing to 0,1 mg.

**4.2 Burette,** for example 50 $cm^3$, graduated at 0,1 $cm^3$ intervals.

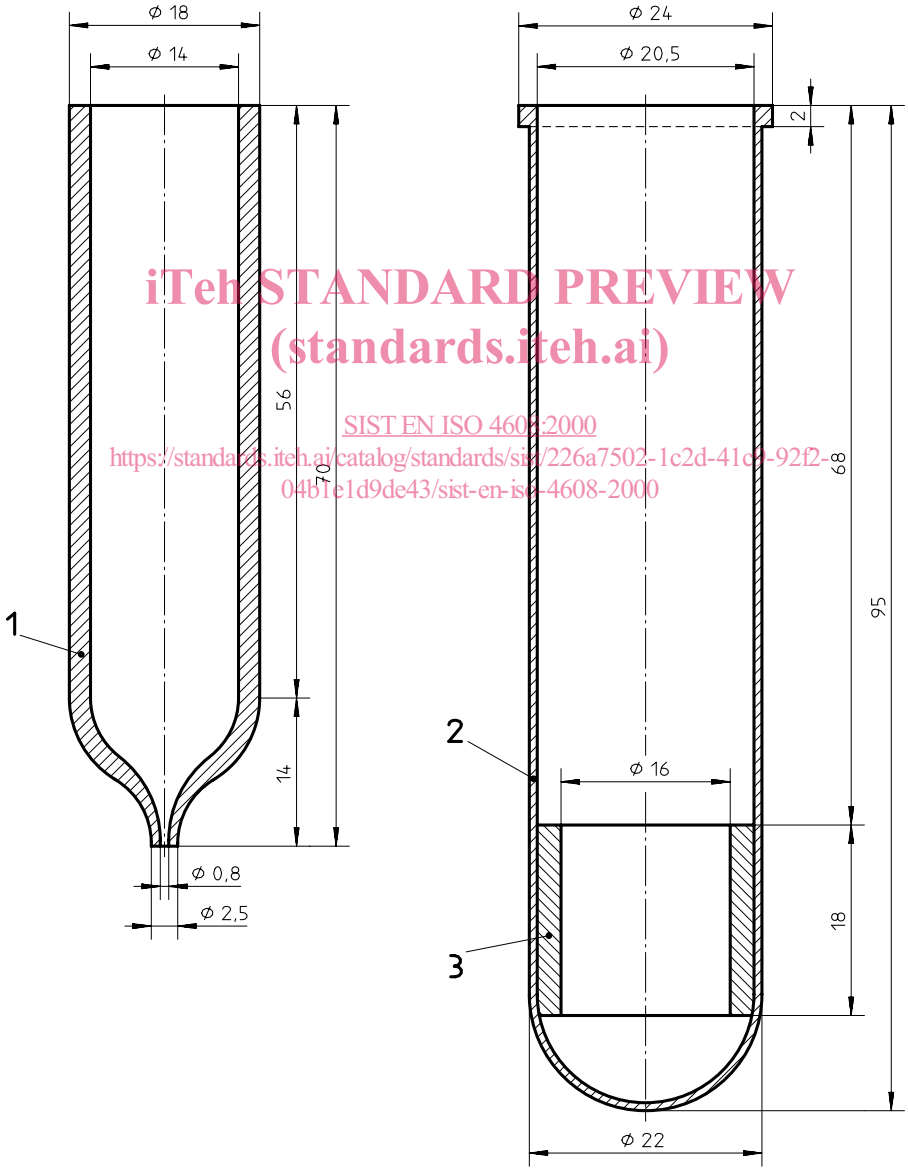
**4.3 Centrifuge,** whose rotor turns in a horizontal plane and which has an acceleration under the test conditions of 24 500 $m \cdot s^{-2}$ to 29 500 $m \cdot s^{-2}$ measured at the bottoms of the tubes, with, if necessary, a cooling system to prevent the temperature of the mixture from exceeding 30 °C at the end of centrifuging for 60 min.

NOTE — It is permissible to use different centrifuging conditions, i.e. a different acceleration, a different time and smaller centrifuge tubes (see 4.4), provided that it has been verified that the results obtained are equivalent.

**4.4 Centrifuge tubes,** to fit the centrifuge used, each consisting either of a tube, made of glass or another material, with a conical bottom pierced by a hole of about 0,8 mm diameter (see figure 1) or of a cylindrical tube fitted at one end with a sieve plate on which a filter paper can be placed (see figure 2). The sieve plate is pierced by holes of diameter approximately 0,8 mm. The holes are arranged concentrically approximately 4 mm apart.

**4.5 Sheaths,** made of polyamide, polyethylene or any other suitable material, to fit the centrifuge used, with a reduction tube at the bottom to support the centrifuge tube (see figure 1 or 2).

Dimensions in millimetres



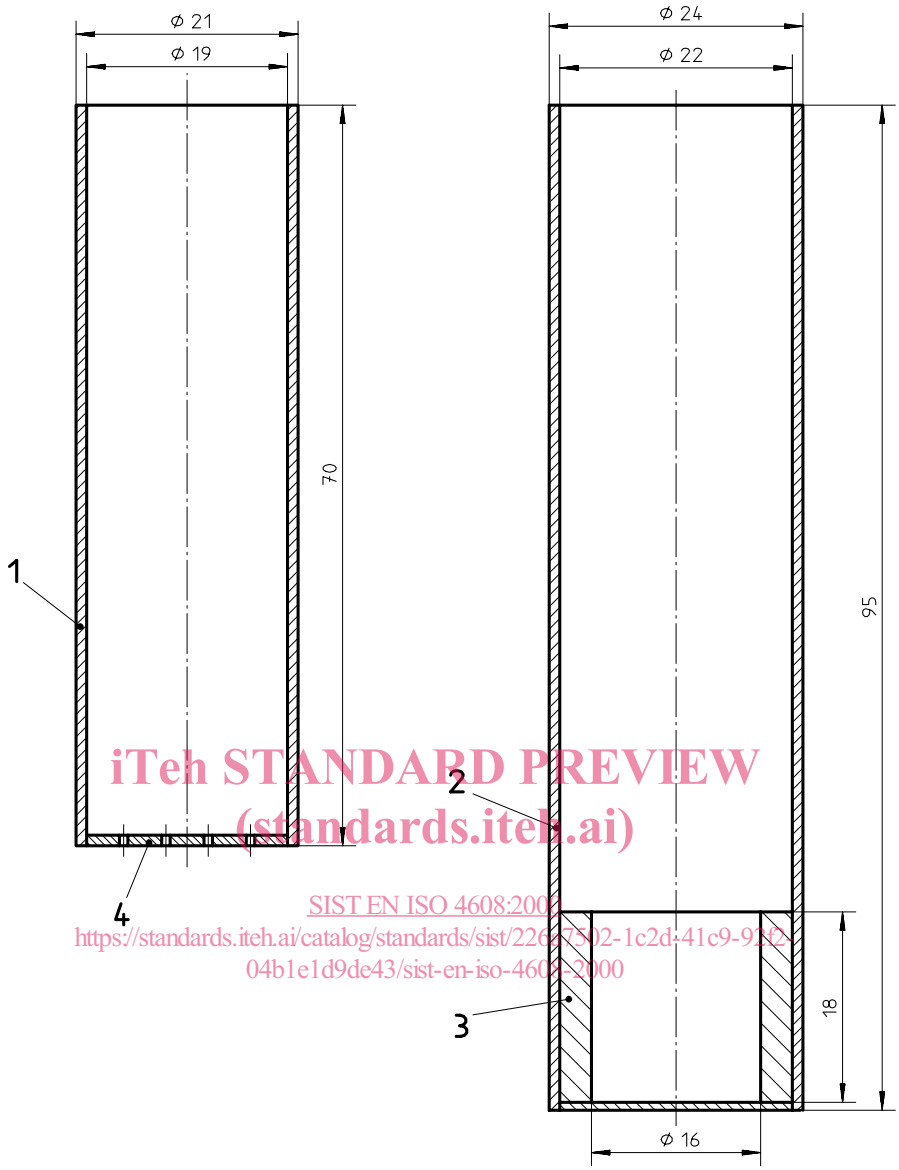



**Key**

1 Centrifuge tube
2 Sheath
3 Reduction tube

**Figure 1 — Example of centrifuge tube (without sieve plate) and sheath**

Dimensions in millimetres






**Key**
1 Centrifuge tube
2 Sheath
3 Reduction tube
4 Sieve plate

**Figure 2 — Example of centrifuge tube (with sieve plate) and sheath**

**4.6 Cotton wool,** pharmaceutical quality, having a DOP absorption measured under the test conditions (see 5.1) of approximately 10 %, or, if a centrifuge tube with a sieve plate is used, **filter paper**, with a diameter is equal to the inner diameter of the centrifuge tube.

NOTE — Alternative materials to cotton wool may be used if it can be shown that they produce equivalent results, for example glass wool and PTFE-coated polyester felt.